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A collective case study to critically evaluate the educational preparation of registered nurses in Higher Education institutions in relation to pressure ulcer assessment and identification, specifically focusing on skin tone diversity.

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Acknowledgement

"Education will always remain a key instrument for dismantling ignorance"
Dr. Jason Arday

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Abstract

Background

As a discipline, nursing espouses ideologies of inclusion, equity and valuing diversity. However, little is known about how these ideologies translate into clinical care. Pressure ulcer prevention is a routine aspect of nursing care; yet there is evidence of inequity in relation to patient assessment and clinical care, with a higher prevalence of pressure ulcers in people with dark skin tones. Despite limited literature being available surrounding the topic of pressure ulcers and skin tone diversity, it remains the responsibility of nurse educators to address contemporary issues and health inequity within the nursing curriculum to ensure that the teaching of pressure ulcer prevention is inclusive.

Aim

The aim of the study was to critically evaluate the educational preparation of registered nurses in Higher Education institutions in relation to pressure ulcer assessment and identification, particularly focusing on skin tone diversity.

Method

A sequential mixed method collective case study design has been applied. The first phase of the study, after the development of an observation and documentary analysis tool, assessed whether pressure ulcer identification and assessment in undergraduate nurse education programmes considered skin tone diversity through the analysis of educational material and teaching observations at five Higher Education institutions in England. The Higher Education institutions were recruited through a purposive sample, following ethical approval (University Research Ethics Committee Registration

No: 171077). The preliminary findings informed the second phase of the study as per the requirements of a sequential mixed method study (Creswell, 2014). The second phase included semi-structured interviews with a nurse educator and focus groups with students at each of the previously selected Higher Education institutions. Informed consent was obtained before data collection and participants were informed that involvement in the study would not have an impact on either their employment or their educational programme.

Findings

The first documentary analysis phase of the study confirmed all Higher Education institutes overwhelmingly directed teaching and learning activities about pressure ulcers towards people with light skin tones. Observation of teaching indicated all teaching sessions only contained brief, separate and superficial information on people with dark skin tones and pressure ulcers. There was no discursive language or awareness of colour or colour blindness. In the second phase of the study, classroom learning was predominately framed through a white lens with White normativity being strongly reinforced through teaching and learning activities. This reinforcement of White normativity was evidenced through four main themes:

i) dominance of whiteness in the teaching and learning of pressure ulcers in undergraduate nurse education,
ii) the impact and implications of whiteness as the norm in pressure ulcer teaching on student nurses,
iii) the role of external inputs on the teaching and learning of pressure ulcers in on-campus undergraduate nurse education

iv) suggestions for change in educational practice of skin tone diversity: improvements within the classroom.

Conclusion

Nurses responsible for the design and delivery of teaching and learning experiences for students of nursing need to ensure meaningful teaching and learning experiences that facilitate future nurses to interrogate their complicity within a system of White dominance. Anti-racist pedagogy and the radical critique of all teaching and learning activities are needed to help explore, improve and meaningfully include skin tone diversity and inclusivity in nurse education.

Table of contents

List of figures

List of tables

List of abbreviations

CINAHL	Citation Index for Nursing and Allied Health Literature
DOTT	Diversity Observation Teaching Tool
EBSCO	Elton B. Stephens Co.
EPUAP	European Pressure Ulcer Advisory Panel
MDS	Minimal Data Set
MEDLINE	Medical Literature Analysis and Retrieval System Online
MeSH	Medical Subject Headings
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
NMC	Nursing and Midwifery Council
NPUAP	National Pressure Ulcer Advisory Panel
NPIAP	National Pressure Injury Advisory Panel
PPPIA	Pan-Pacific Pressure Injury Alliance
PUs	Pressure ulcers
PRISMA	Preferred Reporting Items for Systematic reviews and Meta-Analyses
UK	United Kingdom
UREC	University Research Ethics Committee
US	United States
USA	United States of America

Glossary

Acculturation	The process of cultural and psychological adaptation to a different culture
Anti-racist	Anti-racism is an active and conscious effort to work against multidimensional aspects of racism.
Anti-discriminatory practice	Any practice meant to counter discrimination and promote diversity whilst recognising the value of difference equality by introducing anti-discrimination policies in the workplace and in care settings.
Black and Brown people	People presenting with visual features and/or black and brown skin tones (Fitzpatrick skin type iii-vi (Fitzpatrick, 1988).
Colour blindness	The idea that race does not matter and everyone is treated equally no matter of their colour.
Dark skin tones	A person with a Fitzpatrick skin type iii-vi (Fitzpatrick, 1988).
Darkly pigmented skin	A term frequently used in policies to refer to people with a dark skin tone. Refer to Dark skin tone.
Disparity	Difference of some kind not related to unfairness.
Equality	Ensuring that all people get the same things or treatment in order to enjoy full, healthy lives.
Equity	Understanding people and provide them with what they need to enjoy full, healthy lives
Ethnic minorities	All ethnic groups except the White British group (UK Government, 2021)
Institutional racism	A set of practices that discriminate based on race.

Nurse educator	Also known as nurse academic. This role is that of a registered nurse teaching in or employed by a Higher Education institution and educating the future workforce.
Political correctness	General agreements about the language that seems intended to give the least amount of potential offence.
Race	A social construct where humans are grouped together based on shared physical qualities into categories.
Racism	A belief that membership of a particular racial or ethnic group fundamentally determines human traits and capacities and that these differences, typically related to a minority or marginalised group are seen to be inferior to another race.
Skin tone	The genetically endowed amount of melanin in a person's epidermis (the outermost layer of skin).
Systemic racism	A form of racism that is embedded in everyday thinking by groups with power at a systems level of society or an organisation.
White fragility	'discomfort and defensiveness on the part of a White person when confronted by information about racial inequality and injustice' (Di Angelo, 2018, p2).
White normativity	To see White ways of knowing and being as the norm, with people not perceived as White to a deviation to this norm.
White privilege	A built-in advantage of being a member of the dominant race which is separate from one's level of income or effort. One of the many social advantages, benefits and courtesies of White privilege is that White people do not need to consider certain issues and topics including the realities of racism.
White supremacy	The belief that White people are superior to those of other races and thus should dominate them.
Whiteness	A social construct that embraces White culture and ideology as the norm due to it being seen as the dominant race.

List of dissemination outcomes

Publications

Oozageer Gunowa, N., Hutchinson, M., Brooke, J., Aveyard, H. and Jackson, D. (2021) 'Pressure injuries and skin tone diversity in undergraduate nurse education: Qualitative perspectives from a mixed methods study'*, Journal of Advanced Nursing,* 00, pp. 1– 14. doi: https://doi.org/10.1111/jan.14965.

Oozageer Gunowa, N., Hutchinson, M., Brooke, J. and Jackson, D. (2021) 'Evidencing diversity: development of a structured tool for investigating teaching of pressure injury on people with darker skin tones', *Nurse Researcher*, 29(2), pp. 17–24. doi: https://doi.org/10.7748/nr.2021.e1761.

Oozageer Gunowa, N., Brooke, J., Hutchinson, M. and Jackson, D. (2020) 'Embedding skin tone diversity into undergraduate nurse education: Through the lens of pressure injury', *Journal of Clinical Nursing*, 29, pp. 4358-4367. doi: https://doi.org/10.1111/jocn.15474.

Oozageer Gunowa, N., Hutchinson, M., Brooke, J. and Jackson, D. (2018) 'Pressure injuries in people with darker skin tones: a literature review', *Journal of Clinical Nursing*, 27(17-18), pp. 3266-3275. doi: 10.1111/jocn.14062

Oral presentations

October 2021	**Invited speaker - Equity gaps: Health disparities and skin colour** Association for the Advancement of Wound Care, Pressure Ulcer Summit, Atlanta, Georgia (Online).
October 2021	**An exploration of skin tone diversity and pressure ulcers in undergraduate nurse education.** European Pressure Ulcer Advisory Panel (Online).
July 2021	**An exploration of teaching approaches examining pressure injury identification in people with dark skin tones.**

Phi Mu Conference, Sigma, United Kingdom

April 2018 **Exploring teaching content pertaining to pressure injuries across five Higher Education institutions**
John Hopkins University, Baltimore, United States of America

January 2018 **Exploring teaching content pertaining to pressure injuries across five Higher Education Institutions**
2018 Postgraduate Research Student Symposium, Oxford Brookes, Oxford, United Kingdom.

April 2017 **Pressure injuries amongst people with darkly pigmented skin: exploring the methodological challenges**
Royal College of Nursing International Nursing Research Conference 2017,
Oxford, United Kingdom.

Poster presentations

April 2020 **An exploration of how concepts of inclusion, equity and diversity are embedded into nursing students learning in clinical subjects through the lens of pressure injury**
8th International Nurse Education Conference, Sitges, Barcelona, Spain

January 2020 **Nurse Education and Pressure Injuries: A collective case study to examine skin tone diversity inclusion within the classroom**
Runner up Poster Presentation Human Health and Lifestyle, 2020
Postgraduate Research Student Symposium, Oxford Brookes, Oxford, United Kingdom.

July 2017 **Assuming Caucasianess in Pressure Injury Research: A Literature Review**
International Nursing Research Congress, Sigma Theta Tau International (STTI), Dublin, Ireland.

