# Framing the message: Healthcare Support Workers' experiences of Patient Handling Training using visual research methods.

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"Photography is a system of visual editing. At bottom, it is a matter of surrounding with a frame a portion of one's cone of vision, while standing in the right place at the right time. Like chess, or writing, it is a matter of choosing from among given possibilities, but in the case of photography, the number of possibilities is not finite but infinite".

> John Szarkowski On Photography (Sontag S., 1970, p.192)

# Abstract

Practical training for healthcare workers is necessary to improving the essential skills associated with the moving and handling of patients, during their hospital stay. This qualitative study observed Healthcare support workers, (HCSWs) during a Manual Handling Induction programme, at an Acute NHS Hospital Trust.

**Purpose-** This Qualitative study aimed to explore the experiences of HCSWs' whilst attending the Induction programme, and specifically their reactions, and perceptions to a practical hands-on approach to training.

**Approach**- An exploratory sample, of eleven HCSWs undergoing the Induction programme, were observed during their one-day patient handling training session. The data collected, was analysed using Roses' (2016) Critical Visual Methodological Framework, Keats's (2009), and Lieblich et al., (1961) Interpretative models of meaning.

**Findings**- The findings revealed, HCSWs viewed their training as a positive experience, from taking part in group work to problem solving and role play. The participants were able to carry out safety techniques whilst in a safe environment, distinguishing between acceptable, and unacceptable practice. The impact of information-sharing and support on the HCSWs' experiences was highlighted, as key to empowerment, motivation, and confidence building. These findings suggest that the inclusion of practical training to move, and assist patients, promotes an enhanced experience of understanding in the use of manual handling equipment.

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**Originality/ value**- This study proposes that the use of visual materials, as a primary source of data collection, provided rich qualitative data, from which a wealth of knowledge was revealed and translated into meaningful elements for discussion. The participants' rich language of text and images gave a primacy to their world and created a sense of meaning which they disclosed to their audience and the researcher.

This study has the potential to add to the body of knowledge regarding the importance of practical training. To share these experiences with other fellow healthcare professionals, creates opportunities to identify the knowledge, skills and development that staff need, to meet the demands of their post, to work safely and effectively.

**Key words**- Healthcare support workers (HCSW), positive experience, qualitative design study, visual research methods, patient handling training, manual handling lifting aids, safe practice.

# Dedication

I dedicate this dissertation to my nursing colleagues, who provide support to their patients through their "hands on" nursing care.

# Acknowledgements

This thesis is meant as a tribute to the Healthcare support workers to whom I reached out to participate in this study. Without their experiences viewed through the lens of a camera, this research would not have produced the rich qualitative data and insightful knowledge presented in this thesis. Their comments and distinctive photographs created a unique view of practical training not previously realised. I would like to thank my supervisory team Dr Adam Barnard, Dr Linda Kemp for their invaluable knowledge and support in guiding me through the challenges of academia. I also wish to convey my appreciation to Dr Ana Souto, and Pamela Henderson, who during the early days when face-to-face workshops were key to our teaching programme, provided many inspirational moments to guide me through the design process of my research. To my fellow professionals Clare Lumb, Nick Foard, John O Connor, who in January 2017 embarked on a shared journey of research that had the potential to make changes in our specialist field's, thank you for keeping in touch across the hundreds of miles that separated us.

I would additionally like to express my gratitude to a late and dear friend; Adi had the passion to deliver practical training in manual handling, that gave students the skills to deliver the very essence of safe patient care. This thankfulness extends to Melanie Ryder, a trusted work colleague and friend who had the confidence in my ability to achieve this level of academia.

Reflecting on this experience, from the start of my nursing career serving her late Majesty to working in an acute hospital Trust, my late parents would be immensely proud. This is a way of acknowledging their love and support, and to my dear brother Jonathan and his wife, a heartfelt thank you.

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Framing the message: Healthcare Support Workers' experiences of Patient Handling Training using visual research methods.

## Introduction

This study sought to explore the experiences of Healthcare support workers' (HCSW) whilst attending an Induction programme. A programme of subjects designed to provide new starters with information and learning about the Hospital Trust, which includes mandatory core skills, for example, infection prevention, and patient handling. Specifically, this study would observe their reactions and perceptions to a practical hands-on approach to patient handling training. It was anticipated that the knowledge gained by sharing these experiences with other healthcare professionals, would create opportunities to identify the knowledge, skills and development that staff need to meet the demands of their post, to work safely and effectively.

This research employed a qualitative design methodology, to explore this area of professional practice. An exploratory sample of eleven HCSWs, undergoing the Induction programme, were observed during their one-day patient handling training session.

This chapter begins with an overview of the context and background that frames the study. Following this is the problem statement, study aims and accompanying research questions. Also included in this chapter is a discussion on the role of the researcher, my personal identity as a researcher, and the proposed contribution this study has, to the existing body of knowledge and field of research.

### **Background and context**

HCSWs are employed in many healthcare systems to undertake clinical aspects of patient care, and although providing a leading role in delivering front line nursing, investment in their skills beyond Induction is limited in the training development provided.

As a professional working within the National Health Service (NHS), I am aware of the increasing demands placed on healthcare support workers to complete everyday tasks, and the fine balance required to ensure a patients' safety. This forms the primary motivation for conducting this research. Practical training in a range of skills is necessary for safer patient handling and can prevent incidents caused by the incorrect use of equipment, (Work and Health Research Centre, Health and Safety Executive 2007). This approach to learning requires managers to release staff to attend classroom based practical training. This can be an additional cost for managers; to backfill extra shifts and as such, staff may not be able to attend. Lacking up to date skills, healthcare staff can quickly lose their confidence to carry out practical patient handling skills, thus contributing to the increase likelihood of harm, to both patient and carer.

### **Problem statement**

In conversation with HCSWs, I am in a unique position to discover how staff feel about their experiences of attending classroom training. This has prompted me to explore the importance of practical training for safer patient handling, their understanding of the terms risk, and patient safety when using devices for patient

transfers. Debating and challenging assumptions and perspectives that could exist in this field of research.

### Research aim, objectives and questions.

The importance of practical training delivered to healthcare staff working in the NHS has been outlined above. A non-systematic review has revealed a gap in the current body of knowledge when exploring the experiences of healthcare support workers completing practical patient handling training programmes. Researchers using visual imagery as a research method to observe emotions, and record responses to training activities as they happen, is limited.

To address these identified gaps the overarching aim of this study is:

'To investigate the experiences of HCSWs' whilst attending the Induction programme'.

To achieve this aim and to ensure the data produced was a true representation of the participant's experiences, specific research objectives were identified:

- To research the HCSWs' perceptions of a practical hands-on approach to the delivery of training.
- Whether a practical hands-on approach to the delivery of training influenced their understanding of the terms risk and patient safety when using lifting devices.

### **Research questions**

To meet the aim and objectives of this study, the following questions were developed:

- 1. What are the Healthcare support workers experiences of practical training whilst attending an Induction Manual Handling Training programme?
- 2. What are Healthcare support workers perceptions and understanding of the term's "risk" and "patient safety" when using lifting devices during the training programme?

With the aim of addressing these questions a qualitative design approach using visual imagery has been conducted at an acute hospital Trust. A successful outcome of the research was to focus on the Induction programme in which HCSWs attended a full days' manual handling training. These experiences suggest practical training provides better informed healthcare workers to participate safely in patient handling tasks. Such an understanding provides the opportunity to develop a blended approach of learning for staff attending a patient handling training programme. This thesis presents the culmination of the interconnected findings of four previous written documents submitted for the Professional Doctorate course: Documents 1 to 4. The abstracts of these earlier documents have been included as appendices to this document and are referred to as part of this thesis.

### The Role of the Researcher

My interest in this field of inquiry has developed over many years working in a healthcare environment. With the innovation of mechanical lifters, to assist nurses in undertaking patient transfers, there is now a greater requirement to acknowledge the specialist need for training. Training that provides instruction on safe processes and

systems to assess and use the equipment safely. I therefore situate myself in this research, as a participant professional researcher, at the very start of this thesis.

### Personal identity in relation to this study

Working in the NHS as a healthcare professional, I am aware of the constraints of conducting a study within a hospital setting. The cultures and behaviours of staff that can exist towards outsiders, challenging existing practice can be problematic. Transferring from a clinical role to an advisor in the management of health and safety, I am in a unique position to understand the complexities of working in the NHS. Through this shared experience of working in a hospital environment I have chosen to limit my research to HCSWs. With a chosen reflexive framework, (Rolfe et al. 2001) that addresses both the macro and micro levels of reflection, I have approached this study with an understanding to the key challenges that may present themselves. Presenting the feelings of these experiences in a holistic way, has given me new perspectives, on the many different services that integrate within our health and social care communities. Describing the emotions of planning, and implementing a study design, to interpreting participants photographs the goal of facilitating objectivity, and validity in the selection and analysis of data collected, has been foremost to ensure the presentation of facts is captured in everyday language

### Making an original contribution to knowledge

In the field of manual handling there are prominent experts who have and will continue to provide expertise, supporting many of the practice guidance publications which inform manual handling practices. In this context it has been important for me

to maintain focus on the original contribution to knowledge that this thesis makes claim to.

This study has several noteworthy dimensions as the information gathered could inform good practice guidance for patient handling in an acute setting. Importantly, the inclusion of such training experiences has demonstrated, that better informed healthcare workers empowered them to use equipment safely. This is significant and may inform future training in safer nursing care practice beyond that of the classroom environment.

In summary this chapter has provided the background and context of the study and defined the researchers' motivation to achieve a holistic understanding of HCSWs shared experiences of practical patient handling training.

### **Chapter One:**

# Literature review of healthcare support workers training in manual handling/ patient handling.

### Introduction

To carry out this study, it was necessary to complete a non- systematic review of contemporary literature, this included empirical, methodological, and theoretical literature. This chapter outlines the processes selected to identify as many relevant studies as possible with a focus on the use of resources selected for photographic and healthcare studies. Guided by both qualitative and quantitative studies distinct sets of words, concepts targeted each of the main facets of the research questions. The review process was ongoing throughout the study and aimed to illustrate engagement with theoretical principles relevant to this developing project.

### Search method

A non-systematic literature review of the topic was carried out based on a knowledgeable selection of current, high-quality articles. It is not considered a systematic approach due to the time and resources committed to this effort. Whilst a protocol/ strategy was not used the researcher has included a Non- systematic Literature Review plan, (Appendix 5) which sets out the resources used for this research, including a list of NHS Trust and University online systems accessed to retrieve articles. Defined by the research questions this review used the framework of Population, Issue, Context, Outcome, and Time (PICOT), to trigger the identification of key terms that might otherwise remain hidden, (Aveyard et al. 2021). (Table 1).

Table 1. PICOT framework and key words		
PICOT		Key words
Population	Adults (aged over 18 years)	Healthcare workers, healthcare support workers, healthcare assistants.
Issue	Practical training, patient manual handling, lifting devices, equipment	Safety, Safety culture, patient handling risks, practical equipment, training classroom/ ward skills, knowledge, superficial learning.
Context	Training environment	Healthcare setting, hospital care home. University training, learning environment.
Outcome	Experience	Staff experiences, patient experiences, staff feelings, emotions, thoughts, questions, empowerment, motivation.
Time	Training duration, schedule	Training duration, teaching, learning models, theory- practice gap.

This method allowed the opportunity to gain a deeper insight to the debates and key issues surrounding the subject.

An Inclusion and Exclusion criteria was also used to select relevant articles and helped to shape the decision of what to include, or not to include, within the review. Many different factors have been used such as Study design, Participants (restricted to HCSWs), Setting/ location (hospital, healthcare centres, care homes), Researched articles and Date (articles reviewed), and has been recorded as a table (Table 2). Other types of supplementary searches for example empirical, methodological, and theoretical literature assisted in identifying discussions on the theories and concepts of what is known and what is unknown about the field of study. Books and book chapters, nursing- related added historical background reading, whilst hand searched articles sourced from the field of manual handling provided literature, parallel to this study. A data extraction table, (Appendix 5a) helped to filter out information pertaining to key topics, from which the articles could then be analysed.

Table 2. Inclusion and exclusion criteria		
Inclusion criteria	Exclusion criteria	
Comparative studies with qualitative anaylsis.		
Comparative studies with quantitative anaylsis.		
Qualitative studies that explored the experiences of healthcare workers.		
Studies in which participants are healthcare workers.	Studies in which participants are not healthcare workers.	
Studies in which participants were located in hospitals, care homes and medical centres.		
Studies in which participants are university students studying health and social care.	Studies in which participants are university students not studying health and social care.	
Research articles published in the English language.	Articles not published in the English Language.	
Research articles published from 2000.	Research articles published pre-2000.	
Full text articles.	Reviews, articles displaying abstract only and discussion.	
Books and book chapters, nursing- related, photographic and Research methodologies.		

As a researcher I am aware that if too many concessions and compromises are made it will undermine the rigour of the resulting review. Under time, resourceconstrained circumstances, the review process is described 'non-systematic, (Gough et al., 2012). The next part of the chapter explores the identified papers on patient handling training and reflects on the different applications to which training experiences have been applied. Indicating important gaps and omissions as and when they became apparent. Each section closes with a synthesis of work that has been undertaken in areas most closely related to the research questions being explored in this study. The interpretative summary concludes with how the literature has informed the understanding of the material and how the material contributes to the ongoing development of the conceptual framework.

### Background

A descriptive insight into the aspirations and dedication of Florence Nightingale (Bostridge 2009), provides the first point of reference to the commencement of nurse training in 1850's. Laying the groundwork for competency evidence-based medicine and best practice guidelines, Tingle and Bark (2011), provide evidence to suggest that at the heart of this early debate the key question was, should the training be theory or practical? Books nursing-related to training in the early 70's describes a practical hands-on approach to the learning experience (Hector 1976). Incorporating modern techniques to aid manual dexterity. This was a quality of considered importance when people were physically lifted and handled. The 80's (Roper et al. 1980) signifies a change to how training was delivered, with a move towards using demonstrated practice in a classroom environment. This resulted in less time being spent on ward-based practice, and as a result nurses became more reluctant to move away or change from their accustomed practices. Contributing authors, (BackCare, The Guide to Handling of People 5<sup>th</sup> ed. 2005), cite the increasing prevalence of musculoskeletal injuries reported by healthcare staff, using 'banned' manoeuvres such as the drag lift. These noteworthy references have revealed debates about the effectiveness of training but also interlinking relationships with a culture of unsafe manual handling practices in the workplace. Studies by Taylor and others (2010) highlight specific training programmes that are typically designed to educate workers to the perceived risks associated with manual handling. There is evidence to suggest the ineffectiveness of this style of learning, that where nurses have undergone Project 2000 training, they have not been educated to be flexible, visionary, and prepared to take risks. Encompassing both theoretical and practical

components, a study by Lee et al. (2017), and Sarre et al. (2017), note that when the training was delivered and managed locally, was often insufficient or ineffective, reporting that the quality and depth of training varied within departments. Ranging from online computer-based modules to one-to-one sessions, the findings of a study by Spitzer and Perrenhound (2006) found that the content and delivery style, differed both locally and internationally. In the practical use of lifting devices, Noble and Sweeney (2018) assert that the training, to achieve competency-based practice was perceived by healthcare workers, to be insufficient and in most cases not relevant to the actual environment. Similarly, the methods of learning used by trainers did not include learners taking part in active role play. This absence the authors stated did not provide healthcare workers the additional skills to assist in problem solving, for example in an emergency when a collapsed patient requires extraction from a toilet, to be medically treated. Whilst there is a lack of empirical evidence, the act of role play has been shown to improve teamwork and is linked to positive experiences and increased knowledge and awareness of skills, (Lee et al. 2021; Garzillo et al. 2020; Kanaskie et al. 2017). Where practical one to one training is included, (Lee et al. 2021; Gusenius et al. 2018) and peer support provided in the workplace after the training programme, there was a positive correlation in the experiences felt by staff. These feelings provided staff with empowerment to advocate for change in practice confirming the positive impact this type of learning had to their day-to-day work. Indicating a change to the views shared by Fray (2005) who argued that the skills, knowledge, and experience of individuals whose responsibility it is to bring about change in manual handling practice, may come to nothing, if the process of managing change is not considered. The notion of empowerment, Kanaskie and Snyder (2017) identified as a motivation to make change, from what was considered

acceptable unsafe patient handling practice to safer handling practice transforming towards a safer patient culture. Empowerment was conceptualized as the freedom to make decisions with authority, and choices, that when reflected with action, and formulated in peer group dialogue, leads to a change in the status quo. This theory proffers an explanation for the experiences shared by the participants in my research, that the act of making decisions was empowering. Most notable examples being the activities assigned for role play, specific to problem solving tasks such as a fallen patient.