Blog

November 2020	**STOP Pressure Ulcer Day: The Need to Focus Darker Skin Tones** BMJ, Evidence-Based Nursing
August 2020	**Our reliance upon colour-blind language is often deeply entrenched** Nursing Times

Media releases

September 2020	**Recognising how conditions present on darker skin: is nurse training colour-blind?** Nursing Standard
September 2020	**Education on pressure area care 'overwhelmingly' focused around patients with white skin, finds study** Nursing Notes
September 2020	**Pressure injury education 'overwhelmingly' focused on white skin** Nursing Times

Board membership

February 2020	**Skin Deep** Don't Forget the Bubble Project
October 2020	**National Wound Care Strategy Programme Board member** National Wound Care Strategy Programme, NHS England and NHS Improvement
July 2020	**Education Workstream member** National Wound Care Strategy Programme, NHS England and NHS Improvement.
September 2019	**Stop the Pressure Workstream member** National Wound Care Strategy Programme, NHS England and NHS Improvement.

Awards

May 2020 **An exploration of teaching approaches examining pressure injury identification in people with dark skin tones**
Education Innovation Award, Phi Mu Chapter, Sigma.

April 2018 **An international comparison of the education delivered to student nurses within Higher Education Institutions surrounding identification of pressure injuries amongst people from diverse backgrounds**
Travel Scholarship, The Florence Nightingale Foundation.

Chapter One: Introduction

Abstract

Nurse education delivered today influences and shapes nurses of the future. Nurses are the cornerstone of healthcare and play a significant role in the delivery of equitable healthcare. Nurse educators have a duty of care to inform and highlight health disparity in nursing and ultimately to enhance equity in care. This chapter provides background for the study which critically evaluates the educational preparation of registered nurses in Higher Education institutions in relation to pressure ulcer assessment and identification, particularly focusing on skin tone diversity. The aim and objectives of the study will be presented and the way in which these have been addressed will be summarised. Due to the nature of the topic and challenges faced within both practice and empirical research around terminology, a section within this chapter is dedicated to the language used within this thesis. The structure of the thesis will also be presented.

Components of this chapter have been peer-reviewed and previously published as:

Oozageer Gunowa, N., Hutchinson, M., Brooke, J. and Jackson, D. (2018) 'Pressure injuries in people with darker skin tones: A literature review', *Journal of Clinical Nursing*, 27(17-18), pp. 3266–3275. https://doi.org/10.1111/jocn.14062. (See Appendix A).

Oozageer Gunowa, N., Hutchinson, M., Brooke, J. and Jackson, D. (2021) 'Evidencing diversity: development of a structured tool for investigating teaching of pressure injury on people with darker skin tones', *Nurse Researcher*, 29(2), pp. 17–24. doi: https://doi.org/10.7748/nr.2021.e1761 (See Appendix B).

Oozageer Gunowa, N., Brooke, J., Hutchinson, M. and Jackson, D. (2020) 'Embedding skin tone diversity into undergraduate nurse education: Through the lens of pressure injury', *Journal of Clinical Nursing*, 29, pp. 4358-4367. doi: https://doi.org/10.1111/jocn.15474. (See Appendix C).

Oozageer Gunowa, N., Hutchinson, M., Brooke, J., Aveyard, H. and Jackson, D. (2021) Pressure injuries and skin tone diversity in undergraduate nurse education: Qualitative perspectives from a mixed methods study, *Journal of Advanced Nursing,* 00, pp. 1– 14. Doi: https://doi.org/10.1111/jan.14965. (See Appendix D).

1.0 Overview

The Nursing and Midwifery Council (NMC, 2018a) require all pre-registration nursing curricula to state a commitment to equality, diversity and inclusion. This has been particularly prominent since the standards for pre-registration nursing education were released in 2010 (NMC, 2010). While these standards place an emphasis upon equality and diversity the extent to which this is achieved is not certain. Similarly, how sensitive topics are taught is often unclear and lacks visibility (Ahonen *et al.,* 2014; Bell, 2021). One example of the way in which equality and diversity needs to be included within nurse education is the teaching of pressure ulcer prevention in people with dark skin tones. At the time of starting this PhD, there was no evidence of any empirical research exploring how the prevention of pressure ulcers was taught within Higher Education institutions and whether skin tone diversity was considered.

The term pressure ulcer is defined as localised damage to an area of skin and/or underlying tissue that is caused by pressure or pressure in combination with shear, often on a bony prominence or related to medical or other devices (National Pressure Ulcer Advisory Panel (NPUAP), European Pressure Ulcer Advisory Panel (EPUAP) and Pan Pacific Pressure Ulcer Alliance (PPPIA), 2019). For more than 50 years, pressure ulcer risk management has been at the forefront of nursing care delivery due to the impact upon patients' physical and mental well-being, as well as the financial consequences for organisations (Spilsbury *et al.*, 2007; Dealey, Posnett and Walker, 2012; Jackson *et al.*, 2017; Jackson *et al.*, 2018). Pressure ulcers are generally considered to be a preventable and predictable form of harm and are classed as avoidable (NPUAP, 2016a). Despite all of this, more than 1300 new pressure ulcers occur monthly in the United Kingdom (UK) (National Health Service (NHS), 2020).

The nursing workforce is required to have the skills to provide safe, equitable, high-quality care, at all times and in all settings, which should be based on evidence-based research (NMC, 2018b). Nursing knowledge directly impacts on the incidence of pressure ulcers (El Enein and Zaghloul, 2011; Kim and Lee, 2019) and is a key factor in reducing patient harm caused by pressure damage (Greenwood and McGinnis, 2016). However, there is evidence of poor-quality post-registration teaching in pressure ulcer management with registered nurses reporting that pressure ulcer teaching is often reactive, where education is based on case reviews and patient safety concerns (Ayello *et al.*, 2017).).

Whilst there is a commitment to inclusion and diversity, in theory, this must be evident in practice. This includes nurses having quality and relevant information from the beginning of their undergraduate programmes. Contemporary research findings (Usher *et al.*, 2017) suggest that undergraduate nursing students may have knowledge deficits and lack confidence in addressing patient safety concerns, particularly relating to pressure ulcers. To ensure a consistent quality of care is provided by registered nurses it is important to acknowledge that prior to registration all nursing students have different learning experiences and opportunities within practice. This variability of learning experiences and opportunities within practice (Meeley 2021), needs to be acknowledged in Higher Education institutions and therefore nurse educators need to ensure that their teaching is truly comprehensive and inclusive. This includes the teaching of pressure ulcers in the context of all skin tones.

Currently, pre-registration nursing programmes in the UK are shaped and delivered in the context of competing content demands, informed by layers of rules and guidelines from governing and regulatory bodies, that tend to generate broad topic direction and

dictate areas for inclusion (European Network for Patient Safety, 2010; NMC, 2010; Lukewich *et al.*, 2015; NMC, 2018c). However, the specific content of teaching sessions is not imposed, and individual Higher Education institutions can interpret priorities, which leads to variance in how content is covered and delivered. Both patient safety and diversity have been acknowledged as key priorities within nursing curricula (Bednarz, Schim and Doorenbos, 2010; Tregunno *et al.*, 2014). Even so, it is acknowledged that student nurses are not fully informed of overall patient safety issues relating to people with dark skin tones (Simonetti *et al.*, 2015; Levett-Jones *et al.*, 2020).

Pressure ulcer prevention has been described as a nurse-initiated patient safety action (Usher *et al.*, 2017) therefore it should be thoroughly embedded in the nursing curriculum. Nurses in practice and nurse educators educate student nurses on the use of risk assessment tools, how to assess patients' risk of developing pressure ulcers using evidence-based knowledge, and holistic assessment (Simonetti *et al.*, 2015). One way in which nurses and nurse educators can demonstrate their commitment to pressure ulcer prevention is by staying current and up to date (NMC, 2018a).

An important revision in the definition of a category 1 pressure ulcer is the acknowledgement that darkly pigmented skin may affect the presentation of pressure ulcers (NPUAP, 1998). Grimes (2009) confirmed that dark skin tones rarely show the blanching response (skin fades when pressed), and erythema (skin reaction) may be hard to detect on visual inspection. Moreover, skin irritation in people with dark skin tones may cause hyperpigmentation (increased pigmentation) or hypopigmentation (reduced pigmentation), with no redness of the skin visible (Vashi and Kundu, 2013). The revision of the definition of a category 1 pressure ulcer (EPUAP and NPUAP, 2009) was necessary as there was recognition that nurses needed to consider skin tone

however the headline of a category 1 pressure ulcer remains as 'non-blanchable erythema' (NPUAP, 2016). The EPUAP and NPUAP (2009) guidance was broad with a small section and limited spread in the document focusing on the different assessment prioritises for individuals with darkly pigmented skin. The more recent guidelines (NPIAP, EPUAP and PPPIA, 2019) do include further information on darkly pigmented skin however this is only superficially embedded throughout the document with a separate section, this demonstrates an assumption that White is the norm and darkly pigmented skin is different.

Despite the acknowledgement of early-stage pressure ulcers being difficult to identify in people with dark skin tones (EPUAP and NPUAP, 2009) and that this needs to be emphasised in nurse education this is not reflected in later classifications such as the National Institute for Health and Care Excellence (NICE, 2014), NPUAP Classification System (2016a) and International NPUAP, EPUAP and PPPIA Classification System (2014, 2019) as they all use the term non – blanchable erythema (discolouration of the skin that does not turn white when pressed) within their headline definitions of early-stage pressure ulcers. Furthermore, nurse education guidelines, campaigns, assessment tools and key nursing literature (NHS Improvement, 2018a; NHS England, 2019a; Moore and Patton, 2019; NPIAP, EPUAP, PPPIA, 2019; React to red skin, no date[1]) refer to redness, discolouration and/or non-blanching skin as early indicators of a pressure ulcer. The guidelines are not demonstrating inclusive practice, by using these terms as indicators of early-stage pressure ulcers, a level of inequity is created as these terms are not applicable when carrying out visual pressure ulcer risk assessments

[1] React to red skin (n.d.) *React to red skin, stop pressure ulcers*. Available at: http://www.reacttoredskin.co.uk/ (Accessed: 19 February 2021).

on people with dark skin tones as the skin may not appear red, discoloured or non-blanching, even in the presence of pressure damage (Black and Simenden, 2020).

There is limited guidance and literature available surrounding the assessment and identification of pressure ulcers in people with dark skin tones. As a result, nurse educators must through general academic principles facilitate students to use critical reflection and rational discourse to delve deeper into their experiences and assumptions (Barbagallo, 2021). By addressing contemporary issues, issues of injustice and health inequities within the nursing curriculum, it might be reasonable to assume that nurse educators enable students to consider care for all and identify people who are more at risk of developing more severe pressure ulcers. Therefore, this study explores pre-registration nurse education content to help identify and understand how the topic of pressure ulcers and skin tone diversity is incorporated into student teaching and learning.

1.1 Pressure ulcers

1.1.1 Pressure ulcers and the definitional challenges

NHS Improvement defines a pressure ulcer as:

> localised damage to the skin and/or underlying tissue, usually over a bony prominence (or related to a medical or other device), resulting from sustained pressure (including pressure associated with shear). The damage can be present as intact skin or an open ulcer and may be painful (NHS Improvement, 2018a, p7)

Internationally, the preferred terminology for pressure ulcers is pressure injury holding a view that the latter term better encompasses ulcerated skin and skin that is damaged but still intact (Edsberg *et al.*, 2016). However, NHS Improvement (2018a) has

reaffirmed the use of the term pressure ulcer in England due to it being widely used and consistent with the definition of the International NPUAP/EPUAP Pressure Ulcer Classification Systems (EPUAP and NPUAP, 2009; NPUAP, EPUAP and PPPIA, 2014a). With this study being carried out in the UK and to remain in line with national guidance (National Health Service Improvement, 2018a) the term 'pressure ulcer', 'category' and Arabic numerals have been used in this thesis. However, it is important to highlight that the term pressure ulcer is problematic because injuries and damage need to be identified before they form into ulcers (Edsberg, 2007). The stubborn adherence to the term pressure injury by the UK contributes to the problem of health inequity, ulcers can be detected in people of all skin tones but injuries cannot.

A pressure ulcer is currently categorised on the degree of tissue involvement and the depth of the damage, scored from 1-4, with four other categories sometimes referred to as unstageable pressure injury, suspected deep tissue injury, device-related pressure injuries and mucosal membrane pressure injuries (NPUAP, EPUAP and PPPIA, 2019). In line with the international NPUAP, EPUAP and PPPIA classification system (2014b quoted in NPUAP, EPUAP and PPPIA, 2019, p. 203), a category 1 pressure ulcer is defined as 'Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area'. A category 2 pressure ulcer has partial-thickness skin loss, whilst categories 3 and 4 have full-thickness skin loss (NPUAP, EPUAP and PPPIA, 2014a cited in NPUAP, EPUAP and PPPIA, 2019). A suspected deep tissue injury according to the NPUAP, EPUAP and PPPIA (2014a quoted in NPUAP, EPUAP and PPPIA 2019, p. 204) is defined as 'purple or maroon localized area of discolored intact skin or blood filled blister due to damage of underlying soft tissue from pressure

and/or shear. Deep tissue injury may be difficult to detect in individuals with dark skin tones'.

1.1.2 The history of pressure ulcer care

Pressure ulcers have been recognised on Egyptian mummies, some of which are more than 5000 years old. Since the 15th Century pressure ulcers have had treatment regimes in place which relate to good nutrition, pain relief and debridement (Agrawal and Chauhan, 2012). In the 19th Century, Jean-Martin Charcot, through a novel approach, associated pressure ulcers with central nervous system damage and documented that severe pressure-related wounds which had developed eschar would lead to death (Levine, 2005). Charles Brown-Sequard disagreed with Charcot's earlier associations clearly indicating that pressure ulcers were linked to poor circulation due to pressure as once the pressure had been relieved the wound would heal or not develop at all (Parish, Witkowski and Crissey, 1997). Based on this work, Florence Nightingale introduced strict repositioning, writing 'If he [sic] has a bedsore, it's generally not the fault of the disease, but of the nursing' (Nightingale, 1859, p8).

Following on from Florence Nightingale's work further research particularly in the 21st century took centre stage with European nurses taking the lead in research focusing on intrinsic (immobilisation, cognitive deficit, chronic illness, poor nutrition, use of steroids and age) and extrinsic factors (pressure, friction, humidity and shear factors) of pressure ulcer development (Halfens and Halboom, 2001). In comparison to other nurse related topics, research focusing on pressure ulcers did not maintain momentum furthermore, it continues to be seen as a complication of another diagnosis rather than as a standalone complication.

1.1.3 The cost of pressure ulcer care

Pressure ulcers are a global concern and are indicative of care quality and experiences of patient care (Li *et al.*, 2020). Pressure ulcers bear a cost, not only a financial cost to organisations (Guest, Fuller and Vowden, 2020) but also costs associated with pain, debilitation and psychological trauma for patients and their families (Jackson *et al.*, 2017; Jackson *et al.*, 2018; James and Holloway, 2020). With most pressure ulcers being preventable (EPUAP and European Wound Management Association, 2017) and more than 1300 new pressure ulcers reported monthly in the United Kingdom, change needs to occur (National Health Service, 2020). Despite numerous preventative measures being in place, such as risk assessments and screening tools (Moore and Patton, 2019), early-stage pressure ulcers continue to go unrecognised in people with dark skin tones (Bauer *et al.*, 2016; Black and Simenden, 2020). As a consequence, people with dark skin tones are more likely to develop later stage, more severe pressure ulcers which can occasionally be life-threatening.

Financial expenditure for the care and treatment of pressure ulcers for both the NHS and private care facilities is immense, with costs to the NHS alone estimated at more than £3.8 million every day (NHS Improvement, 2018a). Moreover, a stay in hospital after the development of a pressure ulcer can extend a person's stay on average by 5-8 additional days hence increasing total expenditure (NICE, 2014). However, it is important to recognise that cost implications are not merely linked to the financial burden of pressure ulcers, but the physical, social, emotional trauma and hardship experienced by patients, their friends and families (Jackson *et al.*, 2017; Sumarno, 2017). Pressure ulcers are mostly preventable therefore it is unacceptable for people to experience pain, a feeling of being violated and experience loss in so many different forms (Jackson *et al.*, 2018). Experiencing loss in relation to pressure ulcers is life-

changing, it does not merely relate to physical harm but to long term ongoing trauma which includes a loss of dignity and independence (Gorecki *et al*., 2012).

1.1.4 Pressure ulcer prevention standards

In 1992, Bergstrom through the United States (US) Agency for Healthcare Research and Quality (AHRQ, formerly the Agency for Health Care Policy and Research) published clinical practice guidelines on preventing pressure ulcers based on expert opinion and panel consensus. This work served as the foundation for providing preventative pressure ulcer care and a baseline for other pressure ulcer guidelines for many years. Following on from this innovative piece of work, international multi-agency advisory panels including the NPUAP and the EPUAP amongst many others have worked collaboratively to set International Clinical Practice Guidelines (EPUAP and NPUAP 2009; NPUAP, EPUAP and PPPIA, 2014a; NPUAP, EPUAP and PPPIA, 2019)

In the UK, key processes and strategies to help implement the International Clinical Practice Guidelines have been put in place to prevent and reduce the number of pressure ulcers. One of the first steps was the introduction of the Skin inspection, Surface, Keep moving, Incontinence, and Nutrition (SSKIN formerly known as SKIN) bundle which was brought over from the Ascension Hospital system in 2004 in the United States of America (USA) (Gibbons *et al.*, 2004). Over the years SSKIN was amalgamated with other programmes in the UK such as the 'Transforming Care' in Wales, '1000 lives' campaign, and 'Stop the Pressure' Collaborative. Then in 2011, the Department of Health incentivised the measurement of pressure ulcers through the introduction of a new Commissioning for Quality and Innovation initiative goal (Department of Health, 2012). Therefore, in April 2012, NHS Midlands and East through the Stop the Pressure Programme launched the SSKIN bundle measuring the

effectiveness of the strategy by the use of the NHS Safety Thermometer (Health and social care information centre, 2012), a monthly point prevalence tool. The NHS Safety Thermometer tool reported that over a 7-month period the prevalence of patients with category 2, 3 or 4 pressure ulcers had reduced from 1.7% to 1.09%. Furthermore, the data demonstrated that the prevalence of the most severe pressure ulcers had halved in the same period.