Chaghari and others (2016) states that empowering through education, can achieve a greater mastery of professional skills among nurses, where understanding has been limited by ineffective training programmes. Where active participation has been achieved, it can lead to effective learning and development in professional skills and improve practices in the quality of patient care. Without sufficient training (Humrickhourse et al. 2015; Caspi and Stevens 2013) suggests that professional skills can decrease, and as a result, through a lack of confidence this further reenforces unsafe practices. This is an important link, and supported by theorists of motivation and learning, the mandatory requirement for a consistent approach to training is therefore necessary. In this context learning provides the motivation for human beings to react, and fulfil the need to learn, and contribute to their learning environment through others, (Gopalan et al. 2017). If staff lack the motivation to learn they will become less likely to change from historic, unsafe, and dangerous practices, to new, and safer handling techniques. This could also result in staff deflecting their main reasons for these behaviours (Scarre et al. 2017; Kneafsey 2006) by citing time pressures and shortage of staff. Issues relating to the lack of equipment (Noble and Lee et al. 2021; Sweeney 2018) available to use on the

wards, and a less than supportive environment, prevent positive transfer of learning into practice. Kneafsey and Heigh (2006), also suggest that there are numerous other factors grouped as challenges, or 'barriers' that exist to explain why staff are not using equipment shown at training sessions. When training is perceived as a negative experience, staff will remain reluctant to translate the learning experience into practice. The reasons given include insufficient time and resources to practice, some aspects of training not perceived as useful or indeed useless, and a dissatisfaction by students of the teaching methods. The consequences of these actions are widely acknowledged in studies reviewed by Bernardes et al. 2021; Horgan et al. 2020; and Kanaskie et al. 2017, who have highlighted the increased prevalence in musculoskeletal injuries and reportable absences from unsafe manual handling manoeuvres. These sentiments are most evident in the acute hospital setting where high-pressured working environments are predominant. Organisational challenges such as financial constraints, and conflicts arising within different management divisions (Chaghari et al. 2016), can prevent the participation of staff in training. In contrast to staff feeling supported by their managers, and thus able to take part in professional learning opportunities. An evidential review of literature by Humrickhourse et al. (2015) confirms such findings and points to the significant gap in research into this phenomenon. Gusenius et al. 2018 showed that when staff received education the positive impact on patient comfort is significant. An example was observed in the use of assessments, to decide on which technique(s) were required for standing/ seated transfers. A further measure to reducing the risk of injury to patients (Lee et al. 2017), are training sessions, demonstrated, and practised in a ward environment. Stokke et al. (2014), descriptive comparative study, showed that 71.8% of staff believed, that evidence-based practice delivered

through training at ward level, improved the care they delivered to their patients. Staff felt that having this knowledge, and taking part in practice working groups, gave them more motivation to learn about and engage in evidence-based work. The argument for change to patient handling education programmes is convincing, addressing the generic nature of training delivery is essential to raising the awareness of risk relating to patient safety. Understanding how training occurs and the experiences of those taking part are a valuable precursor to developing future training programmes, (Scarre et al. 2017; Mc Dermott et al. 2011) that reflect specific individual, organisational and task needs. The role of the HCSW in delivering patient handling care and their experiences of training is pivotal to delivering the practical skills required in caring for people, (Coffey 2004). Despite an increasing growth in healthcare workforce, the training received in manual handling remains limited. Managed locally it fails to consider sustained application beyond an initial induction programme and furthermore, when new equipment is purchased, healthcare workers report no instructions or training is given, before being brought into operational use (Sarre et al. 2017). Developments in new technology such as passive lifters, and ceiling track hoists, have replaced many of the "hands on" techniques carried out by staff. The findings of a study by Wright et al. (2005) conclude that, multiple factors can be attributed to the cause of serious adverse events from patient handling, such as, incorrect equipment selection made by staff at the time of assessment, and or insufficient user training when using hoist slings. The consensus of healthcare staff is that patient handling tasks are distinctively challenging because of the everchanging needs of a patients' physical and mental condition. With the introduction of new technology such as passive lifters and ceiling track hoists the potential for new and different errors to occur. Setting out the difficult juxtaposition between nursing

and technology, Dowling (2013) highlights that to address the shortfall there is a need for an enhanced level of knowledge in patient safety. This is further supported by Sellman et al. (2017), who conclude that such knowledge can be achieved through practice-based competency skills. Strengthening the suggestion, that the principles learnt during training are not applied in the working environment (Love 2013; McDermott et al. 2011;) confirms the need to enhance the effectiveness of inservice training of nurses. This is a requirement (Chaghari et al. 2016) that would be welcomed by healthcare support workers and their managers, (Sarre et al. 2017). Challenges in its implementation, however, are likely to be faced in all international settings where there is increased reliance on a support workforce. Where health and social care organisations are provided with a structured approach to the delivery of training, for example, The Care Certificate Framework (Standards)13.3. Move and assist safely) this provides a process for training whilst also addressing any known risks of using equipment to transfer patients, (Beer et al. 2013). The Royal Marsden Manual of Clinical and Cancer Nursing Procedures, also provides instructional training for staff. Accessed via an online portal system, 'Moving and positioning' Chapter 7 provides staff with key positioning guidelines, essential equipment information, and where appropriate, supported by illustrations. The medium of National conferences such as held by the National Back Exchange, provide a forum for networking of professionals, where the topics of manual handling training are keenly debated. The next component to this review is the role of the regulators in the health and social care sector and its influence on patient safety incident investigation and outcome.

Despite the legislative requirements set out in the Manual Handling Operations Regulations 1992 (as amended), evidence continues to support the concerns of

professional groups in the field of manual handling. Where there is an absence of training in practical use of equipment and techniques, the risk of physical harm to staff and or patients is significant. The effects of psychological harm to patients from poor and or unsafe practice is not widely researched but anecdotal reports would support patients feeling frightened, fearful of being dropped, and not in control of their mobility.

The Health and Safety Executive (HSE), set out requirements for organisations such as within the health and social care sector, to provide a duty of care to persons' undergoing medical treatment. Where cases of noncompliance have been proven, listed cases are provided on the HSE website to illustrate the type of sanctions imposed. The L23 (Fourth Edition) guidance, published in 2016, assist employers in their understanding of the regulations to control, and reduce the risk of injury from manual handling tasks. A case example, from the National Reporting Learning System (NRLS) for a Private Nursing home and Rehabilitation Unit, describe events the consequences of which resulted in the death of the patient and subsequent prosecution under Section 33(1) (a) of the Health & Safety at Work etc. Act 1974. The resultant investigations by the HSE found that inadequate training, inappropriate use of lifting equipment, combined with a failure of staff to communicate information on patient assessments contributed to the patient dying. Further search of the HSE website, "only convictions reportable following fatalities under RIDDOR - The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 specific to healthcare sector". One specific case to this field of inquiry, is an NHS prosecution by the HSE under the Health & Safety at Work etc. Act 1974. The description to the case sets out the following:

"A patient lowered from his position in the Arjo Encore onto a freestanding commode, when subsequently being lifted off the commode by a health care support worker slipped and was impaled upon a post left exposed on the Arjo Encore and subsequently died that day". A case result shows that following an investigation of the fatality, the prosecuted organisation was fined a total of £1,000,000.00 in fines and total costs awarded to HSE £160,000.00 was listed.

The next element of this chapter will address the methodological review, categorised into broad themes such as method and design. Studies which aimed to explore the experiences of sample groups, whilst participating in training, predominately undertook a qualitative descriptive approach (Lee Soo-Jong et al. 2021; Sarre et al. 2017; Kanaskie et al. 2017). Researchers choosing this research design method, offer a comprehensive summary of events from the analysis and synthesis of rich data collected. Literature shows that researchers who have adopted a quantitative approach, (Noble et al. 2018) the data collected has been produced from online, postal and hand delivered surveys supported by other methods, such as focus groups, and feedback group discussions. The limitations of which are reflected in the inconsistent data and poor response rates of surveys returned.

A review of research studies, (Bernardo et al. 2021; Lee et al. 2017; Kneafey 2006). has shown that sample sizes correlate to the method design used, whilst instrument tools vary in both the amount and success of the data gathered. Where final numbers have been lower than expected, researchers have declared this in their study design. Citing contributing factors, such as clinical place commitments, staff refusing to participate and problems with eligibility. Where this is the case, authors recommend further research across a wider group, and multiple care settings (Nobel et al. 2016; Kanaskie et al. 2017).

Research settings have been largely conducted in acute hospitals, known for their high risk and complex patient handling activities, (Sarre et al. 2017; Gusenius et al. 2018; Lee Soo-Jong et al. 2021). Whereas published articles for Care home workers are limited but do provide information that using qualitative studies were successful in portraying everyday settings, (Palsey 2016; Johnsson et al. 2010).

The methodological literature evidence is not conclusive in a standard approach to conducting a research project, with a wide variation in design and application. However, a common thread that links all studies is the evidence provided by researchers to justify the approach adopted, the limitations and recommendations for future research. Most notably, the literature review has revealed a wide range of methods and instrument tools, used to address the field of enquiry. Popular methods include surveys, use of questionnaires, semi-structured interviews (Noble et al. 2016; Sarre et al. 2017). Least used by researchers within the health and social care setting are focus groups, discussion forums and observational methods. From a theoretical perspective, the focus of the papers has been on the type of training experience received by those studied. But as the analysis developed, my findings have revealed factors why individuals behave as they do, (Hattie et al. 2020; Gamal et al. 2020). To be able to feel independent and free to do tasks, staff have to see themselves effective and empowered within a positive workplace environment. To conclude, the literature review has identified that using a Qualitative Descriptive (QD) approach offers a comprehensive summary of an event in the everyday terms of those events, (Sandelowski 2000). Seeking descriptive validity, or an accurate accounting of the events that most people (including researchers and participants) observing the same event would agree is accurate. Whilst language is a vehicle of communication the design feature provides a considered combination of sampling,

and data collection, analysis, and re-presentational techniques, (Sandelowski 2000). Its use as data collection in the examination of documents and artifacts such as visual images support the validity that imaged based data contains evidence of things, with a clarity that words could never hope to match, (Denscombe 2010). Such evidence once interpreted, serves as a record of reality that helps to create an understanding of the phenomenon to be studied. As a method of choice Chapter 3 provides further reference to key papers of both Margarete Sandelwski (2020) and Neergaard et al. (2009), on using QD as a valuable and distinctive component of qualitative research.

The next part of the chapter examines the use of visual imagery in research studies, using two distinct themes as part of the data analysis process:

- The conceptual and analytic possibilities of using both visual and narrative text.
- The visual methods used and how its presentation can convey the emotional tone and experience of an event.

Photography has become one of the principal devices used to uncover social interactions between individual participants and groups, (Sontag 1979) although its use within the healthcare setting is underreported as a method of research, (Frith and Harcourt 2007). The use of this research method due to the complexities of undertaking and seeking ethical approval from clinical research bodies (Riley and Manais 2003) have prevented its use in clinical nursing practice and research. Conversely, when photography is used Riely and Manais (2004) argue that an alternative understanding about clinical practice may lie in the use of visual culture. In advocating the use of Visual Research Methods (VRM), Knowles and Sweetman (2004) considered key debates and theoretical conversations by sociologists,

Whincup and others (2004). It is apparent that through the interpretation of images, a vast wealth of knowledge can be revealed. The main debate surrounding this topic is, translating this knowledge into meaningful elements, (Heath et al. 2007; Whincup 2004 and Radley 2003) that requires creating a disciplined approach to the research design. Understanding the strengths and limitations of using visual imagery, particularly within the research setting, provides researchers useful knowledge, to plan the design phase of the research, (Rose 2016). Noteworthy, is the length of time taken by some participants when taking their photographs. Riley and Manias (2003) provide further examples citing photographic instrument failure and younger participants focusing on self-portraits, or 'selfies', rather than the environment in which they are in. These challenges Bugos and others (2014), claim are easily overcome by developing realistic expectations of the study' intended outcome, particularly at the publication stage.

Reference to and inclusion of ethical considerations, were noted where studies required access to patients and staff on a ward and this it seems was important for the education of others who may be contemplating photographic techniques (Riley and Manais 2003). The literature also highlights relationships that centre on the interpretation of visual images, as Beart et al. (2013) suggests, the importance of actively constructing themes, to understand what lies behind the surface appearance. Furthermore, the importance of considering images critically, Parahoo (2014) writes, is to reflect on their meanings, in terms of their cultural significance, social practices, and power relations. Observing complexities associated with, for example space, interactions, and objects, Shortt (2012), and Clark-Ibanez (2004), state that more detailed image analysis is needed. The importance of understanding this as part of the visual culture research Pauwals (2000) writes, is essential to how

the images are analysed. Relying on images to illustrate arguments can be problematic but viewed as a new sense of 'information' constructed around the image itself can provide unwritten meanings, from which discussions can focus attention on key issues of personal importance, (Keats 2009). Bugos et al. (2014), maintains the importance of establishing a consensus. Whilst using collaborative analysis or member checking with colleagues, Kanstrup (2002) writes, there are strong indicators to the positive contribution that visual imagery can make to uncovering participants' experiences of the situation. Whincup (2004) describes photography as an ideal medium, that communicates the objectifications of emotional responses from human social experiences. By immersing oneself in the data, Bauer and Gaskell (2000) see it as an initial interpretation of the participants' experiences that then begins to unfold. When used in conjunction with other types of data collection methods, (Keats 2009; Chaplin 2004 and Lieblich et al.1998), photography offers an additional perspective to the benefits for the use of qualitive description (QD) as a qualitative research approach.

### How has the literature review informed the research?

Recent studies from contemporary literature in manual handling, confirm that there are knowledge gaps, within the field of health and social care research. Most notably the role of practical training, and the experiences derived from this type of physical interaction, and its significance to understanding equipment safety. While aspects of training content have been explored evidence on the terminology used for operating hoists, and patient equipment safety, appears limited. Extending the understanding of the experiences of HCSW undertaking patient handling training, and the role of

empowerment derived from the acquisition of the skills learnt aim to inform future training and studies.