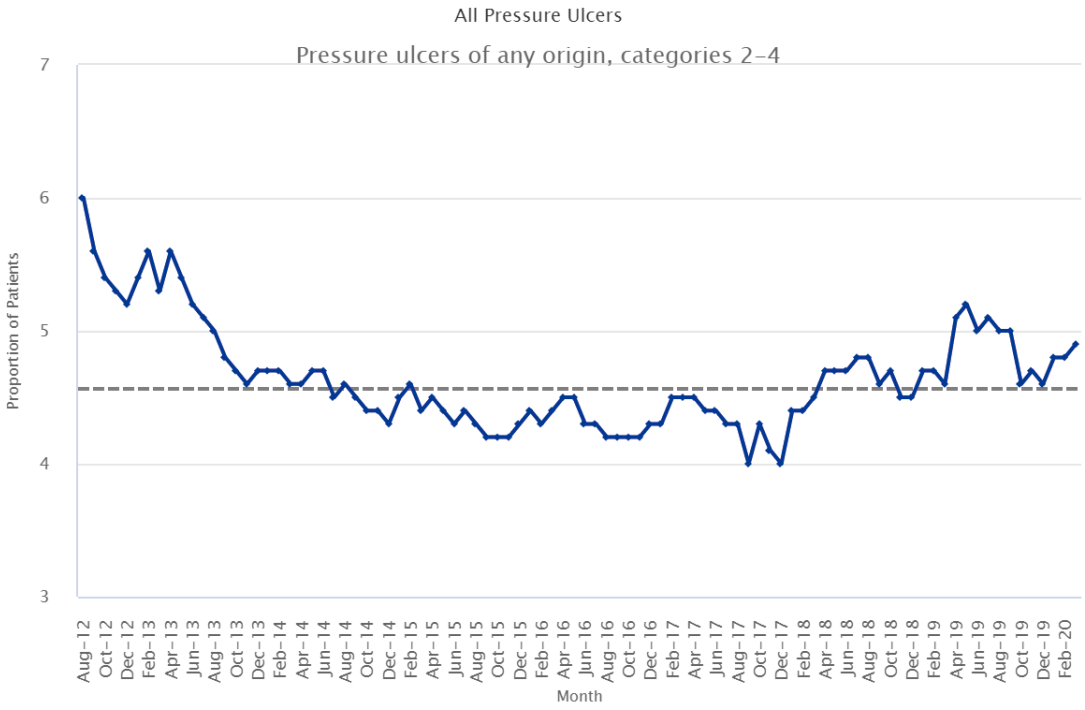
Whilst recognising the Stop the Pressure Programme as a quality improvement project the 2013 Berwick's Report into patient safety, through the National Patient Safety Collaborative, further established the prevention of pressure ulcers as one of their most important priorities. As a result, the Stop the Pressure Programme in 2016 was made a national quality improvement programme and was renamed the National Stop the Pressure Programme (NHS Improvement, 2017). The National Stop the Pressure Programme (NHS Improvement, 2017) was beneficial with the prevalence of pressure ulcers reduced (NHS Safety Thermometer, 2020). However, due to a significant focus on hospital settings the campaign was then linked to the National Wound Care Strategy Programme (NWCSP) which extended the programme into primary care, domiciliary and social care settings (NWCSP, 2021).

In line with the national patient safety agenda in the UK, NHS Improvement launched two key documents in June 2018. Firstly, it was recognised that there was a lack of comprehensive guidance and standardisation of care in the management of pressure ulcers which was leading to variation of care at local, regional and national levels. This variation in care subsequently led to inconsistency in the reporting of pressure ulcers hence the Pressure ulcers: Revised definition and measurement (NHS Improvement, 2018a) framework was published. Secondly, the lack of staff education was identified

as a key factor for a continued rise in the number of pressure ulcers (Greenwood and McGinnis, 2016) therefore a new education curriculum to guide education for registered nurses and other healthcare professionals was designed (NHS Improvement, 2018b).

The NHS safety thermometer is a point estimate survey instrument (NHS safety thermometer, 2020). As presented in Figure 1.1 (below) it can be seen that following the introduction of the Stop the Pressure Programme in 2013 the proportion of patients with pressure ulcers categorised between 2-4 in NHS service provider settings did peak. This increase was possibly due to the rise in pressure ulcer awareness which then led to a continued decline. However, since spring 2018 the figures have started to rise again. This rise in pressure ulcers and changes to the NHS standard contract (NHS England, 2019b) resulted in a public consultation in 2019/20. The consultation alongside evaluations, research and feedback deemed that the safety thermometer despite being the largest scale and longest-lasting frontline data collection system the NHS had created it held incomplete data, was no longer effective and was therefore terminated (Smith *et al.*, 2016; Armstrong *et al.*, 2018). The plans for its replacement remain unclear however the need to be inclusive is crucial, there are suggestions that routinely collected alternative data sources will be used which could include data from the new Patient Safety Incident Management System which is expected to be in place by Spring 2022 (NHS England and NHS Improvement, 2019).

Figure 1.1 The safety thermometer - Classic thermometer dashboard (NHS safety thermometer, 2020)



1.2 Healthcare and skin tone diversity

The resurgence of the Black Lives Matter (2020) movement serves as a stark reminder that whether through force, deprivation or discrimination there exists a system of privilege based on race across the globe. It is well known that people from Black and minority ethnic groups are prematurely and disproportionately affected by the early onset of disease and by leading causes of death compared to their White counterparts (Puzan, 2003; Baptiste *et al.*, 2020; Public Health England, 2020; Yancy, 2020). In 2020, two independent UK reports published data on inequitable outcomes for Black, Asian and minority ethnic groups which relates more directly to healthcare delivery. The first was by Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK (MBRRACE-UK) (2020) where it was found that Black women were four times more likely to die in childbirth compared to White women. The second

report published by the Office of National Statistics (2020a) revealed that Black and minority ethnic groups are more likely to die from COVID-19 even after taking into account age, measures of self-reported health and disability and other socio-demographic characteristics.

In the US African Americans have been reported to have higher staged pressure ulcers and a greater pressure ulcer-related mortality (Bauer et al, 2016). Despite numerous preventative campaigns, standards, education guides and measures being in place, including risk assessments and screening tools (NHS Improvement, 2018a; NHS England, 2019a; Moore and Patton, 2019; React to red skin, no date) none of the documents address racial inclusivity and skin tone diversity. The consequences of early-stage pressure ulcers not being detected and pressure ulcers worsening without the usual preventative measures in people with dark skin tones exposes deeply entrenched racial inequity (Coates, 2008). Nursing is a profession that should interrogate such health inequities (Moorley *et al.*, 2020; Bell, 2021) as failure to address these inequities perpetuates inadequate pressure ulcer care for people with dark skin tones.

1.3 Pre-registration nursing education

The NMC are the statutory regulator for all the UK's nurses and midwives and was established under The Nursing and Midwifery Order 2001 (known as 'the Order'). Under Article 15(1) of The Nursing and Midwifery Order 2001 ('the Order') it has been presented that the council must establish 'standards for education and training which are necessary to achieve the standards of proficiency for admission to the nursing register', as required by Article 5(2) of the Order.

Education providers are required to structure their educational programmes to comply with NMC standards and design their curricula around the published proficiencies (formerly known as competencies) upon which students are assessed against ensuring they can deliver safe and effective care (NMC, 2010, 2018c). The NMC through quality assurance processes ensures that education programmes meet all of the required standards however the day-to-day curricula content lies with the education provider in partnership with practice learning partners (NMC, 2010, 2018c). Nursing curricula needs to be underpinned by theory; however, the theory must be fit for purpose and meet the needs of all people and populations (Mackintosh-Franklin, 2016).

1.3.1 Skin tone diversity in pre-registration nursing education

The visual representation of people across the skin tone continuum is one of the most measurable ways in which skin tone diversity can and should be represented and accounted for in the classroom (Mukwende *et al.*, 2020; Skin Deep, 2020). Nurses hold a responsibility towards patients, and this is reflected in Standard 2.2.3 of the NMC, Future nurse: Standards of proficiency for registered nurses (NMC, 2018d, p. 11) which states that registered nurses must 'understand the factors that may lead to inequalities in health outcomes'. Therefore, nurse educators have a significant role in shaping nursing curricula, this includes meaningful representation and discussion of skin tone diversity which should contribute towards taking steps to reduce racial inequalities in health and health care (McIntosh, 1990; Thornton and Persaud, 2018) and conversely the lack of evidence of such diversity in education should cause concern.

1.4 Aim

The aim of the study is to critically evaluate the educational preparation of registered nurses in Higher Education institutions in relation to pressure ulcer assessment and identification, specifically focusing on skin tone diversity.

1.5 Objectives

Five key objectives were set for this study:

- To critically review and synthesise the literature in relation to the assessment and identification of pressure ulcers in people with dark skin tones.

- To systematically analyse campus classroom teaching for student nurses on the assessment and identification of pressure ulcers in people with dark skin tones across a selection of Higher Education institutions.

- To critically examine student nurse awareness and confidence when assessing and identifying pressure ulcers in people with dark skin tones across a selection of Higher Education institutions.

- To critically examine the perception that nurse educators have when teaching assessment and the identification of pressure ulcers in relation to people with dark skin tones within the English health care system.

- To synthesise the findings from the four objectives above to provide information that could inform Higher Education institutions teaching and practice in the assessment and identification of pressure ulcers in people with dark skin tones.

1.6 Study Context

Due to the international applicability of this study, it is important to highlight the study context which includes a collection of pieces of information, and reports on some of the reasons why this study is useful in this context. This study was carried out in England, a country that is part of the UK. In 2016, at the beginning of this study, the population mid-year estimate in England was 50 965 200 (Office of National Statistics, 2022). It has been recorded that in England and Wales, the White British population from 2001 to 2011 decreased from 87.4% to 80.5%. Furthermore, the percentage of the population from a Black African background doubled from 0.9% in 2001 to 1.8% in 2011 (Office of National Statistics, 2020b). In 2006, it was identified that there were over 500 000 nurses in England and in 2016, 27% of the nursing workforce in the UK were classified as Black, Asian or minority ethnic (NMC, 2016).

It is important to note that despite population and workforce increases in the number of Black, Asian or minority ethnic people it is not the sole reason for this study. Nurses educated in England hold a responsibility towards all patients which includes meaningful representation and discussion (NMC, 2018d).

1.7 Skin tone diversity and language

Over recent years, the importance of diversity and equity in healthcare has been highlighted (NHS England, 2014; United Nations, 2015; Public Health England, 2017) and more recently reinforced by the resurgence of the Black Lives Matter movement (Black Lives Matter, 2020). Variations in skin tones are not and should not be affiliated to a different skin type; however, it is important to recognise that dissimilarities exist (Lawson *et al.*, 2017).

1.7.1 Ethnicity and race as a proxy to skin tone diversity

In general, health inequities are well documented in the literature but not specifically in relation to skin tone. For example, the research often fails to distinguish between ethnicity and skin tone, assuming that particular ethnicities are indicative of dark skin tones (Sandefur, Campbell and Eggerling-Boeck, 2004; Gennaro *et al.*, 2013). According to the Oxford Dictionary (2022), ethnicity is defined as 'A term for the ethnic group to which people belong. Usually, it refers to group identity based on culture, religion, traditions, and customs. In some contexts, it is a "politically correct" term equivalent to the word "race," which may have pejorative associations'. The term ethnicity has more frequently been used in the UK due to the link to the Equality Act (2010) with the term race being more popular in the US due to there being six races officially recognised for statistical purposes (US Census Bureau, 2021). The World Health Organization (2021) recognises both of the terms, race and ethnicity.

A consequence of using ethnicity or race as a proxy to skin tone variances is an assumption that all people who are classified as non-White are one homogenous group that need to be catered for separately. This separation and lack of awareness creates inequity and prevents the investigation of topics relating specifically to skin tone diversity across ethnic or racial groups. Thus, skin tone diversity is not as simple as "black", "white" and "other". Current literature has started to address the gap of skin tone diversity in skin assessments acknowledging that ethnicity or race cannot be used as a proxy for skin tone (Pichon *et al.*, 2010; Everett, Budescu and Sommers, 2012; McCreath *et al.*, 2016). Yet, the literature available on skin tone diversity appears to offer little on the assessment and identification of pressure ulcers in people with dark skin tones and mainly focuses on ethnicity or racial descriptors.

1.7.2 Terminology within the thesis

Despite the term 'darkly pigmented skin' being used in policy (NPUAP, EPUAP and PPPIA, 2014a; NPUAP, EPUAP and PPPIA, 2019) within this study the term 'people with dark skin tones' and 'Black and Brown people' were used to facilitate discussions with study participants. The term non-White creates the impression that White is the norm and anything not White is seen as different and therefore as a deficiency or co-dependency on another dominant racial group. Therefore, within this study whilst recognising the emphasis on light skin tones, differentiation and categorisation of skin tone, the assessment of images has been based on Fitzpatrick's (1988) work which focused on physical traits and clear visual differentiation of skin colour (Fitzpatrick, cited in Labban *et al.*, 2017). The phrase 'people with dark skin tones' is used within this study to define anyone who is defined as type iii - light brown skin, type iv – moderate brown skin, type v – dark brown skin and type vi – deeply pigmented dark brown skin to black skin (Fitzpatrick, 1988).

1.8 Study outline

Following the critical review and synthesis of current literature a sequential mixed method collective case study design was applied which involved:

1.8.1 Qualitative data collection and analysis

The first phase of the study, after critically reviewing the literature and identifying the principles of the curriculum design from programme specifications, included the development of an observation and documentary analysis tool. This tool assessed if and how pressure ulcer assessment and identification in pre-registration nurse education programmes considered people with dark skin tones through the analysis of educational material and teaching observations at five Higher Education institutions.

The Higher Education institutions were recruited as cases (Stake, 2006) through a purposive sample (Palys *et al.*, 2008), following ethical approval (UREC Registration No: 171077). The findings informed the second phase of the study as per the requirement of a sequential mixed method study (Creswell, 2015).

1.8.2 Quantitative data collection and analysis

The second phase included semi-structured interviews with nurse educators and focus groups with students at each of the previously selected Higher Education institutions. Informed consent was obtained before data collection and participants were informed that involvement in the study would not have an impact on either their employment or their educational programme. Semi-structured interviews with nurse educators on average lasted 45 minutes and focus groups approximately 60 minutes with up to seven undergraduate student nurses. Both interviews and focus groups were audio-recorded and data transcribed verbatim. Transcripts were analysed using thematic analysis (Braun and Clarke, 2006).

1.9 Organisation of thesis

This chapter presents the overall study with the purpose, aim and objectives which focuses on pre-registration nurse education and the inclusion of skin tone diversity through the lens of pressure ulcers. A brief overview of the research has been presented. Furthermore, the use of the term 'people with dark skin tones' has been argued. Within this thesis there are eight chapters, seven of which are detailed below:

Chapter Two explores the literature to ascertain what research evidence exists about pressure ulcers in people with dark skin tones. It focuses on whether people with dark skin tones are more likely to have pressure ulcers. This chapter includes detailed

reference to the published literature review (Oozageer Gunowa *et al.*, 2018, see Appendix A) which was fully updated and revised at the end of the study.

Chapter Three provides the methodological approach of this thesis including the underpinning philosophy and the rationale for this choice. This chapter also explores the use of case study research and the importance of a mixed-method approach to data collection.

Chapter Four justifies the design and process of how data was collected and analysed within this study. It includes the design and use of a research tool to analyse teaching materials and the respective teaching in the classroom, to observe whether skin tone diversity in teaching is planned and implemented. This chapter includes detailed reference to the published methodology paper (Oozageer Gunowa *et al.*, 2021, see Appendix B).

Chapter Five presents the quantitative results of this study which systematically analyses teaching in a selection of five Higher Education institutions when framing classroom-based information to pre-registration nurses on the assessment and identification of pressure ulcers in people with dark skin tones. The main body of this chapter presents the data in line with the research tool originally designed and presented in Chapter 4 and includes detailed reference to the published quantitative paper (Oozageer Gunowa *et al.*, 2020, see Appendix C).

Chapter Six presents the qualitative findings of this study which explores not only student nurse awareness and confidence when assessing and identifying pressure ulcers in people with dark skin tones but also critically examines the perception that

nurse educators have when teaching the assessment and identification of pressure ulcers in relation to people with dark skin tones. Due to the nature and purpose of the research and in relation to the importance of anonymity and confidentiality of the case sites the data gathered from students and nurse educators have been merged and presented collectively. This chapter includes detailed reference to the published qualitative paper (Oozageer Gunowa *et al.*, 2021, see Appendix D).

Chapter Seven interprets and explains the findings presented in Chapter five and six using contemporary nursing literature. New insights into the topic of skin tone diversity and the educational preparation of registered nurses in Higher Education institutions in relation to pressure ulcer assessment and identification will also be offered.

Chapter Eight is the concluding chapter which summarises the key finds and presents recommendations for practice, education and research based on the data gathered.

1.10 Situating myself in relation to this thesis

'I came to this study with personal investment as a second-generation immigrant born and raised in England for most of my life. Being of Mauritian descent I spent a few of my younger teenage years in Mauritius where I was educated at a state school. With settlers in Mauritius coming from far and wide I had the opportunity to study numerous languages and I am now multilingual with the ability to shift language, dialect, and other communication features from one language to another. I identify as 'Any other ethnic group' on the recommended government guidance of asking for someone's ethnicity and see myself as Brown, dark brown (type V) on the Fitzpatrick's scale. I have completed a BSc in Nursing Studies and an MSc in Primary Care (District Nursing). I am currently employed as a nurse educator in England where I serve as Community Pathway Lead. Throughout my own nurse education, I do not recall being taught by people with dark skin tones or educated about people with dark skin tones. Through my practice as a

district nurse, I recognised that there was very limited guidance on pressure ulcers and people with dark skin tones and understood that care should not be compromised because of a person's skin tone. As a passionate nurse educator, my interests remain committed to the development of future generations of nurses and the further development of registered nurses. Current government incentives and Department of Health directives make it clear registered nurses have an increasing responsibility towards future nurse training due to their clinical expertise and exposure to patient values. As a result, it is crucial that nurse experiences and evidence-based practice is brought together to provide evidence based nurse education which is not only realistic and clinically led but also equitable for all.' Neesha Oozageer Gunowa

1.11 Chapter summary

This chapter explores and presents the background of equality, diversity and inclusion in nurse education in relation to pressure ulcer assessment and identification. There is a recognition within the chapter that ethnicity cannot be used as a proxy for skin tone when assessing and identifying pressure ulcers however there are undeniable overlaps with racial diversity. To be able to address the needs of people with dark skin tones particularly in relation to pressure ulcer prevention critical evaluation of the educational preparation of registered nurses in Higher Education institutions will take place within this study, to identify if skin tone diversity is present in classroom teaching. Furthermore, in this chapter, the breakdown of the thesis has been described as well as the position of the student researcher.