#### What was most significant in the literature?

Theories relating to learning, motivation, and empowerment of staff (Lee et al. 2021; Gopalan et al. 2017 and Chaghari et al. 2016) when using equipment on patients following a positive training experience. The recognition by researchers of the increasing complexity of healthcare environments and an identified need for staff to have both the knowledge and a practical application of skills, from exposure to a sustained educational programme. Reflecting on this, it reaffirms the direction of my argument, the research topic, and its relevance to the research questions posed.

### What was missing from the literature?

Studies that explored the participants' training experience, using interactive methods to collect and record data. The analysis of data used to interpret the experiences of HCSWs appears limited and as such the impact of which has not been realised or shared amongst the study participants.

A number of studies show that data collection methods were largely based on a mix method approach and revealed limited use of a critical visual methodological framework, to analyse the visual data collected.

### Conclusion: Key findings.

The key theme identified, from a non-systematic review of patient handling training, is the importance of practical aspect of training for healthcare staff. Furthermore, the requirement for Health and Social care organisations to provide ongoing professional

development, that is consistent in delivery and programme content is essential to reducing harm to patient and care givers.

Increasing the awareness of staff, through training such as Induction programmes, to provide competent skills in patient handling is pivotal. Drawing upon research and experience, the type of practical instruction training is the synthesis for building a new knowledge base. The non-systematic review has been found to support the need for my research into this neglected area of study. Recognising the limitations of such a review, a more detailed understanding of relevant theories is needed in many of the studies researched to provide more validity to the conclusions drawn. In conclusion, this chapter has provided a review and critique of the literature, drawing together key themes known in the field of patient handling training. What still needs to be learnt and accomplished, whilst providing a new perspective for subsequent research. The next chapter will discuss how the researchers' own experience and insights, has contributed to developing the conceptual frameworks for the design and conduct of this study.

### **Chapter Two: Conceptual Framework**

### Introduction

This chapter explores the strategy and conceptual framework developed for this study, which helped to focus and shape the research process, informing the methodological design and influencing the data collection instruments used. Concept mapping, (Bloomberg and Volpe 2019) is one type of diagram, that lays out key ideas related to an area of research and indicates relationships between these areas. Useful for visualizing relationships in different ways, among a set of concepts and ideas, I have outlined three multifaceted domains represented in a circle, (Figure 1). This represents a broad concept which is the first stage of the process, and distinctive to my study. Each element, derived from my study questions develop as supporting literature is identified, indicating the type of relationships that exist between them. Useful as a starting point, the information gathered provides a more detailed conversation of the topics debated in the field of manual handling.

### Figure 1



# **Lived Experience**

# 1. Reflection of the research problem and study title.

Creating an enabling environment for learning. The participants experience of learning in a classroom setting. Practical training in people handling for HCSWs, the demonstration and use of manual handling devices.

Research into training (Gould et al. 2007; Reece and Walker 2007) suggests the need for greater assessment, identification, and evaluation of training needs, advocating that training venues conducive for learning can enhance a students' experience. Christiansen (2013) concludes that participants involved in shared activity-based learning, or group work, were able to grasp and dissect complex situations. Whilst exposure to other senses such as touch, Wilson et al. (2011) claim, promoted greater understanding, and improved the confidence of staff, when using equipment,

### Healthcare staff- user group

- 2. Relevant concepts researched.
  - Manual handling lifting devices used by HCSWs to assist in the movement of patients.
  - The operational use of mechanical lifting equipment by healthcare staff.
  - Methods of learning for practical training in the use of equipment available for staff.
  - Regulators and enforcement role within health & social care.

Keeping patients 'harm free' from clinical incidents, has emerged as one of the greatest challenges facing healthcare services.
Prior to the Report of Mid Staffordshire NHS Foundation Trust, Public Inquiry, 2013, conducted by Robert Francis, QC, the Health Services Advisory Committee, HSAC (1984) warned of the increased risk of injury from poor handling techniques to patients. Resulting in delays of early mobilization, patients were more prone to healthcare-associated infections, either as a direct result of healthcare interventions, such as medical or surgical treatment, or from being in contact with a healthcare setting. The failures shown in NHS England and NHS Improvement, (2020b) Never Events, provide a valuable reminder that within health and social care there is still a long way to go to developing an ingrained patient safety culture in the NHS. The NHS Patient Safety Strategy (2019) sets out how the NHS will support staff, and providers, to share safety insights and empower people, patients and staff with the skills, confidence, and mechanisms to improve safety. Evolving over time, to ensure it is supporting the NHS to meet its current challenges, programmes and areas of work include the Patient Safety Incident Response Framework (PSIRF). This framework provides processes for responding to patient safety incidents, such as a patient fall, for the purpose of learning, and improving patient safety.

#### Hospital- demanding research setting

#### 3. Relevant concepts relating to research data collection tools.

- Observational studies of practical training.
- Interviews, questionnaires, and surveys
- Use of visual research methods within the context of health and social care.
- Ethical considerations and safeguards to protect participants.

The identified papers on manual handling / patient handling training reflect the different applications to which this subject has been applied and the chosen methods used to carry out research studies. The findings having brought together the concepts of lived experience, hospital setting and healthcare workers, has defined the conceptual framework, to be applied for my research, (Figure 2). I have identified possible relationships in training style, the frequency of training delivered and programme content providing knowledge. In addition, through enhanced awareness of patient safety the potential for reduced costs associated with patient/ staff litigation could be achieved. With these and a link to theories of empowerment and motivation by staff to make change, these interconnecting relationships provide a broader understanding of the research problem.

# Figure 2 Conceptual Framework

# Context

Researchers' knowledge of training, review of literature relevant to this body of knowledge, staff using manual handling equipment aids, patient safety incidents, associated legislation, and case examples.







Establishing a conceptual framework, through what has been examined, Bloomberg and Volpe (2019), highlight the significance of this, to the subject of the research. Discovering what other researchers have contributed to the research "conversation", has guided my own research when using data collection methods for analysis, and interpretation of findings. Developing this framework, proposes new relationships and perspectives, whilst also acknowledging the limitations in its use. Therefore, each concept and theory has been considered, for its relevance and application to my research aims, and objectives.

The next part of this chapter will explain the rationale for adopting an additional theoretical framework, that directly derives from Question 2 of this study. A framework (Rose 2016), that is based on the use of visual research methods (VRM)

to generate, and analyse data, such as photographs. Supported by interpretative models of meaning (Keats 2009; Lieblich et al.1998) both methods will seek to determine the extent of the participants' experiences, when using lifting devices, during the training programme.

#### Rationale for using Visual Research Methods (VRM)

A critical visual methodology, must be concerned with the social effects of the visual materials it is studying, "... the pleasure, thrills, fascination, wonder, fear or revulsion of the person looking at the images and then writing about them." Rose (2016, p. xxiii).

To understand in what context visual materials are used in VRM and why, there are four sites to consider:

- Sites of *production*, which is where an image is made.
- The site of the *image itself*, which is its visual content.
- The site(s) of *its circulation*, where it travels.
- The site where the image encounters its spectators and or users its audience.

Analysing participant-generated images in this way, embraces the opportunity of using a new approach, to exploring the phenomena within this study, (Clark 2019). Figure 3 illustrates each element of the framework with a description of key areas.

# Figure 3.

# The sites for interpreting visual materials- adapted from Rose; Visual

*Methodologies* (4<sup>th</sup> edition).



Rose (2016) offers a compelling argument to support the use of visual materials, especially effective in generating evidence that other methods, such as interviews cannot. Using Keats (2009) and Lieblich et al. (1998), Interpretative models of meaning, provides an approach to exploring the 'parts' of each story, for specific readings, thus contributing to and shaping the meaning of the whole experience. Thus, enabling the participants to reflect upon and share their own experiences of training and the support they provide to each other during their practical session.

#### Chapter Three: Research methodology

#### Introduction

This chapter explores the research methodology chosen for this study and sets out my interpretivist, ontological and epistemological position. With the intention of answering the research questions, it was necessary to position my research within an appropriate research paradigm, that would allow the participants to share their experiences of training.

# My ontological position; using an interpretivist, social constructivism paradigm.

Communicating my ontology and epistemological orientation as a researcher will require that I ask:

a) the ontological question: What is there to be known about the form and nature of reality? My role was to understand the multiple realities from the perspective of the participants, undertaking practical training in a meaningful way,

b) the epistemological question: What is the relationship between the researcher (myself/would be knower) and that which can be known about the reality? My relationship will be to act ethically before, during and after my research, knowing that no harm will come to them from disclosure of my studies. The knowledge generated about their experiences and understanding of the equipment should reflect the participant's perspective. And

c) the methodological question: How can I go about attempting to know that which can be known about the reality? Through the selection of methodological tools as part of the research design process.

Having this in mind opens the portal into my research and illuminates what I am about to discover and uncover in my research, (Makombe 2017). This research resides in an interpretative paradigm that is typically directed toward discovering the who, what, and where of human events or experiences (Sandelowski 2000). By generating an account from those involved, as a descriptive summary most relevant to the audience for whom it is written, (Sandelowski 2000) the data yields the working hypotheses or key categories for future theory- based research (Neergaard et al. 2009). The crucial purpose being as seen through my constructivist- interpretivist lens, to get insight and in-depth information, to make meaning and therefore understand the world better as a researcher.

#### **Qualitative Description**

Qualitative description (QD) follows the tradition of qualitative research an empirical method of investigation aiming to describe the informant's perception and experience of the world and its phenomena (Neergaard et al. 2009). Founded in existing knowledge, thoughtful linkages to the work of others in the field and clinical experience of the research group provides the theoretical framework for my research.

Choosing QD in relation to my own small independent research, with no previous experience prior to carrying out the project would provide the focus needed on this specific topic. Whilst explaining the deeper understanding of the patient handling training activity, as viewed from the perspective of the HCSW's. During the analytical process and when reporting results in QD, Neergaard et al. (2009) explains that one stays close to the data and describes informants' experiences in a language similar to the informants' own language. Rose (2016) compelling argument to support the

use of visual materials, highlight that images can be particularly revealing about the affective aspects of such experiences conveying an important aspect of the topic under investigation.

However, Neergaard et al. (2009), suggests caution in that it is always important to carefully consider which method to use prior to initiating the project, bearing in mind its limitations. QD has been criticised for its lack of rigour and for being flawed, when it comes to judging its credibility. Chapter Four Research methods include the strategies I have used to enhance rigour in QD (Milne et al. 2005) as illustrated by Neergaard et al. (2009).

Alternative approaches, such as grounded theory, mixed and quantitative methods were considered during the design phase, for their respective strengths and weaknesses but were excluded, as the approaches were unlikely to produce the rich descriptive data necessary to address the research questions.

In conclusion, drawing on the findings from the non-systematic review, this study adopted a QD approach that was suitable, feasible and ethical (Denscombe 2010), for the eleven HCSWs taking part in the study. It was imperative to provide an account of the experiences of individual participants and to facilitate this the process of reflexivity provided a more effective and impartial analysis. With the opportunity to reflect more deeply on the thesis experience, which Schön (1983) identifies as, 'reflection-in-action', and using Rolfe et al. (2001) 'reflection-on-action' (Document 6) considered retrospectively transforming the experiences, into knowledge conveying the potential to develop, explore and (most importantly) articulate experimental knowledge.

The choice of research design worked best in achieving alliances with the hospital Trusts' Clinical Education Department and communication, with the educators was

essential throughout the duration of the study. With limited access to the booking schedule for the Induction programmes, the practical aspects of conducting the research when considering the necessary authorisations required, was crucial for the success of the research. Consciously acknowledging, the assumptions and preconceptions I could bring to the research and therefore shape the outcome of the study, this QD approach was particularly suitable for this research.

The Methods Map, (Appendix 6) gives an overall view of the whole project, from which a research design was been chosen, that is most appropriate for this small-scale investigation. The map sets out a plan of action, to achieve a specific goal, carefully constructed that is rationally designed to provide a clear and structured approach, Denscombe (2010). In consultation, and carefully planned with the service users, it was likely to offer the best prospect of success. The strategy and the range of research methods chosen, discussed in the next chapter, justify the choices made for answering the research questions.

In summary, this chapter has provided a detailed description of this study's research design. A QD approach to the research strategy was employed to illustrate the training experiences of HCSWs during a practical training programme. A non-systematic review of the literature was conducted to devise a conceptual framework for the design of the study. The sample was made up of eleven participants, with three data collection methods used including visual imagery, written text, and recorded observations in the field. The next chapter sets out in more detail the Research methods used.

#### **Chapter Four: Research methods**

In this chapter, I will set out the approaches used, their crucial characteristics, that provided a snapshot of how things were at a specific point in time. Divided into several sections, each will describe and explain the choices made, at various stages of the evolving process. The chapter concludes with a description of the methods adopted, for qualitative data analysis of words, spoken and written, and visual images, photographically produced.

#### Introduction

The purpose of this study was to investigate using visual imagery, the participants' experience of practical training for patient handling. Using the principles of inducive analysis, to arrive at a more abstract and generalised statement, Rose's (2016) Critical Methodological Framework, has been used to interpret the meaning and value of images. Keats's (2009), analysis of text and Lieblich et al. (1998) Interpretative models for meaning, have been used to understand the significance attached to the contents by those that view the images. Founded in the training experience of the research-group the QD design features are set out below.

#### Sampling strategy

To identify participants for this research it was necessary to develop a sampling strategy. The approach to sampling in QD, can vary dependant on the question(s) being asked. The population referred to in this study are healthcare support workers, working in hospital settings, and the sample, a small subgroup, refers to those HCSWs who have been selected to take part in the research.

#### Sampling

An exploratory sample was used as a way of probing relatively unexplored topics and as a route, to the discovery of new ideas or theories. The sample explicitly selected to gather new insights, was considered an unusual example of what was being studied, (Denscombe 2010).

A non-probability sampling approach was used to choose this study's sample, which involved an element of choice in the selection process. The reasons for this are: the non-feasibility of including sufficiently large number of examples in the study, and insufficient information about the population to undertake probability sampling. The approach involving non- probability sampling, would select people based on their expertise, (Denscombe 2010) or the fact they share common experiences, (Padilla-Diaz 2015).

Specific to the type of organisation, a sampling frame was selected where the administrative arrangements for the recruitment of new starters was held. This suited small-scale research, directly relevant and linked to the research topic, the organisations' Recruitment Team would have access to up-to-date information. The limitations of this approach were acknowledged. Insufficient new starters, recruited to the HCSW Induction programme, or a delayed starting date to the Induction programme, could have possible impact on the findings from the research. Exploratory sampling was selected as the non-probability sampling technique for this study. Chosen on the principle of getting the best information, through focusing on a relatively small number of instances deliberately selected based on their known attributes, Denscombe (2010) states this technique is both relevant and knowledge based. Typically, used to provide an individual's perspective, exploratory sampling was selected both

feasible and likely to produce the relevant information, I adopted a pragmatic approach, where the aim is to get accuracy that is good enough for the purposes of research, within the resources available. I have considered other similar studies under comparable conditions. When calculating the number of people to include in the sample, I considered both the number of HCSWs recruited on each Induction programme and the safety requirements mandated to carry out practical training. Awareness of these limitations were acknowledged and considered with respect to the available resources and the level of accuracy demanded on the findings. The sampling criteria included the following:

- 1. All participants must be HCSWs.
- All participants must have completed the recruitment process and enrolled on the Trust's Induction Training programme.
- For practical training and safety reasons, the ratio of trainer to student was set at 1 trainer to 8 participants.
- 4. For safety reasons all participants, would be required to acknowledge their fitness to undertake practical training, and inform the trainers of any health concerns at the beginning of the training programme.
- 5. The training programme must take place in a classroom environment attached to the Trust where research and ethical permission was granted.

Ethical approval from the Hospital Trust and Nottingham Trent University, was shared with the Lead Clinical Educator, and eleven HCSWs were approached to take part in the study. Three Health & Safety Trainers were assigned to deliver the training programme. The trainers, within the context of this study had routinely delivered the Induction programme and planned prior to the commencement of the academic year. The trainers were qualified to deliver training in patient handling, and

had valid competency certificates, specific to the equipment products used. The trainers were consulted on the study and provided their agreement, for the images to be included in this thesis. The training environment was a designated space for learning, and my presence as an observer was noted by trainers and participants. With the programme content and lesson plans processed, that made it amenable for analysis. A process of communication and consultation took place with the clinical educators prior to the commencement of the study, to ensure all practical considerations were met. An initial group meeting with participants, provided a verbal explanation of the study requirements. This was assisted by the clinical educators, who were available should any concerns be raised. This provided the opportunity to confirm the necessary permissions, and the voluntary signing of a consent form by the participants. Handouts were given to the participants on the day of the training, as to type of disposable cameras being used for the data collection. The images generated by the participants, would be developed after the training, and returned for their analysis, at a feedback session arranged the following day. This time was allocated by the Clinical Educators and was scheduled as part of the participants next days' training. Participants were informed that data collected from the study, visual and written text, would be stored safely in line with the hospital Trust's Information Governance guidelines. On the day of the Induction programme, all eleven HCSWs that met the sampling criteria, were present, and were able to take part, together with three Health and Safety trainers in the research study.

#### **Research setting**

In the context of conducting small-scale research, the setting of my study was very important, both in the physical layout of the environment to accommodate the

practical activities but also key to the events which subsequently took place. The trainer had set up the Lecture Theatre in advance of the session, for a practical programme. The area included group seating arrangements, set around an item of moving and handling equipment. The layout of equipment provided an environment to observe the participants learning in the demonstrated activities of patient handling training. My observations were noted in a field study plan, (Appendix 13) and to assist with the data gathering, a notepad was used in the field, with segregated sections for recorded entries of general observations.

#### **Research Tools- data collection**

The main objective of this section is to explain the tools used for data collection, a research design flowchart adapted from Bloomberg and Volpe (2019), (Appendix 7) indicates the order in which these steps occurred. The instruments selected, were chosen to be appropriate to this study, and provided an important contribution to the research output, (Bauer and Gaskell 2000). The tools used to gather the data, for example disposable cameras, required purchasing and then gaining the participant's trust to use them during the study. Auto-photography, chosen as the primary method of data collection with the use of single and multiple photographs, provided a powerful record of real time actions and events, (Pole 2004). Photographs taken from the participants' perspective, helped them to express fully the rich descriptions of their experiences. To achieve this, I was able to consult with the clinical educators and work collaboratively to arrange a meeting with the participants, on their Induction briefing. Understanding the structures of power, and authority within the organisation was necessary and indeed essential to the success of my research. This collaborative working enabled me to secure a training venue, borrow specialist

equipment, such as hoists and explain the step-by-step method to the clinical educators as the study progressed.

#### **Photo-production**

Studies researched in social sciences, and education have identified the role mobile technologies have in facilitating learning experiences, both within a formal and informal context, (Bachore 2015). However, the use of such devices within a hospital setting, can be problematic. Discussions with the clinical educators, mentoring the participants, confirmed that the use of personal devices would not be a suitable method, due to the organization's data protection procedures. Chosen instead of a digital camera, disposable single use Kodak cameras, (27 exposures) was purchased by the researcher, and provided to the participants on the day of the training session. The same brand and type of camera guaranteed a more consistent quality of photograph, from participant to participants were free to use as many exposures as they wished, to capture their experiences. Images not selected by the participants taking self-portraits or "selfies", was not encountered.

#### Participants photo feedback.

Creating a platform for participants to engage was a key methodology process adopted by Kaplan and Howes (2004), to examine how the perspectives of staff and pupils can often be marginalised or totally ignored. The findings produced resultant images and commentary, that was insightful and revealed a unique individual and shared perspective of their experiences.

QD draws upon the review of documents or other pertinent materials for data collection to convey descriptive validity in the meaning attributed to those events. The concept of using a visual map, from which the participants could choose to describe their experience was an inspiration. From which I set about constructing a central image of the equipment to be trained on and with each practical exercise I created four flip charts. The term "Equipment Map" became the platform, for the participants to describe their experiences using photo images and written text. Drawing upon everyday experiences I explained the concept as a road map in which to document a journey taken, linking their conversations, through written text and images of their own choosing. Whilst I recognise that the term Equipment Map is not being used in the true sense of qualitative research, the tool was suitable for testing the "why", "how" and "what questions of human behaviours. Most notably providing a visual representation of equipment that the participants could associate with. As a design feature such methods can supplement in analysing and presentation of facts in everyday language (Sandelowski, 2000; Rose 2026; Heath and Cleaver, 2004). The unveiling of the images was eagerly anticipated by the participants and provided much conversation as to what they might reveal. The packages of photographs assigned a coloured sticker, were placed alongside a packet of adhesive pads, with a script setting out Directions for Responding to Photographs, (Appendix 18). Prompt questions, designed to be broad in their meaning, (Appendix 19) provided context, for the participants to organise their images. Without hesitation, they wrote alongside the chosen photos placed on to the flip charts and when completed submitted them to me at the end of the session. The data materials were stored safely against damage or unintentional corruption whilst awaiting analysis.

#### **Researcher- participant observation**

Specific to this QD approach, minimal involvement was required by the researcher to engage with the participants, during the training programme, (Frith and Gleeson 2021). A study of naturalistic observation by Miles and Huberman (1994), provides evidence that to observe things 'as they are', without any intervention draws upon the direct evidence of the eye, to witness events at first hand. Observing what happens, I was acutely sensitive to the possibility that researchers' perceptions of the situations, might be influenced by personal factors, and as such the data collected could be unreliable. Accepted with this approach, there is almost inevitability 'an element of interpretation', but the process of observing Denscombe (2010) explains helps the researcher to understand the culture, and processes of the group being investigated.

The training activities observed by me during the study, included the use of manual handling equipment, such as electric hoists, slide sheets and activities using role play in group work. Assigned during the eight-hour training session, time was allocated for natural comfort breaks, questions and answer sessions, and housekeeping instructions on fire, health, and safety protocols. This process of observation was recorded in a notebook, which provided primary data on a variety of observations, such as the dynamics of the group, noting participant's interactions with each other and that of the trainers. At no time during the training, did I intervene in the delivery of the programme or attempt to manipulate the situation itself. A major concern to avoid disrupting the naturalness of the setting when undertaking research, (Denscombe 2010).

#### Management of data

Raw data, difficult to handle in a meaningful and systematic way, was saved and stored using the hospital Trusts' password, according to the Trusts' Information Technology systems management. The participant's photographs, narrative text (equipment maps), back up negatives, copies of articles, and book extracts, have been preserved safely and stored securely in a locked office at my place of work. The office is situated in a building patrolled by security officers, with swipe card access only. All information related to this research, will be destroyed using the confidential waste stream protocol, set out in the Trust's Information Governance Framework and 'The Code of Practice for Research NTU'. Both of which align with the Research Councils UK Policy and Guidelines on Governance of Good Research Conduct (2013).

#### Data analysis and synthesis

From the synthesis of data, (Bloomberg 2019, p. 200), specific patterns or themes are created. To ensure that these themes, fit together and support the overall story being told, A Road Map for the Process of Qualitative Data Analysis: An Outline, adapted from Bloomberg and Volpe (2019), has been adopted (Appendix 9). To create a comprehensive and trustworthy account of the analytical process, such techniques are considered key to answering the following:

- (a) How the research questions are answered by the findings.
- (b) How the findings support the data collection methods.
- (c) How findings relate to the literature.
- (d) How findings relate to my own assumptions about the study.

Analysing visual material as a primary source of data, I was mindful of the many theoretical debates that exist about how to interpret the meaning of visual texts. Rose (2016, p. 46), suggests that an important aspect of analysing visual material as "visual culture", is the attention paid to the audience, the image, and the site of production, and that all are intertwined with the technological, compositional, and social modalities. My aim was to analyse the images from a multidimensional viewpoint, within the context of equipment training, but also beyond to the contribution the study findings may have on professional practice, and patient safety within the healthcare environment. The focus was to ensure that the qualitative material produced by the participants was kept in its original form, stored safely and be accessible, for analysis and synthesis. Using a coded system, (colour dots) the disposable cameras were assigned a specific colour, logged, and allocated to the group, connected to the equipment activity. The films were developed locally as colour gloss prints, and the disposable cameras were destroyed at source, by the local developers. The colour-coded packets were then returned to the participants unopened, at their feedback evaluation session. This session scheduled within the Induction programme, was held in the same training venue, and all eleven participants attended. Using large flip chart sheets, the participants selected images for display, as shown in Figure 4. The written text would take the form of unscripted narrative, provided by the participants, handwritten in a style of their choosing. This approach allowed the participants to adopt a free form and creative approach, to their written text. As part of my data management plan, (Appendix 10) required by the Trust to preserve participant confidentiality, the participant's names and references were not disclosed. It was agreed by the clinical educators and

participants, that the photos could be used as part of the research findings and be contained within the thesis document.



#### Figure 4

In using Visual Research Methods, (VRM) in the collection of data, I have recognised the challenges faced by researchers, (Riley and Manias 2004; Rose 2016) when using photography in clinical nursing practice and research. Where access to spaces, places and events that might otherwise prove to be difficult or unethical to enter, (Bugos et al. 2014). My reasoning for this selection was based on the non-systematic literature review, where visual imagery had been used for small scale study groups, particularly within a healthcare environment, (Frith and Harcourt 2007; Riley and Manias 2003). The positive outcomes of providing rich narrative data, offered me exciting possibilities of natural and creative participant thought. As a researcher, using this method, the ability to connect early on (Samuels 2004) with the participants was important, and key to the uptake and usage of the disposable

cameras. Furthermore, access to products such as pens and rolls of wallpaper for the equipment maps, was an instinctive way to support the use of cameras, within the research setting. The notion of empowerment, where the participant plays a central role within the research process, is arguably an advantage for its use as a research tool. By exploiting the interplay between visual and written text, these methods provided novel and stimulating techniques, uniquely appropriate to its use as data collection methods.

In summary, understanding and addressing, the strengths and weaknesses of both primary and secondary data collection methods, is essential to the type of raw data generated using qualitative description. The analysis process, discussed in the next section has been designed specifically for these methods, and is unique to my research study.

#### Process of data analysis

A manual system of recording the data, was used to analyse the equipment maps, working from left to right, each photograph was catalogued with a code. This process was repeated in the same order for the written text. When coding the written text, it was important for me to correspond the text to the correct image(s). This was guided by the participant's use of arrow(s), handwritten, and in bold text. Out of the 162 exposures available, 155 photographs were used by the 11 participants, from which 43 images were viewed, and then arranged and applied to the separate flip chart papers.

A total of four, flip chart papers were used, with an additional piece used to record instructional information. This single piece of data was attached by the participants to the appropriate equipment map, at the end of the allocated time.

The equipment maps, used to display both visual and written data was populated with information from the participants. This medium was easily integrated into the research design and served to capture both a participants' experience but also act as a 'member check', (Kanstrup 2002) for respondent validation, when discussed later at the feedback session.

The following details have been set out, to illustrate the numbers of photographs displayed on each map by the participants. The associated data set was then logged and analysed by me, to determine their meanings and themes. There were no limitations recorded associated with the use of the Equipment maps by the participants. All participants actively engaged in the feedback process using a method they identified with.

#### Equipment map 1.

Twelve images had been positioned by the participants from left to right, arranged clockwise around a black and white picture, of a mechanical hoist system.

#### Equipment map 2.

Eleven images have been displayed in rows, with the equipment picture placed centrally, on the map.

#### Equipment map 3.

Fourteen images have been displayed in four rows, each row containing handwritten text to the right-hand side of the images. The equipment picture has been placed centrally on the map.

# Equipment map 4.

Six images have been displayed in ascending order, to illustrate a stepped process, when using the equipment. An additional piece of paper with narrative text was added to the left-hand side of the equipment map.

Converting the raw data, produced from the equipment maps into themes, Rose (2016), provides a clear theoretical and methodological framework to analyse the meanings given to the photographs. To interpret and therefore understand the written text, provided by the participants on their equipment maps, Keats (2009) and Lieblich et al. (1998) Interpretative models of meaning were used, as an approach to discern themes or patterns. Flow chart Figure 5 illustrates the pathway used.



## Figure 5 Flow chart Analysis Model for visual and written text

#### **Data reduction**

An essential part of data analysis is data reduction, adapting the critical visual methodology framework (Rose 2016), provided a meaningful theoretical approach to analysing the participants' visual images. Having coded the equipment maps, each image displayed was analysed, according to the following sites:

- Sites of *production*, which is where an image is made.
- The site of the *image* itself, which is its visual content.
- The site(s) of its *circulation*, where it travels.
- The site where the image encounters its spectators and or users, its *audience*.

Taking each photograph displayed on the equipment map, the data collected was analysed, and recorded with handwritten details, noting any additional elements of interest. The purpose of which, was to detect and record both the seen and unseen enactments, taking place within the image, (Pyle 2013). From these areas of focus, themes emerged from the data, and revealed shared features which were repeatedly cross-referenced, against other images of the same activity group. These themes were then analysed, (Figure 6 and 7) to explain what the visual images and written text meant.

# Figure 6



### Figure 7



#### Analysis of participant's written text

To ensure that each writing "tells its own story", (Keats 2009, p. 188) I developed a plan to manage the data, independently but also as a whole, and aligned to the images displayed. This enable me to return to points in the data, which were of particular interest. The participant's written text was chosen as a data collection tool, to strengthen and enhance the quality of the data generated. Handwritten alongside the images selected by the participants, this method created an opportunity for their thoughts and reflections to be shared and was unique to this research.

Using wallpaper and coloured marker pens, the participants were free to record their experiences of training in written text, creating narrative from the images they had selected. One key element incorporated into the design of the map, and consistent to all maps, was a black and white picture of the equipment used in the activity. This allowed participants the instant recognition of the equipment and training activity. It also provided a methodological triangulation (within methods) as a check to the authenticity of the findings.

Adapting the approach set out by Keats (2009) to specific reading of the text, the focus was directed towards distinct aspects of the participants recorded accounts. Six aspects set out below, which when analysed, contributed, and shaped the meaning of the story, as told by the participants of this study:

- Self of the narrator- cultural perspectives, unique symbols, or references.
- Perspective-narrative viewpoint of experience.
- Issues of attention- subject's experiences reencountered.
- Sequence- how events are told.
- Time-stretches or periods of time in which the experiences are told.
- Context- place or location, telling of a story in the context of the present.