Chapter Two: Literature review

Abstract

In this chapter, the literature has been reviewed to ascertain what research evidence exists in relation to the assessment and identification of pressure ulcers in people with dark skin tones. The terminology surrounding people with dark skin tones and skin tone diversity in the literature has been surveyed and assessed extensively. The contemporary discourses regarding the risk of sustaining a pressure ulcer based on skin tones, identification of pressure ulcers in people with dark skin tones, pressure ulcers and place of care and socio-economic impact on pressure ulcer development are also examined. From the literature reviewed the need for this study will then be argued. The review found that people with dark skin tones are more likely to develop high category pressure ulcers. Reasons for this are not fully elucidated however, it may be associated with current skin assessment protocols being less effective for people who have dark skin tones resulting in early damage arising from pressure not being recognised. Pressure ulcers in people with dark skin tones are being missed by nurses internationally.

Components of this chapter have been peer-reviewed and previously published as: Oozageer Gunowa, N., Hutchinson, M., Brooke, J. and Jackson, D. (2018) 'Pressure injuries in people with darker skin tones: a literature review', Journal of Clinical Nursing, 27(17-18), pp. 3266-3275. doi: 10.1111/jocn.14062

2.0 Introduction

The importance of effective skin assessment and early recognition of skin damage is an essential step in reducing the burden of harm to patients (NICE, 2015; NPUAP, EPUAP and PPPIA, 2019). Yet, it is only in 1998 that the definition of a pressure ulcer (NPUAP, 1998) was amended to reflect that, the visual presentation and identification of pressure ulcers for people with dark skin tones may be 'different'. In 2009 (EPUAP and NPUAP, 2009) as well as in 2014 and 2019, NPUAP, EPUAP and PPPIA guidelines highlighted that the detection of pressure ulcers appeared to be more difficult for people with darkly pigmented skin. Though this acknowledgement is welcome, in this guidance, there is limited reference to empirical research and superficial information to guide and support health professionals, patients and carers to reduce pressure ulcers among people with dark skin tones.

This chapter focuses on the terminology used within the literature review, the methods used for the previously published literature review (Oozageer Gunowa *et al.*, 2018) and the more recently updated review completed in early 2021. Subsequently, the findings of the literature review will be presented which will justify the need for this study.

2.1 Terminology

Terminology was partly discussed in chapter 1 (see section 1.8), where the language used was critiqued and the words of choice in the thesis was presented, the terminology discussion in chapter 1 did not discuss spellings. It was important to take into account the terminology used within the literature search considering that the electronic data would be sourced internationally and that spelling of words such as "colour" and 'discolouration' were different if based on British English or American English. As well as spelling it was important to contemplate the variation in sentence structure and

wording such as “skin tone” and “skin colour” as each search would bring up different papers and articles.

Exploring and identifying terminology surrounding skin tone was not the only concern, as pressure ulcers and terms surrounding this topic are also worded and named differently according to the country of origin. In the USA and the Pan Pacific region, the term “pressure injury” (NPIAP, 2016a; PPPIA, 2020) is used and in the UK and Europe “pressure ulcer” (EPUAP, 2017) is utilised. In the early stages of this study and on completion of the first literature review (Oozageer Gunowa *et al.*, 2018) despite the USA using the term “pressure injury” the not for profit organisation guiding the change of terminology remained as the NPUAP. The organisation’s name was eventually changed in 2019 (NPIAP, 2019). For this literature review despite being based in the UK, the term pressure injury (NPUAP, 2016b) was used alongside pressure ulcers in the search strategy to fully encompass international publications.

2.2 Review question

As a result of the research aims and objectives presented within the introduction of this study, the review question focused on the critical review and synthesis of the assessment and identification of pressure ulcers in people with dark skin tones.

2.3 Search strategy

An initial comprehensive search of the electronic databases provided by Elton B. Stephens Co. (EBSCO) Information Services was conducted including PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and British Nursing Index (BNI) between 1990–July 2016 to search for relevant data-based, peer-reviewed literature. The start of the time frame was set to capture activity following

the 1989 NPUAP goal, of reducing the incidence of pressure ulcers by 50% by the year 2000 (Cuddigan *et al.*, 2001). In early 2021, a further literature review was completed to capture papers that had been published during the data collection and analysis stage of this study. Specific subject headings under which searches were made included the following: "pressure injury", "pressure ulcer", "deep tissue injury", "bed sore", "decubitus", "ethnicity", "race", "skin tone" and "skin colour". After analysis of the findings of the first search two further words were added to the search which were "Black" and "white". These terms and the search procedures were found with the help of Medical Subject Headings (MeSH) and the subject headings list and were audited by a health librarian. To streamline the search from the online library systems use of Boolean operators (AND, OR, NOT) connection keywords were used (Bramer *et al.*, 2018). Alongside the electronic data, journals, books, papers from conferences, relevant national and international organisations and reference lists were also hand-searched to source key studies and to avoid any biased search outcomes (Vassar, Atakpo and Kash, 2016).

2.4 Appraisal of literature

2.4.1 Eligibility criteria

All studies were screened for inclusion based on the inclusion and exclusion criteria in Table 2.1. The inclusion criterion for this literature review was that all articles needed to be based on original empirical research (quantitative, qualitative or mixed) relating to adults with dark skin tones, in the English language with at least one element of comparative data. All titles and abstracts of articles that did not clearly fulfil the eligibility criteria were excluded. Following this, all full-text copies of the remaining articles were obtained, those not meeting the inclusion and exclusion criteria were discarded. The articles which met the criteria were then included in the literature

review. To maintain rigour and reduce bias all articles included were checked independently by two members of the supervisory team (MH, DJ).

Table 2.1 Inclusion and exclusion criteria

Search Inclusion Criteria	Search Exclusion Criteria
1st search: Articles within the search time period parameter of 1990-2016. 2nd search: Articles within the search time period parameter of 2016-2021.	Articles that fall outside of the search time period parameter 1990-2021 (except seminal works).
Empirical research article or thesis	Articles other than empirical research articles or theses
Articles written and/or transcribed into the English language.	Published in a language other than English
Articles on the selected topic which relate only to adults.	Articles on the selected topic but which relate to children and/or adolescents.
Articles on the risk factors for pressure ulcers and the harm on people with dark skin tones and the comparison between population groups.	Articles focusing on prevention strategies, change, the review of general skin assessment tools and time of development.

2.4.2 Search outcomes

A total of 596 papers were initially identified from the combined search strategy; 182 duplicated articles across the databases were discarded. Of the articles remaining, 160 were rejected as they were of poor quality, reported prevention strategies or the development of tools resulting in 436 being screened. Following exclusions, 11 studies remained, all of which were quantitative studies. An updated search was completed in January 2021, three further studies which met the inclusion criteria were found. Figure 2.1 illustrates the study selection process between 1990-2021 using a Preferred

Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) flowchart (Page *et al.*, 2020).