Immersing myself in the written text, an initial general reading was undertaken, to understand what the participants had experienced. Making a record of unusual or striking comments, the data was then analysed in more depth for repeated phrases, words, or perspectives. A process then followed, of connecting these to a broader narrative, situating the phrases in context to the event, and study setting. I included both the educational, and social involvement that existed, within the research setting, noting the behavioural dynamics of groups, the learning environment, and the atmosphere of practical hands-on engagement with equipment. As an assurance to the credibility of the study, care was taken that the recorded text remained a true reflection of the participants understanding, and subsequent interpretations of events. Features were highlighted and referenced at each stage, and written accounts recorded any similarities and differences. These narratives helped in crosschecking the data and served as a secondary analysis. Based on this analysis of the written text, I explored both the observational and written recordings, until specific patterns with shared features emerged as meaningful, descriptive units.

#### **Researchers' observation notes**

Observation notes recorded whilst in the research setting, were analysed from an 'interpretivist' viewpoint for descriptive words, and patterns that reflected the social and personal meanings of the HCSWs experiences. Descriptive titles brought together text notes, into a series of fragments that commonly recurred, such as *word repetitions, indigenous categories, compare/ contrast, and metaphors* that identified common themes.

# Figure 8

Word Repetitions	Indigenous Categories	Compare/ Contrast	Metaphors
<ul> <li>Used in conversation yes,ok,very good,yes I see, yeh ok ok</li> <li>Feedback evaluation</li> <li>learnt a lot very useful interactive knowledge</li> <li>learning enjoyable</li> <li>practical use of equipment</li> </ul>	<ul> <li>Behaviours</li> <li>Communications verbal/ non verbal</li> <li>Interactions</li> <li>Groups working together</li> <li>Indivduals focused on trainers</li> <li>Approach to training</li> <li>Body language posture and movement</li> </ul>	<ul> <li>Open and closed body language</li> <li>verbal /non verbal exchanges</li> <li>group/ indivdual activity</li> <li>Lead role/ sitting back listening</li> <li>Activites hands on/ demonstration</li> <li>Learning theory and written</li> </ul>	<ul> <li>'bridging the gap'</li> <li>'hands on'</li> <li>trial and error</li> </ul>

Discussed in more detail, in Chapter 8 are the findings of the researchers'

observations. A selection of the participant's transcribed quotes has been included,

with the theoretical significance provided from the analysis undertaken.

# Data presentation

The literature review has identified, numerous possibilities as to how researchers recorded in their studies, both visual and written data. Knowles and Sweetman (2004, p 2) describe "People and places, in particular, demand visual representation as researchers struggle with the methodological means of imparting what they see in more than words". I find this reference and subsequent theory very interesting, on how pictures when used to define a concept, with little or no caption, can establish

for dramatic effect just one meaning. However, a note of caution by the authors, this approach could prevent further meanings from being explored and by relying on images, for illustrative purposes only can be problematic, with the findings open to misinterpretation. Within the context of my research, I acknowledged the criticisms shared by researchers (Kaplan et al. 2004; Knowles et al. 2004) relating to the limitations of using VRMs, which include the manipulation of pictorial representation of images to present the desired effect. Equally, the representation of photographs does allow multiple interpretations to be conveyed.

#### Issues of trustworthiness, rigor, and credibility

As a researcher, I have attempted to provide assurance of the credibility of this study, by asking several questions, including:

- What are my personal biases and what have I done to address such biases?
- Has the research been completed in a systematic way?
- Who would believe this information to be credible?

Personal biases, that have been acknowledged in the preparation and management of this research, include working in the research setting as a senior manager, and therefore, initial judgements could be inferred, on the training delivered. To address this, my position in the Trust is managerial, and not connected to the role of trainer, and as such I do not directly influence the programmes set. My participation in the Health & Safety Executive, Prosecution case, took place before this research commenced, and I do not believe that the approach adopted would have been any different if these experiences had not occurred. The research topic has been an area of interest for me, for many years, and undertaking this professional doctorate,

provided a unique opportunity to explore the debates being discussed in this field of knowledge.

To enhance the rigour and therefore the credibility of the data collected, (Table 3) identified strategies and techniques were used, as proposed by Milne et al. 2005.

Table 3. Strategies to enhance rigour in QD		
Strategy	Techniques	
Authenticity	The informants are free to speak- actively encouraged during their training to ask questions	
	Sampling approach	
	Participant- driven data collection visual and written text	
	Participants voices are heard through the transcribing of written text, vocal exchange of words and display of visual images	
	Feedback by participants conducted through the photo feedback session	
	Participants perceptions are accurately represented and transcribed	
	Content anaylsis using visual methodological framework and interpretation of meaning	
Credibility	Capturing and portraying a truly insider perspective	
Criticality	Reflection on the critical appraisal applied to every research decision	
Integrity	Reflection on researcher bias – dual roles, participant relationships and ethical considerations	
	Participants' validations/ member checking	
	Peer review/ researcher triangulation.	

Through transparency and procedural clarity, other researchers will be able to replicate this study. To address the question of credibility, this study acknowledges the limitations of a small sample studied. The information required, to explore the participant's experiences of a practical training session was determined by mandated health & safety requirements, needed for both the trainer and students, when carrying out practical training.

Reflecting, on the choices made to achieve the aims of my research, and justify the choices clearly and explicitly, I have set out the limitations (Table 4) recognised as inherent in my method of data collection.

Table 4. Limitations recognised from the chosen methods of data collection			
Data collection	Actions / interventions		
Researcher involvement during the activities/ training of the participants	Observed things 'as they are', specific occurrences. Without any intervention in the field, focusing on the key activities, conversations and use of cameras by the participants.		
Equipment failure – disposable camera assigned to each group.	The purchase of extra cameras to act as spares.		
Poor quality images taken by participants.	Any images taken would be eliminated by the participants, they were free to include or exclude an image of their choosing. Films were developed locally by a recognised provider for developing.		
Misunderstanding of how to use the equipment.	Participants were provided with an instruction sheet to use the cameras. Prior to the study commencing on the training day a brief overview on the equipment prior to handling out.		
Lack of engagement by the participants.	Information and consultation with participants and Clinical Education leads prior to the study to provide the context and purpose of the study. At the training, volunteers were asked who would use the cameras to take the images, working in their groups they decided themselves who and how this engagement would take place.		
Researchers' element of interpretation'	Straight description of how the data was organised – chronologically in the management of data and analysis.		

The most important criteria to meet when using QD is that of integrity or neutrality. In health services research where the participant's perspectives and evaluations are a quality goal in itself (Neergaard et al; 2009) the presentation of these facts from the informants' points of view is important.

#### Triangulation

Triangulation involves the practice of viewing things from more than one perspective (Denscombe 2010). I have chosen to make use of several techniques of peer review/ researcher triangulation in relation to the authenticity of the data collected, and credibility of using QD as a successful method in focusing on the experiences of HCSW's and their views on patient handling training. From these techniques I have applied in the following categories.

- Methodological triangulation (between methods)
- Data triangulation (use of contrasting sources of information)
- Research Ethic (use of guidelines recording insights and reflection of participants in training)
- Theory triangulation (use of theoretical position in relation to the data).

*The first example* illustrates the use of three methods, to provide a fuller picture of the research topic.

Method 1, observation in a classroom setting, whilst the participants took part in the training activities of patient handling.

Method 2, participants using disposable cameras to record images of their activities.

Method 3, analysing participant generated photo feedback, and my own recorded observation notes.

*The second example* illustrates how the data collected, ensured that a true representation of the participants' experiences was recorded, for consistency and accuracy.

Method 1, participants were provided with instructions for the use of the cameras and recording their experiences. Communicated at the start of the study via documented sheets.

Method 2, materials / flip charts were provided for the participants to record their experiences allowing for the participants voices to be heard, promoting a richness rather than superficiality of data.

Method 3, participants validation/ member checking was performed during the photo feedback session provided integrity to the techniques used.

The third example illustrates how the research was conducted, within the guidelines of Research Ethics. To ensure that the design of the research included appropriate measures to protect the people, and groups covered by the research. Included as part of the appendices are copies of the documents submitted.

Method 1, approval from the NTU University Ethics Committee was obtained, before any primary data was collected.

Method 2, the Trust's organizational procedures were observed, in the submission of a Quality Governance Audit Action plan, to register the study. With a submission of enquiry to the Medical Research Council - NHS Health Research Authority, approval was not required.

Method 3, the research process followed regular University Supervision sessions and document submissions set out in the Professional Doctorate programme. *The final example* illustrates how the participants' experiences from taking part in

practical training correlates to the findings of the study.

Method 1 the experience of physical contact and interaction between participants when using the equipment, this created the sense of empowerment and confidence to share those events in their own language.

Method 2 the experience(s) of describing the photo images at the feedback session, providing a voice and a chance to reflect on the act of taking the photographs as a process rather than just the content of the images portrayed.

Method 3 the experiences accumulated from taking part in the training and feedback session provided the participants positive reassurances and confidence to ask and challenge on the topics of risk and patient safety.

In summary, I have used various applications to demonstrate that the QD strategies employed was reasonably likely to be accurate and appropriate, (Denscombe 2010). I can offer assurances that the research was conducted in accordance with good practice, focusing on elements of consistency, confirmability, and transferability within my methodology. Whilst ensuring that my interpretations, and understandings would not cause any potential bias, or assumptions, that would require an alternative course of action to be taken.
#### **Chapter Five: Ethical considerations**

My ontological and epistemological stance that form the assumptions I bring to my research and position as a researcher, will not be complete without addressing the values and ethics I bring to this research. This chapter sets out the necessary steps taken as a researcher, to consider all ethical issues that might arise, and the required measures put in place to safeguard the participants of this study.

## Introduction

The processes undertaken during this research, have been set out in previous chapters and include how as a researcher I have satisfied both the National Health Service and Educational guidelines when conducting this research. Describing the key issues pertaining to the limitations of using QD and the strategies applied to enhance rigour.

When planning a research proposal the ethical issues (axiology) need to be considered. As a researcher, dealing with human participants, I am bound by duty to act ethically before, during and after my research. To consider the values and ethics that I bring to the research. This study employed various safeguards to ensure the protection and rights of the participants. Disclosing the purpose of the research to all participants, avoid deceiving participants and making them aware of how data will be used was important to my study. Selecting the training location was paramount to ensuring participants' safety, and that no power issues arose in my role as researcher observing the training. In reporting, sharing, and storing data, I have endeavour to avoid disclosing information that would harm my participants.

In accordance with best practice, the conduct of this research was submitted to the NHS Health Research Authority. The selection process, determined that the ethical implications for this study, excluded the use of research involving patient care, and treatments. The following authorities, granted ethical approval:

- Medical Research Council NHS Health Research Authority, confirmed that with no patient involvement, it would not consider this to be a research study.
- Clinical Governance Development Unit, United Lincolnshire Hospitals NHS Trust, confirmed approval and registered the study.
- Ethical approval was received by the School of Social Sciences, Research Ethics Committee, (SREC) Nottingham Trent University, and documentation has been included in the appendices of this thesis.

In compliance with the Data Protection Act (1998), and the Trust's Information Governance Policy and Procedures, the confidentiality of participants was required. This was satisfied through the processes put in place, for use and storage of the data collected, the sharing of images during the study, and subsequent article / journal publications, used in the dissemination of this research. Additional assurance was provided to the Clinical Educators, and participants, through the Information Forms, circulated on 'Day 1' of the Induction week, (Appendix 16). The management of this study, as detailed in the Trusts' Clinical Audit Framework, (pages 165/166) was designed and administered to mitigate any ethical issues.

## **Researcher and participant relationships**

It is widely acknowledged that reducing bias in studies, is crucial to the integrity of the research findings, (Fiori, Endacott and Latour 2018) and that the stories and meanings behind the participants narratives are portrayed without pre-judgement. As

the researcher, I was therefore mindful of my position as senior manager, and as such wanted to minimise any potential bias. An initial meeting with the participants, allowed me to develop a relationship that would embrace the use of participantgenerated photographs, this was viewed as a crucial part of the study, in gathering the necessary data. From their own discussions beforehand, the participants had identified that the training was very much 'hands on' and expressed a keenness to be included in the photographs taken. This request I had not anticipated, but given the collective agreement by all parties, the images would include both the participants, trainers, and equipment. I made a conscious effort, to recognise the potential for implicit coercion in my relationship with the participants, developing a good rapport whilst observing my positional role as a senior manager, was pivotal to conducting my research. As an observer, to the training programme, I had no direct control over the delivery of the training session, or the use of the cameras by the participants, to record their own experiences. In following the core principles of obtaining informed consent, establishing ground rules for the observer and participant, and protecting the privacy of all the participants within an educational environment, I believe this requirement of participant and researcher has been observed. Confirming that my ontological and epistemological stance that form the assumptions I bring to my research and position as a researcher was addressed when considering the values and ethics I bring to the research.

### Participant safety

To protect and care for the participants of this research, I was able to use my knowledge as a registered nurse, to recognise any signs of physical injury or stress, experienced during the research process. The data collection methods used in this

research could not be field-tested, and therefore the researchers' temptation to intervene, when observing unsafe, and or poor practice, during the training activities was acknowledged. To meet a moral accountability, to those being researched, I was able to arrange additional mental health, and wellbeing support from the Trusts' Occupational Health Department, Human Resources and Pastoral Services. Using the Trusts' risk assessment documentation, I assessed the likelihood, for this type of emotional psychological risk to exist, and on what scale of harm, this document was then shared with the Clinical Educators (Appendix 8 Risk Assessment Form).

### Informed consent

Informed consent from the participants, to take part in the research study was considered necessary. This was achieved, by a participants Research Information sheet, and written consent, discussed with them before the study commenced. I also used this meeting as an opportunity to provide information on the research and answer any questions. The participants were advised that they were under no obligation to be involved in the study, and their non-participation would not have a negative outcome, on the completion of their Induction programme.

### Chapter Six: Themes, elements, and their meanings

This chapter provides the analysis of image-based data from my research, that aims to serve as records of reality, as documentary evidence of the participants actions and events they depict. Largely favoured as a qualitative design approach, the images have been interpreted, (Denscombe 2010) and the meanings of which have been produced within the social context of a learning environment.

### Introduction

Securing all necessary permissions, to conduct the study within a healthcare environment, took four months to complete. Following internal and external approval processes, the 11 June 2018, scheduled as an Induction programme, was confirmed as the date for undertaking my research. Of the eleven HCSWs enrolled on the Induction programme, one was male, and ten females, all of whom agreed to take part. The visual materials chosen for this study, were four disposable, single use Kodak cameras, each with 27 exposures. The participants used the cameras to record their experiences of training, and the photographs were then displayed on the equipment maps, for data analysis. Using the elements for interpreting visual materials, Rose (2016) I was able to discern patterns, layers, and connections that provided for a better understanding of the participants perceptions, and sense making of the event. The following table, (Table 5) adapted from Rose (2016) Critical Visual Methodological Framework, defines the 'groupings', which have been analysed, from the photographic descriptions taken from the four equipment maps.