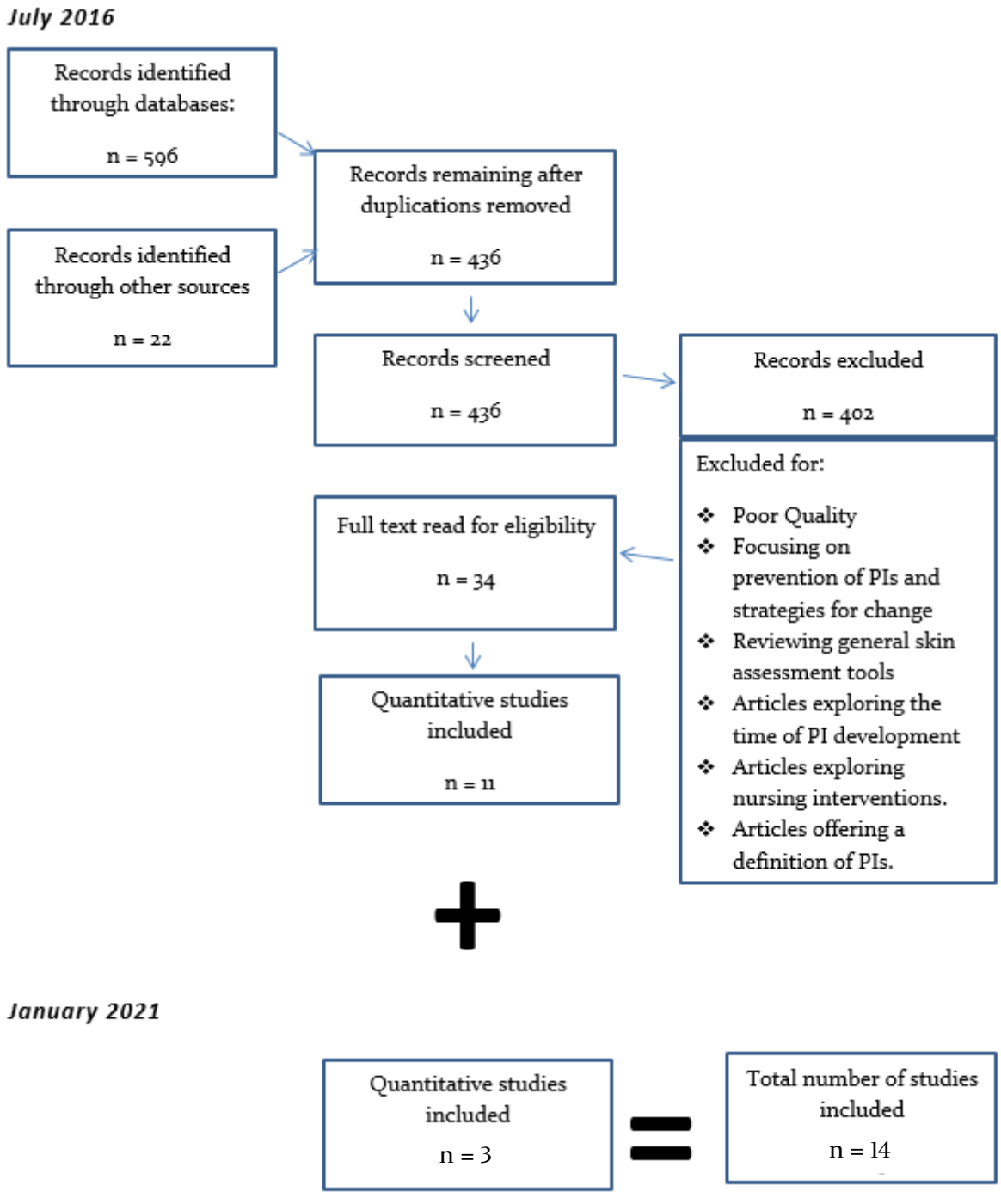


Figure 2.1 Flowchart of the different stages of the literature search

2.4.3 Quality appraisal

All included papers were subject to quality appraisal, based on component ratings for quantitative studies (National Collaborating Centre for Methods and Tools, 2008) which considered six individual quality domains: selection bias, study design, cofounders, data collection methods and statistical analysis. The component ratings were carried out and checked by a supervisor (MH), discrepancies were discussed and then overall ratings were agreed upon. All the studies within the initial search were either moderate (Bergstrom *et al.*, 1996; Baumgarten *et al.,* 2004; VanGilder, MacFarlane and Meyer, 2008; Gerardo, Teno, and Mor, 2009; Cai, Mukamel and Temkin-Greener, 2010; Li *et al.*, 2011; Harms *et al.*, 2014; Howard and Taylor, 2014; Ahn *et al.*, 2016) or weak quality (Anthony *et al.*, 2002; Fogerty *et al.*, 2009), with none rated as strong quality. Most of the studies (Baumgarten *et al.* 2004; Fogerty *et al.*, 2009; Gerardo, Teno, and Mor, 2009; Cai, Mukamel and Temkin-Greener, 2010; Li *et al.*, 2011; Harms *et al.*, 2014, Howard and Taylor 2014, Ahn *et al.*, 2016, Hefele *et al.*, 2017) were based on retrospective secondary data analysis where statistical analysis was not always used or appropriate. Upon completion of the updated review in early 2021 three further papers were included in the review. The newly added studies were rated as moderate (Hefele *et al.*, 2018) and weak (Tescher *et al.*, 2018; Bates-Jensen *et al.*, 2021) using the National Collaborating Centre for Methods and Tools (2008).

2.5 Data extraction analysis

After reviewing the 14 articles using component ratings (National Collaborating Centre for Methods and Tools, 2008), data extraction took place using tabulation with the characteristics of the studies illustrated in Table 2.2.

Table 2.2 Characteristics of the studies included in the review

Author and Location	Aim	Sample Size	Design	Method of Data Collection	Summary of Findings
Ahn *et al.* (2016) United States, Nursing Homes.	To provide information on risk factors associated with pressure ulcers amongst nursing home residents	2,936,146 residents	Retrospective Secondary Data Analysis	Minimum Data Set (MDS) January to December 2012	Risk factors were drawn from four elements of Defloor's conceptual model, and it was identified that residents categorised as Black had a 1.76% increased likelihood of developing a pressure ulcer in comparison with residents categorised as white
Anthony *et al.* (2002) UK, Hospital.	To ascertain whether there is a relationship between ethnicity and pressure ulcers	45,735 admissions	Retrospective Secondary Data Analysis	Hospital Information Support System data from 1996–2000	Ethnicity was not seen as a significant risk factor. The odds ratio (OR) for pressure ulcers at the time of admission for people categorised as White to Pakistani was 10.3. It was established that there were inaccuracies within the data collected.
Bates Jensen *et al.* (2021)	To provide descriptive data on pressure injuries among racially/ethnically diverse nursing home residents over 16 weeks	142 residents	-	Multiple methods	More Black individuals had trunk and stage 4 pressure injuries. Black and Hispanic individuals were described as having normal skin colour surrounding pressure injuries with more Asian individuals having purple or discoloured skin around the pressure injuries. More Black

					individuals' heel pressure injuries were unstageable, necrotic, and showed no granulation. Black and Hispanic individuals exhibited more deep tissue injury
Baumgarten *et al.* (2004) United States, Nursing Homes.	To compare the incidence of pressure ulcers amongst residents categorised as Black or White in nursing homes	1,938 residents	Prospective cohort study conducted between 1992 and 1995	Either Interviews or MDS	Residents categorised as Black were more likely to develop a pressure ulcer in the nursing home in comparison with residents categorised as White (0.56 vs. 0.35, respectively). However, the hazard ratio was reduced from 1.66–1.35 when multiple resident characteristics were controlled
Bergstrom *et al.* (1996) United States, Multi-site study.	To determine the number of pressure ulcers amongst various population groups. To identify whether demographic characteristics or primary diagnosis are risks of developing a pressure ulcer	843 residents	Cohort Study	Observations of clinical practice.	As a significant difference in the total sample, 15% of residents categorised as White had stage 2 pressure ulcers in comparison with 5% of residents categorised as Black ($p = .02$). Using logistic regression, race was seen as a significant predictor of pressure ulcer development (OR = 2.73)

Cai, Mukamel and Temkin-Greener (2010) United States, Nursing Homes.	To determine whether facility characteristics impact pressure ulcer development.	59,740 residents	Retrospective Secondary Data Analysis	MDS and Online Survey Certification and Reporting January 2006 to January 2007	The difference in the prevalence of pressure ulcers with stage 2 or greater between people categorised as White and Blacks are due to across facility variations rather than within facility disparity. About 18.2% of long-term care residents categorised as Black had pressure ulcers in comparison with 13.8% of people categorised as white. Results from the base logit model presents an OR = 1.203 and $p < .01$, with residents categorised as Black, were more likely than people categorised as White to develop pressure ulcers.
Fogerty *et al.*(2009) United States, Nursing Homes.	To investigate the demographics associated with a higher odds ratio in African Americans and whether they have different rates of medical risk factors.	94,758 discharges	Retrospective Secondary Data Analysis	2003 Nationwide Inpatient Sample database	People categorised as African American (of all ages and either male or female) were 12% more likely to have a discharge diagnosis of a pressure ulcer compared to people categorised as Caucasian. Females categorised as Black over 75 were twice as likely to have a pressure ulcer upon discharge in comparison with their Caucasian counterpart.

Gerardo, Teno, and Mor, 2009 (2009) United States, Nursing Homes.	To explore whether there is a correlation between the prevalence of pressure ulcer(s) when there is an increased number of people from a category such as Hispanic in a nursing home	74, 343 nursing home residents	Retrospective Secondary Data Analysis	Second-quarter MDS 2000 and Online Survey Certification and Reporting data 2000	Residents categorised as Hispanic (9.71%) and Black (12.10%) were more likely to have pressure ulcers compared to residents categorised as White (7.60%)
Harms *et al.* (2014) United States, Nursing Homes.	To explore the prevalence of pressure ulcers by race and ethnicity amongst older adults admitted to nursing homes at the individual nursing home and regional levels	111, 640 nursing home resident admissions	Cross-sectional observational design Retrospective Secondary Data Analysis	MDS 2000 to 2002 and 2000 U.S Census tract data	Older adults admitted to nursing homes categorised as Black (15%) or Hispanic (11%) had a higher prevalence of the most severe pressure ulcers in comparison with older adults categorised as non-Hispanic Whites (6%)
Hefele *et al.* (2017) United States,	Measure within facility differences for a number of publicly reported	3,748,105 long-stay nursing home	Retrospective Secondary Data Analysis	MDS 2009	People within the same facility who were categorised as Black or Hispanic were more likely to have high-risk pressure ulcers and people

Nursing Homes.	nursing home quality measures.	resident stays			categorised as White likely to have low-risk pressure ulcers.
Howard and Taylor (2014) United States, Nursing Homes.	To determine whether there is a variance in the incidence of pressure ulcers between African American and White nursing home residents.	113,869 residents	Retrospective Secondary Data Analysis	MDS Atlanta Region from 1999– 2002, the Online Survey Certification and Reporting database and the 2000 U.S. Census	People categorised as African American had more frequent pressure ulcers at all stages except stage 1 (risk ratio = 0.61) than people categorised as white. People categorised as African American had a 1.1% incidence of having a stage 4 pressure ulcer in comparison with 0.4% of people categorised as white; this was the greatest differential figure presented within the study
Li *et al.* (2011) United States, Nursing Homes.	To explore the trend of pressure ulcer prevalence among high-risk, long-term nursing home residents in relation to race and to identify whether disparities are linked to the place of care received	2,136,764 White and 346,808 black residents.	Observational cohort study	MDS 2003 to 2008	Amongst high-risk nursing home residents, there was a higher prevalence of pressure ulcers amongst residents categorised as Black (16.8% in 2003; 14.6% in 2008) compared to residents categorised as White (11.4% in 2003; 9.6% in 2008)