# Table 5.

Photographic description	Number of	Elements assigned
	pictures	
Landscape composition	30	Site of production meaningful to the
Lanuscape composition	39	audience in composition and content
Portrait composition	4	Site of production more detailed focus
T offait composition		conveying a message to audience
		exclusion of participants
Training room – group	43	Site of the audience participant
work		engagement learning knowledge safe
Work		environment shared fellow participants
Equipment used for	/3	Site of the image meaning to the
manual handling		audience visual effect and message
manual nanuling		informative exchange of information
Equipment alone	7	Site of the image communication of
	,	message complex imaginary
		informative exchange of information
Equipment separated into	Λ	Site of the image and production to
narts with attachments		intended audience, focus on safety
		message
Trainer included in the	14	Site of the audience complex imaginary
image		with a view to the side to incorporate
intego		other features
Participant in the role of	28	Site of the audience engagement with
patient seated in a sling or	20	participation central to the role of patient
raising aid		
Images of participants	42	Site of production complex imaginary
group activities		unseen conversation and group
		behaviour communication and activities.
Images of safety features	18	Site of the image and production
		directing viewer to a message
		communicated, instructional.
Participant hoisted	4	Site of production and circulation,
completed movement		participant engagement, confidence
		activity completed.
Participant completed bed	5	Site of production participant
movement with slide		engagement site of circulation intention
sheets		of purpose activity completed.

The next account of the process illustrates the meanings of the images itself, and the associations with events, prior to and after, the moment was captured.

# Analysing visual data- Elements and meanings



# Meanings – formed descriptions common to the displayed images.

	<u>Meanings</u>	Descriptions
Site of production	<u>)</u>	
	Demonstrating technique	Participants- equipment technical
	Specific element of equipment	instruction
	Participant's role patient/carer	
	Participant's role of observer	
	Trainer role of instructor / observer-	J
Site of image		
	Functionality of the equipment Ins	tructional use of equipment
	Message- instructional wit	thin a training environment
	Learning activity	
Site of circulation	_ 	
	Practical learning	Role of patient engaged in
	Participant's role as carer/ patient	practical training within a
		Classroom setting

# Site of audience

Chosen images by participants Safety message Intended audience Chosen images selected to share a safety message for an intended audience

# Meanings- formed descriptions of unseen elements.

Meanings	Descriptions
Site of production	
Spontaneous composition of image	Equipment images
Foreground significant to visual meaning	Message delivered to audience.
Participant's role as photographer	All images captured.
Participant's role of communicator	Informative
Site of image	
Visual meaning	Instructional use of equipment
Unseen communication/ exchange	1:1 role / interaction trainer and
_	participant
Site of circulation	
Intended audience	Role of participant engaged in
Image multiple layers of meaning	practical training within a safe
	Classroom setting
Site of audience	
Chosen images by participant's importance	e "patient may feel imitated by
placed on safety	how complex it looks".
Supported by narrative text captures patient	"servicing tags need to be in date".
experience	_

Relevant to the analysis of written text, Lieblich et al. (1998) interpretative model of meaning, has been used as a tool for narrative analysis. In particular, how the participants have described and explained, the construct of their world. As a combination of both Holistic – content, and Categorical- content, the circumstances surrounding the story have been analysed, and how these meanings are then conveyed, beyond the research setting. Where the story content has been

considered, both explicit and implicit meaning, and specific segments, have been categorised into researcher-defined categories.

In summary, I have been selective in choosing key parts of the data/ analysis and prioritized certain parts over others. The participants multiple images have revealed broader meanings, that offered a reliable, and valid account of their experiences. Providing a visual picture of the links being made, (Denscombe 2010) it also gives some transparency to the process of data analysis. With aspects of the data singled out and described, the next chapter will present relevant findings.

### **Chapter Seven: Research findings**

In previous chapters, I have discussed how my research design was implemented, and the evidence gathered, to support the research hypothesis, and objectives. This chapter presents the key findings obtained from the research. Divided into several sections, to reflect the visual and narrative data produced, each section as its own summary of results, explained and discussed.

#### Overview

The purpose of this study was to explore the experiences of Healthcare Support Workers (HCSWs), attending an Induction Manual Handling Training programme. Provided in an educational environment, this programme forms part of the recruitment process, and is mandatory for all new starters to the Trust. The researcher believed that a better understanding of the experiences obtained by staff, would allow a more informed understanding of the importance of practical training, and patient safety. This research therefore focussed on the practical training given on manual handling aids, and their use in assisting patient transfers. To achieve this, my research design used, disposable cameras handed out to participants to capture their experiences. The photographs and narrative text, presented on the equipment maps were then discussed after the training, within their participant groups. Using visual materials as the primary research tool, had the potential to be problematic, but all the participants engaged in the study. My expectations of this study were that it would provide an opportunity for healthcare staff to communicate their experiences of training. The consensus of the group was that the experience was positive and through the use of visual images and written text, they sought a balance between conversations related to the reality beyond the training setting – that is, the specific

research topic. They also found ways in which to locate themselves in relation to this reality through the interaction of the training setting within their group work. The existence and belief of the practical hands-on approach was extremely rewarding, both in acquiring knowledge but also their growing confidence to use equipment. The established knowledge of using the equipment safely was achieved affirming my interpretative paradigm. An illustration of process of 'deep attentiveness, of empathetic understanding' (Punch & Oancea, 2014) my participants took a spontaneous group photo at the end of the feedback session, to remind them of the event.

The research questions for this study were:

- 1. What are the experiences of Healthcare Support Workers involved in a practical session on an Induction Manual Handling Training programme?
- 2. What are Healthcare Support Workers perceptions and understanding of the term's "risk" and "patient safety" when using lifting devices during the training programme?

Six major findings emerged from this study:

- 1. The participants agreed that the practical training provided a shared experience conducive for learning.
- 2. All participants decided that a hands-on approach to using equipment, provided a safe training environment within which to learn.
- The participants felt confident in the use of equipment, achieved by a positive learning experience.
- Participant interaction with each other when using the equipment, created a sense of working together, and problem solving, to ensure the techniques were carried out safely.

- 5. With the active engagement by participants, evidence of transferable knowledge from theory to practice was demonstrated.
- 6. All participants found that group working provided a collective voice, and a sense of empowerment, to share their experiences.

A breakdown of the findings from this qualitative study and how they addressed the research questions, are set out below.

- Findings 1,2, 3 and finding 6 addressed the first research question, which asked: What are the experiences of Healthcare Support Workers involved in a practical session on an Induction Manual Handling Training programme?
- Finding 4 and finding 5 addressed the second question: What are Healthcare Support Workers perceptions and understanding of the term's "risk" and "patient safety" when using lifting devices during the training programme?

The following account is a discussion of the findings, with writings and photographs that support and explain each of the findings. My emphasis on allowing the participants experiences to speak for themselves, follows through to the findings with Illustrative quotations, and photographs. To portray the multiple perspectives captured, through richness of their language and recorded images.

**Finding 1:** The participants agreed that the practical training provided a shared experience conducive for learning.

My analysis of the equipment maps, and recorded observational notes, have revealed a generic category connected with the exchange of spoken communication. Positive reassurances, and the ability to make physical contact with the training equipment, these forms of engagement provided the participants the confidence, to

ask, and challenge responses to questions raised. A 'hands on' approach to training was considered valuable, and helped to create a shared bond of understanding, between group members. The participants demonstrated their willingness to learn through verbal, and non-verbal signs of communication. The repetition of short words, such as "yeh" "yes" "yep", showed that they were listening to each other, and their trainers. As the programme progressed during the day, conversations became more animated. Full of interest the participants explored, and challenged their knowledge, through lively question-and-answer sessions.



Social changes in behaviours were observed by the researcher, with fellow participants supporting each other in group work. Most notable were those who provided reassuring words, and support such as "that's right" "yes, that's ok", when completing a task. This was also reflected in the writings, shown in the example provided above, which demonstrates an understanding of the social context and environment, and how essential the participants perceived this experience to be. Furthermore, not pressurized by any time constraints, and distractions, the findings identified a developing self-confidence and belief in their own abilities.



This was demonstrated, when participants stepped forward to work with the trainer, on their own or in a small group, for example in applying slings whilst a patient was lying in bed. The equipment map image above, shows evidence of how this was accomplished, and with time made available during the training, these practical skills were practised safely. The intensity of these experiences increased, as the activities became more complex, such as performing a lateral transfer using two flat surfaces i.e., beds. This demonstrates the importance of practical training within groups, and within the social context, is evidence of how a group can transition from listening to actively taking part together. When encouraged by their own experiences, these occurrences provided a valuable source of learning.

**Finding 2:** All participants decided that a hands-on approach to using equipment, provided a safe training environment within which to learn.

The analysis of image-based data has revealed that a large proportion of the images have been chosen, where there are activities that involve group participation. These images are framed with a sense of purpose and appears on further analysis, natural and full of movement. An example, selected below shows the photograph viewed as a landscape format, the colour image captures the active hoist system being prepared in readiness for an upward movement. The content of this frame is full of detail and shows other members of the group observing, and overseeing the tasks being performed. Shown from a side view, the audience is drawn to the equipment, the central mast, and the spreader bar attachment. The participants are seen handling the equipment and operating the controls to raise and lower the hoist cradle.



This activity is not however the focus of attention, centrally positioned the participant is seen placed in a sling, being prepared for hoisting. The participant has assumed the role of patient and as adopted a cradle like position in the sling, to protect their arms, when the hoist is in an upward movement. Of interest, is the participants' facial expression, with arms crossed they are looking down. Their eyes semi closed, suggest a degree of anxiety, in an unfamiliar role. The image-maker in this example has not made the sling the centre of attention, but the group activity, and the facial expressions of those participants involved. The remaining participant confirms this; standing to the left-hand side, she observes her colleague being lifted in the hoist. The image selected, focuses the viewer's attention on a specific element within the social context of the story.

The next illustration, also viewed as a landscape format, shows two participants carrying out a technique of using a hoist sling whilst the patient is seated. A key

feature is the positioning of the image-maker, in relation to the trainer and participants.



The photograph appears to have been taken from a standing position, looking down it captures the sling being checked by the participant, and is shown placed underneath, and over the participants' left knee. The composition is situated centrally, however, much of the activity in this image is taking place to the left. The intended audience would also be aware that the trainer, holding the sling clip in his right hand, is demonstrating the final positioning of the sling before its attachment on to the spreader bar. The participant on his left, is being shown the technique to apply the sling, and from her facial expression, is immersed in observing the practice. Highlighted as a theme, the atmosphere produced from this type of learning, affords a sense of eager anticipation as the participants await the next stage, of the learning process. This photograph also delivers a safety message, rather than bending over, which is considered unsafe practice, the participant is kneeling, thus preventing a posture known as, 'top loading of the spine'. This image shows the importance of face-to-face training, when set in a calm, and relaxed atmosphere amongst colleagues.

In a training environment where practical training is an essential part of the programme content, teamwork, is a key element to group work. This element as a recurring theme, was identified in the photographs displayed on Equipment map 3. In the writings next to the photograph shown below, *"A photograph showing 2 members of staff moving the patient down on the bed using slide sheets"* an additional note reveals *"that if they had a chance to do it again, they would have taken it at a better angle"*.



The image below taken as a landscape format, places one participant and one trainer, central to the participant acting as a patient. The composition of the image is not clear but does show all parties are involved in this event.



The audience viewing, is directed towards the slide sheet equipment, which is placed underneath a participant in preparation for the technique of sliding the participant up the bed. In the background, a participant is observing the practice, and an unseen element linked to the social context of the activity is the focus of attention on the participants' face, waiting for the trainers' command, to ready, steady, slide.

**Finding 3**: The participants felt confident in the use of equipment, achieved by a positive learning experience.

An example of this finding can be shown from the photograph below, a landscape format, this image focuses on the hoist and its spreader bar system. The participant seen holding the spreader bar, is preparing to release the clip mechanism using her left and right thumb.



This technique requires a working knowledge of the equipment, and viewed in the background is the trainers' hand supporting the spreader bar, ready to assist in the release process. The participant would need to be confident in her use of the equipment, to fully appreciate the safety aspects required to hold the attachment in a safe manner. Used in this way the photograph demonstrates an important acknowledgement by the participants to use the equipment confidently. All of those who participated in the research, identified that the shared experience of training was enjoyable. To "grow in confidence", was an important skill expressed by the participants, particularly in using the equipment. Written text showed, how this confidence was translated into words, such as "ensure strap is correctly fastened".



Observations of social behaviour revealed that the participants body postures were visibly more relaxed as the day progressed, and verbal commands, such as "ready steady slide" were spoken without hesitancy. These examples also showed a good understanding and awareness placed on the language used and associated with risk and safe practice. This was observed by the researcher, in the final training scenario of the day. When the trainer, in the role of a patient, collapsed in a confined space. The HCSWs worked together as a group, to retrieve the patient from the confined space to a safe area for further medical assessment. Although this event was not photographed, because all the participants were involved, I observed from a distance the actions of the group. It was a genuine response, to a situation that they would not have been expecting, and would have required them to discuss, problem solve and demonstrate their newfound skills to achieve a safe outcome.

The next image captures the trainer, supporting the ankles of the participant. Placed above two slide sheets, the image appears sharp in its composition and is projecting

a message to the viewer. In the background, the participant in the role of student, is being provided with both verbal and visual instruction on its safe use. Next to this photograph, the participants have added a written text.



"This is a photo ensuring the patient ankles are checked to be over the top of a slide sheet to prevent sheering of the skin."

The message to an intended audience is directed toward patient safety and shows how through the correct application of the slide sheets, skin damage can be prevented. The use of a visual safety message is a powerful medium for explaining cause and effect, and by using images shows a strong indication, that the participants have gained the confidence in using the equipment safely. Displayed in the next image, the focus is directly on the equipment and its central mast and is the strongest indicator of this finding. The image centres on the emergency clip, the area is highlighted by the participant pointing upwards to the red clip where the lever is located. Closer viewing of the image at the bottom left-hand side a small image of a participants' face is visible and looking towards the cradle.



The significance of this is unknown, however, as a researcher this unseen element does signify that a participant has been hoisted and is positioned at ceiling height. More specific knowledge is required to explain this photograph, and its significance to patient safety. The participant has included written text, and no change has been made to its translation:

"This photo shows the emergency clip to lower the patient in the sling in case of the battery running out while in use. This lever is good to lower the patient manually and safely. If we could take this again, we would include the movement of the handle (red plastic at the top of the maxi move)! also including the safety peg."

This image provides to its audience significant detail, on the activity being performed, and the wording reflects that this experience has been particularly important to them. To ensure the safety of the students in this activity, the trainer would have demonstrated, and observed the practice being performed.

A further example can be seen in the next illustration where the participants have been confident to use the equipment. A landscape format this image is viewed towards the front of the raising standing aid, and shows only the equipment, there are no participants present, and the background view is black. The focus of this image is the sling placed over the handlebar, with the arc rest in an elevated position. Also, present but not the main feature, is the kneepad which is attached to the main body of the equipment. Two elements that stand out for the viewer to see, are the sling and arc rest, both of which are essential components in the supporting and lifting of the patient. The image-maker has also captured an important safety feature, the emergency stop/cut-out button, which is distinguishable by its yellow and red colour.

The significance of this image is that the participants have understood all the working parts and its relevance to equipment safety. Fundamentally, its significance shows how theory can be translated into practice through a practical hands-on approach.



**Finding 4:** Participant interaction with each other when using the equipment, created a sense of working together, and problem solving, to ensure the techniques were carried out safely.

This finding can be viewed, through the interpretation of images that capture the insertion and handling of the slings, and associated movements of raising and lowering the hoist systems and standing aids. The illustration below, shows a sling ready to be attached to the spreader bar, with the patient in a seated position. In landscape format, the image includes both the equipment, and the participant involved in the practical activity. The focus is directed towards the hoist cradle handset, which is shown by the participant, holding the handset in her right hand.



Knowledge to use the handset is required, particularly when positioning the cradle, to attach the sling clip, prior to lifting the patient. This photograph also captures an event, caught in the moment of time. This hoist movement would require a series of operator equipment checks, to be performed by a second person.

A further example of this identified theme is shown below, with the participant seated in a chair. To the front and right is the second participant, in a kneeling position. The image focuses on the seated activity taking place and shows the participant holding the sling clip, in her left hand. As a site of production, the participant directs the viewer to the material, that surrounds the participants' back. The sling clip (green tag) indicates the size of the sling, and what the viewers of the photograph will not be aware of, is the padded fabric. This is important, when situating the sling underneath the patients' thigh. The text that accompanies the image, reveals the reason for this, and is evidence of the participant's insightful knowledge.



"We took these photos to correctly demonstrate the positioning of the sling. We would re-take a full body shot of the photo."

The image confirms that the participants have understood the theory information and applied it to practice. An unseen element of the photograph reveals the confidence the participant must have, to carry out this technique safely and to recognise the importance of its final positioning underneath the patients' thigh.

**Finding 5:** With the active engagement by participants, evidence of transferable knowledge from theory to practice was demonstrated.



This type of practical experience, in a classroom setting prior to working on the wards, is distinctive for HCSWs, and is only made possible when the training venue, resources, and team are booked in advance. This research has revealed, through the images selected, active participant engagement in many of the equipment activities. This engagement reaffirms, that from the theory provided, the participants have understood the skills required to demonstrate in practice, the techniques needed. Also, how the participants have used the practical training, to embrace several different types of roles, i.e., learner, patient, carer, teacher, and observer. The photographs have shown moments too, where nonverbal communications have taken place between the participants, these include facial expressions of apprehension, focused attention, and relaxed postures, when carrying out the tasks

assigned to them. The images of participants taking the role of a patient, was interesting, with some displaying signs of concentration, while others were more relaxed within the social context of their world. The portrait image below, was singled out by the participants, as an example, where they agreed that the knowledge from the theory session, had been demonstrated in practice. This photograph, shows the participant as a patient, seated in a chair using a standing aid.



With the hands placed on to the support bar, the viewer sees the participant ready to stand. The expression on the participants' face, shows concentration, whilst listening to her colleague, who is positioned at the side but out of camera shot. Taking part in this type of activity, is an opportunity for HCSWs to experience and understand what a patient might fear, when being placed in the equipment. Further examples, with written text, show the participants using items of equipment.

"Photo shows teamwork and support provided to the patient. This is the step of the patient roll/ tilt. This shows of the patient is being supported on their hips whilst being

supported with their back. The patients' back and other areas can be washed using this technique."



An unseen and positive element, viewed on the left-hand side of the image, shows the lowered stance, adopted by the participant. For the audience, the composition of this image shows, the participant in a crouched position to tilt the patients' hips, which is necessary to ensure the slide sheet movement, is completed safely. This action demonstrates a strong link between the safe use of patient handling aids, and the patients' safety, when this task was being performed.

**Finding 6:** All participants found that group working provided a collective voice, and a sense of empowerment, to share their experiences.

The content of the practical programme for manual handling, provided the participants with an opportunity to work together, exchange ideas, solve case study scenarios, whilst immersing themselves, in the use of the equipment. For many of the participants, before joining the Trust, they may not have had previous experience of patient handling equipment. Practical training provides a common connection for the participants, and the findings suggest that such exposure, would help them to overcome the anxieties of a new workplace environment. Detailed analysis of the data, evidenced below, revealed several key themes relating to safety, information shared and communication of knowledge.



Collectively all the equipment maps, produced a very personal, and meaningful record of events, and experiences, which portrayed the activities undertaken by the participants. A combination of both landscape, and portrait images, were chosen and

displayed by the participants in such a way, for an intended audience to view. The participants recognised this process, not only for themselves but collectively their experiences could be shared with other health professionals, to assist in their learning. This demonstrates that the participants felt empowered by the training, and evidence of this was shown, through the narrative text, and images selected. The viewer to the photograph, also becomes part of this discussion, and what is distinctive are the captured meanings. Portrayed through the composition of the image, a focus on a specific object, such as, a safety feature or moving part. This observation was an important find, and identifying the text found on the equipment maps, confirmed that the participants had used the arrows to direct the viewer, from one statement to the next and so on. The significance of sharing this message of safety, using equipment correctly was identified as being foremost in the participant's thoughts, and was translated by using photographs and narrative text. This form of written expression was a unique aspect of the study, and allowed the participants to relive their training experiences, producing many thoughtful and honest accounts. This completes the discussion on the six major findings of the research. The next part of the chapter sets out the findings from analysis of the participant-generated equipment maps.

### Findings from the participant-generated equipment maps.

The equipment maps were the principal design tool used, to provide a platform from which participants were able to present their photographs and written text. The conversations generated, around these photographs confirmed the findings from a study undertaken by Frith and Harcourt (2007), the images provided a richness to the data collected. The photographs below, illustrate visual examples together with

the narrative text, provided by the participants. Some of the sentences were not grammatically correct, and for the purposes of creditability and trustworthiness, the extracts quoted in this document have not been altered.

## Equipment map one.



## MAXI MOVE

- 17 individual paragraphs handwritten in biro pen.
- 0 individual paragraphs handwritten in bold marker pen.
- 5 arrows bold marker pen connecting paragraphs.
- 12 photographs- landscape.

"This photo shows the electronic controls and the battery situation for the maxi move".

"This photo represents a correct positioning of the patient once hoisted. As you see the correct sized sling is being used as the patient is not hanging out/falling out of the sling"

"This photo shows the use of the leg straps and the use of the dignity straps. The dignity strap is between the legs".

"We ensure we are using the correct size of equipment for the patient i.e., sling".

## Findings 4 and 5:

Key references have been made to the importance of sling positioning, this demonstrates that the participants have understood the instructions provided and applied in practice the techniques required. The association with equipment usage, and the correct application of slings, to prevent skin damage, are good indicators of acquired learning, to the specific aspects of safety. Moving from general to specific equipment safety, images from Equipment map one, reveal the precise technical actions required, on the use of the emergency clip, this is evidence of enhanced learning, beneficial to both patient, and staff safety. Key themes show that specific and connecting segments of the story content, are portrayed using the images, that reflect the importance assigned to equipment safety, patient comfort, and dignity by the participants.

### Equipment map two.



- 8 individual paragraphs handwritten in bold marker pen.
- 2 equipment identification handwritten in bold marker pen.
- 5 individual paragraphs handwritten in biro pen.
- 14 arrows bold marker pen connecting paragraphs and photos.
- 11 photographs 3 portrait and 8 landscape.

"Ensure strap is correctly fastened".

"Showing a patient how to correctly place their foot on the plate this supports and

encourages the patient".

"Check brakes are on before asking patient to pull up(stand)"

"Patients may feel intimidated by how complex it looks".
# Findings 3, 4, 5 and 6

Key references have been made to the importance of using the equipment correctly and demonstrates a confidence in the practical application of new skills. The text also reveals team communication, working together to ensure the safety of the patient and provides further evidence of a collective voice in communicating their instructions. The additional reference to patient empathy and understanding is a positive feature, that embraces the role of the learner as the patient, and important to how this information is then shared in the ward clinical setting. Key themes show specific and connecting segments of the story content. Relating to patient reassurance through the communication of instruction, a hands-on practical touch to provide comfort and security, and understanding for the patient using a mechanical device.

## Equipment map three.



- 0 individual paragraphs handwritten in bold marker pen.
- 0 equipment identification handwritten in bold marker pen.
- 17 individual paragraphs handwritten in biro pen.
- 2 arrows biro pen connecting paragraphs and photos.
- Photographs 1 portrait and 13 landscape.

"This is a photo ensuring the patients ankles are checked to be over the top of a slide sheet to prevent sheering of the skin".

"We did not include a photo of the brakes. If we were to take these photos again the mechanical aspects of the bed would have been shown"

Patient has been moved up the bed and slide sheet has been removed safely. We have now sat the patient up ready for their lunch".

"A photograph showing 2 members of staff moving the patient down on the bed using slide sheets".

"This is the start of the tilt/ log roll. Teamwork is essential when moving patients. If we were to retake this photograph, we would take it at a better angle".

# Findings 3, 4, 5 and 6

Key references have been made within the text to team working and problem solving to ensure the safety of the patient ankles when using slide sheets. This illustrates a transference of knowledge in the use of specific techniques. The group work also provided an example of motivation and the learning process of accomplishing a task safely, i.e., tilt/ log roll text. Taken to the next level, the participants have reflected on the image taken and their contribution to the task and have stated their thoughts by adding the text of retaking the photograph at a better angle. This suggests a fundamental factor needed for effective and useful learning. Key themes show

specific and connecting segments of the story content, relating to staff instruction on the movement of a patient, and related patient safety. In this case focusing on potential risks caused by sheering of the skin from contact with bed sheets. Noteworthy is the recognition, by the participants that certain photos were not taken and if given the opportunity again, certain aspects of equipment safety would have been included and or at a better angle.

# Equipment map four

- 6 individual paragraphs handwritten in bold marker pen.
- 6 equipment identification handwritten in bold marker pen.

- 6 arrows bold maker pen connecting paragraphs in ascending order situated alongside individual photos.
- 6 photographs all landscape

"Step 1 Ensure the equipment is clean and maintained for use". "Step 2 Assure the patient is calm as many of our frail and elderly patients will be nervous".

"Step 5 The patient is standing and now can be moved or try to move independently or with assistance".

"Step 6 at the end of the examination or when then patient begins to feel uncomfortable, they can be quickly transported back to resting position".

### Findings 1, 3, 5 and 6:

Grouping and clustering of images revealed a heighten sense of context, and of relevance to the participants was how they wanted to set out their photographs and which ones to share was important. The display of images supported by narrative text discloses the engagement and honesty the participants had in sharing their experiences. The attention to detail in the display of images and text provides an insight into the importance placed on the messages. Key themes specific to this map show a sequence to the story content relating to a "step by Sara step" process for using the Sara Stedy standing aid. Each instruction has been assigned a photo and for the readers benefit an arrow directs the flow of events. The written text also features a strong emphasis on patient comfort and reassurance. This informs the reader the importance placed by the participants on capturing information taught at the training session. The participants demonstrated this experience positively, through a unique style of using both visual and written text.

The below illustration captures all the maps placed together and recorded by the participants as finished work. The work produced has been retained as part of the data collection and protection procedures set out in Chapter Five of this document.



The next part of this chapter worthy of more detailed discussion is participant ownership and voice. A key finding of my research (Finding six), the reference to and inclusion of participant ownership through their conversations, (Pyle 2013) is an important contribution to the quality of the meanings placed on the training experience, by the participants. It is also evidence to the trust worthiness of my study, and respondent's validation of the events.

Taking an active role in group work, was seen by the participants as an important part of the training experience. The participants of this study would not have met

prior to the Induction programme, and therefore, to achieve a level of trust within the group, that uses equipment to lift and lower is significant. These events were considered very important to their learning experience and were most evident when group work was taking place. The following examples, recorded in my observational notes, have been selected, for further discussion.

#### Participants using the maxi move hoist.

"how do you feel", "tipped back head slightly", "you know how it feels", "watch your toes", "once lifted do you turn", "too much height", "yes I can see", "ok", "make space, probably need to go back", "brakes on or off", "now they are on", "can I try, controlled movement lower, lovely. Let's measure. Yep from there lovely. Yep think so yes label on back".

#### Participants using slide sheets and bed work.

" not sure what to do, ok thank you ok", "do you want to push or pull", "we will go down first, better yes, ready steady slide", "sheering of skin right", "trying to work it out-yes, yeh oh yeh", "ready working together" " place your hand in a little that's better yeh", "that's better", " I like it".

#### Participants using Sara Stedy.

"try to push through, check strap, that's the Velcro- not used this before", "go up normally", "that feels better", "easy to move", "depends on patient assessment checklist", "move your feet", "looks fun like a cross trainer", "do you have same sling size", "hoist levels out".

The findings have revealed that the focus of conversation was largely directed to the use of manual handling equipment aids. The flow of conversation was spontaneous due to the small groups, and in these surroundings their disclosures were, open and

honest. A key feature was the participants agreement, on points of view relating to significant parts of the equipment, and the techniques required. Predominantly, this was evident when the needs of patient safety were required, such as the application of sling clips on to the equipment spreader bar. As the participants became more confident, relaxed spoken communication within groups was observed. A reciprocal relationship during group activity events, provided a moment of humour which I have included:

#### "Looks fun like a cross trainer".

The findings suggest that the participants actively engaged throughout the process and with the use of visual research methods, written, and spoken texts, participants were able to provide feedback on their experiences. Observing these encounters was worthwhile, and as new starters, the HCSWs eagerly engaged with activities of the training programme. Participating in group work, the conversations between participants developed through the session. Expressed in the style of their choosing, such terms were used, "*Sling hoist covering bottom area*", "make space, *probably need to go back*", "brakes on or off". Applied in practice these instructions were understood and carried out, and as part of their equipment checks demonstrated an awareness of both risk and patient safety.

In conclusion this chapter has presented six key findings, uncovered by this study. The findings have been discussed according to the listed six elements, incorporating evidence from the data collected, using photo images, narrative text, and researcher observational notes. The data has revealed evidence of the participants experiences of patient handling training, whilst attending an Induction programme.

As is typical of QD research, extensive samples of photos and narrative text from participants have been included in the thesis. By using the participants own images, and their words, I have aimed to provide an accurate representation of the research study and its setting.

Through interpretivists approach the interaction with the participants has generated knowledge (epistemological), formulated by the images taken and narrative shared. The image below of the data collected verifies how they have sought to move beyond reality of training to the feedback session.



The primary finding of this study (which addressed the first research question) was that the participants agreed that the practical training, provided a shared experience conducive for learning. This finding emanated from the meaningful descriptions, and photographs of the participants, using the techniques demonstrated, to carry out safe movements. They said that being practical and hands on, they understood what was

expected and put it into practice. "Very practical and hands on, allowed me to learn in a different way rather than being in a classroom setting".

The study's second finding (which addressed the second research question) was that all participants decided that a hands-on approach to using equipment, provided a safe training environment within which to practice and learn. Achieving this safe place, enabled the participants to experiment and ultimately use the equipment confidently and safely. Reference to items of equipment listed in the text, for example, "ensure strap is correctly fastened", is evidence of their understanding and demonstrated when carried out in practice. Photographs also showed how the participants recognised key safety features, important to the equipment usage and maintenance. This also directly links to the findings 3 and 5 of this study. A surprise find was the type of conversations shared in their peer groups. The conversations revealed complex levels of information about how the equipment worked and demonstrated the focus placed on the safety of the devices being used, which supports finding six. In the interpretive paradigm the crucial purpose of research, is obtaining insightful and in-depth information this has been realised.

Thus, confirming that the practical aspects of the training programme, provided the participants with the motivation and empowerment, to use their knowledge to operate the equipment safely.

#### Chapter Eight: How the findings relate to the literature review

The previous chapter has provided interpretative insights into the findings of this study. The purpose of this chapter is to provide a more holistic conversation as to how these findings relate to the literature explanations, for this field of inquiry and will conclude with setting out the opportunities for further research.

In establishing how the findings relate to the body of knowledge, I believe I have established outcomes that confirm practical training for HCSWs is significant to providing the necessary skills required, for the moving and handling of patients. The findings of this study revealed that the participants positive experience was directly associated with the practical hands-on approach to using equipment. A deep connection to learning, (Gopalan et al. 2017) through a motivation and learning process, provides students with a persuasive feeling of positivity, to accomplish a task or activity to its end. This theoretical concept is demonstrated in my research by the participants energy, and application to performing their group activity tasks. This study confirms that a practical approach to completing a task, even though the task may be challenging, reflects a contribution to shared knowledge. Active engagement, collaboration, and recognition are among the fundamental factors highlighted in this research, for effective and useful learning. Furthermore, this type of training must be made available to all healthcare staff within health and social care practice, with further research required, to establish specific learning styles for key groups such as HCSWs. This research advocates the use of visual research methods to capture the data, allowing interconnectivity between experience and reality, that creates an opening for active dialogue, between researcher, and participant.

#### How findings relate to my own assumptions about the study.

The findings of this study confirmed my own assumptions related to practical training, and in particular the contribution that healthcare support workers can make, to a training programme. It confirmed the importance of providing a practical training session, delivered in a familiar, and safe environment.

A surprise find was the participant's own recognition and contribution to their role in delivering key safety messages. A role that is critical, to the delivery of safe patient care at ward/ department level. The findings confirmed that HCSWs have a 'voice', that should be heard, to promote the values of patient handling practice. With the opportunity to express these experiences, the participants enjoyed their involvement and were all actively engaged in the research. Using direct quotes, to illustrate the experiences of the participants during practical training, key themes have been identified and discussed to highlight similarities, and differences. Data analysis has occurred using Rose's (2016), Critical Methodological Framework, Keats's (2009), analysis of the text, and Lieblich et al. (1998) Interpretative models for meaning. Analysis has shown that the participants underwent a positive process of engagement and interaction, with the equipment, developing confidence to take on tasks independently of the trainer. In the next discussion, the research aims, and objectives are revisited, with a reflection on the conceptual framework that provided a theoretical lens, through which to view, the participant's experiences.

### Original contribution to knowledge

The original contribution that this thesis brings to the existing knowledge base of informing practical patient handling training, is summarised. This thesis has revealed a unique understanding of healthcare support workers experiences, during manual

handling training. The photographs have captured a sense of purpose, and movement to the activities performed by the participants. The findings confirmed that a 'hands on' approach to learning, enabled the participants to develop their skills to become confident and proficient in the use of manual handling aids. Awareness of patient safety and dignity are crucial elements when assessing the application of techniques, this was improved with the opportunity of taking on the role of a patient during the moving and handling procedures.

Using QD could be useful to educationalists in the field of manual handling and patient safety, to obtaining straight answers to questions of specific relevance to practitioners and policy makers, (Sandelowski, 2000). Also, encapsulating a broader role of the researching professional as change maker in wider society, (Burnard et al. 2019; Costley 2019) such research applications could benefit patients, and healthcare staff, in other professional practices.

#### Limitations.

To the author's knowledge this is the first study to use participants photographs, and narrative text, to explore their practical patient handling experiences, at an Induction programme. This study contains however certain limiting conditions, some of which are related to the study's inherent research design. Careful thought has been given to minimizing the impact and subjectivity of any potential bias, regarding my role as a health and safety practitioner working in a healthcare setting, and as a novice researcher. Due to the limited sample size and unique study design, responses could have influenced the findings. The preparation taken in the design method, to ensure the environment was conducive, and the instructions provided to the participants in using the data collection tools, was effective in this regard. The

delimitations of this study are also recognised as the conditions, and parameters, intentionally set to limit the scope of the study. A non-systematic review was conducted due to time and financial constraints, using QD as the method of choice, however the experiences of HCSWs undertaking manual handling training was realised. Focusing on healthcare support workers the study was conducted in one research setting, and collecting data was limited to the duration of the Induction programme. This may have prevented wider data collection and as such extrapolating the findings to other populations should therefore be done with caution. This research has endeavoured to convey the overall essence of the study, in the context in which it occurred, and further research looking into the experiences of a larger sample is indicated, (Creswell 2007). Has a method of choice, I have discovered Qualitative Design is alive and well, (Sandelowski 2000) and as proven to be a valuable and distinctive component to my research.

The next section considers the current discussions taking place in the field of manual handling, through study groups, conferences, and peer dialogue. Relating to this I have set out as a research agenda, my own specific recommendations for further investigation.

### **Research agenda**

The development over the last twenty years within the field of manual handling has been dramatic, and with its development many challenges to the role of safer patient handling in health and social care. Key debates being discussed at the local network groups, and at Conference 2023, for members of the National Back Exchange, include the following:

- The need for more practice-based guidance supported by research, and legislation, on transfer movements associated with profiling beds, and different heights trolleys.
- A judgement to support the levels of risk taken by care workers, specific to early mobilization of patients with co-morbidity problems. For example, cardiac patients presenting with weight related mobility problems, and the role of early rehabilitation with handling aids.
- With limitations on the training provision, experienced in the Acute setting, there is a move towards external consultancy-based services. Not favoured by Manual Handling Advisors, budgeting for this type of training, however, is constantly being evaluated against cost improvements programmes.

Nationally, there is continuing work to provide safer methods of handling for older people, particularly those who have fallen during a hospital stay, and on examination have signs of injury. With the primary focus, driven by guidance from Falls in older people, National Institute of Clinical Excellence Guideline [QS86] published in 2015, Manual Handling Advisors are being approached, to consider safer manual handling methods as part of the post falls protocol to lift a patient. The use of Air-assisted devices, (inflated mattresses) have been implemented in many hospital Trusts, together with scoop stretches to provide different methods of clinical intervention post assessment of the fall. The Health & Safety Executive (HSE) continue to visit health & social care settings to promote safer manual handling, post their summary report on Work-related Musculoskeletal Disorders, 2018 (WRMSDs) a tri-sector exploration. With opportunities for raising awareness, and profile of WRMSDs, the HSE, are considering the use of behavioural change techniques, to use the correct equipment when it is provided for. Currently being conducted in a joint UK/US study,

an assessment of environmental risks in community settings, is being looked at in relation to the activities carried out by community care staff within a patient's home. Whilst the conversations on manual handling of people are encouraging, the investment in safer systems of work, and the provision of sufficient and suitable moving and handling equipment, will continue to be a challenge but essential to ensuring the risks are reduced to the lowest level reasonably practicable. This study highlighted practical hands-on training is pivotal to providing an enhanced experience for HCSWs. However, the contribution to the body of knowledge in HCSW training, from this study's unique perspective, is not fully reflected in existing literature. As the author of this study, I am proposing five priority areas for investigation, that could significantly contribute to the ongoing knowledge of patient handling training.

- Context specific- the experiences of HCSWs have shown positive responses to using equipment, to learn practical skills. With a focus directed to equipment safety both in its usage, and application to moving and handling, the participants felt empowered to perform the tasks in group work. Further discussion is proposed, to broaden the conversation with HCSWs input, to fully understand their training needs during a practical session.
- 2. Creating a safe training environment- undeniably a safe training environment minimizes the risk of harm, and anxieties relating to practising with equipment. Proposing mechanisms to protect training environments as a safe place, protected time to attend, and financial resources to equip the facilities to a national standard, is crucial to supporting a fully inclusive education programme.

- 3. Addressing HCSWs contribution to training strategy and policy- the findings of my research revealed the importance of including practical elements in training programmes. The contribution made by HCSWs is necessary to ensure that such programmes continue to provide elements, that enable healthcare workers to fully absorb knowledge, through a hands-on approach. National and local conversations, on professional development must include representation from HCSWs when developing policy and strategy.
- 4. Technology-driven innovations- equipment training aids such as hoists play an essential role in the practising of techniques, and development of core skills necessary, to the safer handling of patients. This study has confirmed these experiences, to be positive, and empowering. Educational preparations for healthcare workers must include, the use of equipment, and technology systems, which is fundamental to the shaping of a safer healthcare system.
- 5. Advocates of patient care through safe manual handling practices-HCSWs have a crucial role in the delivery of safe nursing care. To build this knowledge they serve as a backbone of the healthcare system and should be the allies to a patients' positive experience of their hospital journey.

In this study I am proposing that the five priority areas listed for future research, are a springboard for discussion. This research fashioned from literature, and a chosen conceptual framework anchored from human experiences, and behaviours, would better equip our healthcare workers to deliver, harm free care.

#### **Opportunities for Further Research.**

Prior to commencing this research, I considered how this study's' findings would contribute to existing knowledge, in the field of patient handling training, and enable other professionals, to act upon these findings.

The use of visual research methods was an effective methodology for this research; it produced a range of data for analysis, resulting in some unexpected surprises and finds. Which allowed me to form several conclusions, and recommendations, that can advance the profile of patient handling training. Beyond the dissertation, and in contemplating new projects, the findings of this research should be shared with a broader audience. I have already presented my findings through poster presentations (discussed in more depth in Document 6) at NTU Doctoral Student Research Festivals, and as a keynote speaker at the National Back Exchange, both of which provided an opportunity to explain my research and receive feedback from professional colleagues. From fieldwork experience to a published journal article, pertinent to my field of interest this would be an opportunity worthy of consideration. Locally, I intend to share my findings with the NHS Trust involved in this study, and in partnership with the Clinical Educators, Manual Handling Advisor and Trainers, explore different approaches to the delivery of practical training, that could be implemented across healthcare specialities.

Future research, which would build on my findings relating to *Context specific- the experiences of HCSWs have shown positive responses to using equipment, to learn practical skills* include the development of a competency-based skill set in the application of slide sheets. Using the QD method the study would focus on HCSWs as the sample group. Undertaken in a training venue during a mandatory training session, a photo video would be used to record the equipment competency skills observed and tested. Drawing upon an existing methodology the checklist would

include instruction on assessment and insertion of slide sheet (s). The observed competency would be recorded as a tool for participant recall and feedback. After the training session the participants would be issued with a camera to record their own identified training given to their colleagues in the workplace. The time frame of the study would be determined with key stakeholders from the training department and ward managers. Executing the study through interpretivists approach the aim of this study would be to discover whether the learnt patient handling competancy skills, have empowered the participants to pass on their knowledge to others. Generating understanding that best supports patients, and staff through the psychological aspects of patient safety, (Tingle and Bark 2011) would be interesting, and add another dimension to this field of research. My ontological and epistemological stance that form the assumptions I would bring to this research and position as a researcher, the specific topic would require addressing the values and ethics of carry out a study within a hospital setting. Dealing with human participants inclusive of patients and staff confidentiality and anonymity would be paramount. In summary, this chapter has discussed and explored the findings in relation to the research questions, from which consideration as been given to how the recommendations could be implemented. The next chapter provides a reflective piece of my professional doctorate experience.

Chapter Nine: 'Reflection - the professional doctorate experience'.

#### Introduction

This chapter provides a consolidation of personal thoughts, and experiences on the Professional Doctorate Course, and the journey taken to achieve the key milestones set, noting some surprises along the way.

Reflecting on my own experiences (explored more fully in Document 6), I discovered that I have embarked on a professional journey of becoming a researching practitioner, embracing new experiences, that have formed the framework of the research process. Exploring practice, understanding and feelings, a recognition and attention to the corporal situatedness and context of human beings becoming professional, (Barnard 2017, p. 21). Skills that have enabled me to learn and practise new skillsets and make many decisions central to the research design. The study's participants became a central part of the research, and immersed within their training, I have observed participants in their social world. Revealing a range of shared emotions, from anxiety to eager anticipation, the participants worked together during the practical activities. The excitement in seeing their images for the first time, was a pivotal moment to witness. The participants level of interest, and willingness to take part in the research was surprising but worth the time, and energy invested. A greater focus on reflexivity, has highlighted the importance of considering the potential impacts of the choices made, whilst conducting this research and writing the dissertation. Translating the principles into practice, I view my role as not only shaping and navigating my own professional development, but also "... as a catalyst for transformative change and for knowledge creation and knowledge mobilisation" (Burnard 2019, p. 51).

### Chapter Ten: Conclusions

### Introduction

This chapter provides a conclusion to this research and will complete my thesis. The purpose of this study was to explore the experiences of HCSWs undertaking practical training on an Induction programme, within an acute hospital Trust. The researcher believed that a better understanding of the experiences gained by staff, would allow a more informed understanding of the importance of practical training, and patient safety.

Articulating my ontology and epistemological orientation as a researcher I have taken an interpretivists approach using Qualitative Design to execute the study. This research therefore focussed on the practical training given in the use of manual handling aids, in assisting patient transfers. In the understanding that practical hands-on training was a positive and rewarding experience. Which enhanced their knowledge of using equipment safely.

The conclusions from this study, followed the research questions, set out below:

- 1. What are the Healthcare support Workers' experiences of practical training whilst attending an Induction Manual Handling Training programme?
- 2. What are Healthcare support Worker's perceptions and understanding of the term's "risk" and "patient safety" when using lifting devices during the training programme?

Although it is widely accepted that patient handling tasks are distinctively challenging, because of the changing needs of a patients' physical and medical condition, there is paucity of evidence in how this can be addressed, through practical interventions, such as training. With the introduction of technology, such as

lifting devices, this introduces the potential for new, and different errors, and therefore, practical training, is an essential measure, to preventing patient harm from lifting manoeuvres. The findings of this study showed, that the HCSWs perceived their training as a positive experience, and that a hands-on approach to using equipment, created a safe environment to learn. Feeling empowered and motivated to share these experiences with their colleagues, open conversations were exchanged, on equipment safety, and practice. From the rich data produced by the participants, key visual themes were revealed, (Rose 2013), illustrating their experiences of using the equipment during training. Using Keats (2009) and Lieblich et al. (1998), interpretative models of meaning, the complexity of understanding spoken, and written text has been explained, and verified, as valuable design tools, unique to my research. The results of this study have indicated that, practical training was beneficial to the participants in their learning experience. This was demonstrated through their recognition of safe practices, such as sling positioning prior to hoisting. This study further identified the positive process of role play, in the engagement, and interaction with the equipment, with participants developing confidence to take on tasks independently of the trainer. The results of this study, prompt further consideration of the impact of training on staff and patients, and whether the programme content used by healthcare organisations support the needs of the workforce. Recognising the limitations of this small-scale study, the methodological framework I have used may resonate with other fields of nursing, and healthcare professionals, within various contexts in which they work. Uncovering potential areas of interest that could be explored in subsequent research. The study recommendations provide achievable suggestions, that could be implemented by using practical training activities, to develop novel approaches to engaging with

relevant manual handling information. When considering my practice, I have felt it essential to acknowledge my role as the researching professional, and the strategies used to identify the evolving processes of this research. I also believe that I have shown an awareness of key challenges, whilst acknowledging the desire for a positive outcome. The knowledge gained from the research process, reflects the participant's experiences from their own perspective. A detailed reflexive account of my learning and development, on this doctoral journey have been presented, as Document 6. This journey has reinvigorated my passion- my identity, to provide a lead practitioner voice, through which others can share their concerns. In summary this chapter as provided trustworthy conclusions, and actionable recommendations, to encourage you as a reader, to think more deeply about the findings of this study and its application in terms of future research and policy. Photographs have provided a means for the participants to engage in conversation, their experiences of practical training. Therefore, it is appropriate that the closing words should be theirs.

"Enlightening", "enjoyable" and "we worked well as a group". "Very practical and hands on".

Research- participants and researcher, a final photo



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