Tescher *et al.* (2018) United States, Hospital.	To describe the characteristics of deep tissue injuries and the variables that may affect their deterioration	179 patients	Retrospective, descriptive, single-site cohort study	Electronic health records	Among the 179 deep tissue injuries studied 2 (1%) occurred on people categorised as Black and 1 (<1%) on a person categorised as Asian. The majority of deep tissue injuries occurred on people categorised as either non-Hispanic whites or Hispanic whites totalling to a figure of 169 (96%).
VanGilder *et al.* (2008) United States, Canada, Australia, Saudi Arabia and the United Arab Emirates.	To enable healthcare facilities to compare their pressure ulcer prevalence against similar institutions.	447,930 records	Retrospective Secondary Data Analysis	Survey data from the International Pressure Ulcer Prevalence™ Survey were collected from 1989 to 2005.	The overall patient group was divided into dark, medium and light skin tones. Patients with dark skin tones had more severe staged pressure ulcers in comparison with people with medium or light skin tones. Of the pressure ulcers recorded (N = 162,296), 12.9% of people with dark skin tone had a stage 4 pressure ulcer in comparison with 5.5% of people with a light skin tone

2.5.1 Difficulties of comparison between studies

The studies analysed either explored the prevalence or incidence of pressure ulcers and due to the variability of the aims as well as the timing of each study, meta-analysis and comparison of the results were deemed to be inappropriate (Moore and Cowman, 2011). Furthermore, many of the studies employed retrospective data analysis, attention is drawn to the possible limitations regarding the reliability of the original data sets as well as coding inaccuracies and omissions which could confound results. All the papers collated in the first review referred to data pre – 2016 therefore the term pressure ulcer had been used (NPUAP, 2016b).

2.6 Results

Thematic analysis (Braun and Clarke, 2006) of the included papers involved i) critically reading through the 14 papers, ii) identifying codes, iii) finding themes within the papers and iv) generating clear definitions of the themes. Four themes were identified as follows: (i) risk of sustaining a pressure ulcer based on skin tones, (ii) identification of pressure ulcers in people with dark skin tones, (iii) pressure ulcer and place of care and (iv) socio-economic impact on pressure ulcer development. The studies included have interchangeably used category, grading or staging when assessing the severity of a pressure ulcer; through the presentation of results and discussion, the term category will be used, as this is the term recommended by the NHS Improvement (2018a).

2.6.1 Risk of sustaining a pressure ulcer based on skin tones

Three studies (Bergstrom *et al.*, 1996; Baumgarten *et al.*, 2004; Cai, Mukamel and Temkin-Greener, 2010) made no acknowledgement of how pressure ulcers, particularly at category 1, presented in people with dark skin tones. Tescher *et al.*'s (2018) study

only looked at deep tissue injuries. Classification of colour or ethnicity into categories within all the studies reviewed was dependent on observer-reported race.

In Howard and Taylor's (2009) study, which analysed MDSs in the Atlanta Region from 1999–2002, category 2 pressure ulcers which are visual breaks in the skin (EPUAP, NPIAP and PPPIA, 2019) were the most common category on admission, occurring at a rate of 2.6% in the overall study sample. A consistent trend found across a number of the studies reviewed showed that people with dark skin tones developed more severe categories of pressure ulcers (Baumgarten *et al.*, 2004; VanGilder *et al.*, 2008; Fogerty *et al.*, 2009; Gerardo, Teno, and Mor, 2009; Cai, Mukamel and Temkin-Greener, 2010; Li *et al.*, 2011; Harms *et al.*, 2014; Howard and Taylor, 2014; Ahn *et al.*, 2016; Hefele *et al.*, 2017; Bates-Jensen *et al.*, 2021). Findings from one study suggested that people who had skin classified as medium or dark were more likely to develop pressure ulcers with a visible break in their skin (VanGilder *et al.*, 2008). This is reinforced by Harms *et al.*'s (2014) study where people admitted to nursing homes who had been categorised as Black had a 1.7 higher pressure ulcer rate than people categorised as white. Bates-Jensen *et al.*'s (2021) study indicated that Asian individuals were more likely to have purple or discoloured skin around the pressure ulcer.

Whilst the number of pressure ulcers in people with dark skin tones is high, the category of pressure ulcer varied; drawing from Harms *et al.*'s (2014) work, people categorised as "Black newly admitted to nursing homes" had the lowest prevalence of category 1 pressure ulcers but the highest prevalence of category 2 pressure ulcers amongst all racial and ethnic groups. This could infer that category 1 pressure ulcers were not being detected meaning that appropriate nursing interventions to prevent early pressure ulcers developing into category 2 were not able to be initiated. According

to Hefele *et al.* (2017) secondary analysis of data (2006-2009), long-stay quality measures indicate people categorised as White are more likely to develop low-risk pressure ulcers in comparison to people categorised as Black or Hispanic. In the absence of high-quality primary data pertaining specifically to pressure ulcers in people with dark skin tones, it is difficult to make comparisons between studies.

Prevalence and incidence rates of pressure ulcers were presented differently across the articles reviewed. Five of the articles were presented as prevalence studies (VanGilder *et al.*, 2008; Gerardo, Teno, and Mor, 2009; Cai, Mukamel and Temkin-Greener, 2010; Li *et al.*, 2011; Harms *et al.*, 2014), and four were incidence studies (Bergstrom *et al.*, 1996; Baumgarten *et al.*, 2004; Howard and Taylor, 2009). Both sets of studies were spread across various time frames which often related to the collection of data from the MDS. One study using an online survey did explore pressure ulcer prevalence across nine international settings, and it was identified that between 1999–2005, prevalence remained at approximately 15% of the total sample; however, the prevalence of pressure ulcers in people with dark skin tones was only presented between 2004–2005. Within this time frame, pressure ulcers were more visible amongst the higher categories of pressure ulcers in comparison with people with a light skin tone (VanGilder *et al.*, 2008).

Risk factors vary widely between different groups of people as well as between countries. Estimated Waterlow risk assessment scores for people categorised as either White or Black Caribbean were the same; however, the specific details of the risk assessment tool and the knowledge of the clinicians carrying out the assessment were not clear (Anthony *et al.*, 2002). Moreover, it is important to consider the factors of the assessment which resulted in a confounder, that people categorised as Black 'other'

were on average younger (Anthony *et al.*, 2002). Similarly, reporting North American findings, Baumgarten *et al.* (2004) and Bates-Jensen *et al.* (2021) identified that people from a Black race were younger at admission and had more complex care needs. According to Baumgarten *et al.* (2004), despite there being more care needs amongst Black people, there were no significant differences regardless of skin tone diversity in the site or category of pressure ulcers; however, the rate per person per year of pressure ulcer development for people from a Black race (0.56) was significantly higher (p = <.001) than people from a White race (0.35). The multivariate analysis in Baumgarten *et al.* (2004) study reported that based on the Cox proportional hazards models, the inclusion of a covariate (a person's body mass index, number of comorbid conditions, admission from hospital and diabetes) changed the hazard ratio for race by <10%, indicating race to be a significant factor on pressure ulcer development. However, when age was taken into account within Anthony *et al.*'s (2002) study, there was no statistical evidence to suggest people of Pakistani origin were more or less likely to develop a pressure ulcer.

2.6.2 Identification of pressure ulcers in people with dark skin tones

The EPUAP, NPIAP and PPPIA (2019) guidelines reflect changes based on the production of new evidence; the categorises that have been referred to in some studies (Bergstrom *et al.*, 1996; Baumgarten *et al.*, 2004) are up to date for the study, but are not contemporaneous overall. Despite there being four recognised categories of a pressure ulcer and four other classifications (EPUAP, NPIAP and PPPIA, 2019), many of the studies focused on category 2 or above and discounted category 1 pressure ulcers as they were considered to be reversible as well as difficult to identify (Baumgarten *et al.*, 2004; VanGilder *et al.*, 2008; Gerardo, Teno, and Mor, 2009; Li *et al.*, 2011; Ahn *et al.*, 2016).

The studies presented within this literature review mostly investigated pressure ulcer identification and assessment within the one continent which directly relates to ethnic groups or race and skin types within that area. Notably, both race and ethnicity cover a wide spectrum of groups. When considering the heterogeneity of skin tones internationally identifying people only by race can be challenging and may not provide enough detail, particularly in relation to skin assessment. Of the 14 studies included in this review, five (Baumgarten *et al.*, 2004; Fogerty *et al.*, 2009; Howard and Taylor, 2009; Cai, Mukamel and Temkin-Greener, 2010; Li *et al.*, 2011) referred to people as being either from a "Black" or "white" race, with little indication of the involvement of people from other minority ethnic groups or mixed backgrounds. However, there was an acknowledgement by Hefele *et al.* (2017) that due to the use of secondary data there were limitations of the racial identification of the participants involved. VanGilder *et al.*, (2008) identified that skin tone may not be specifically linked to ethnic groups and people may instead be classified as being of dark, medium or light skin. Categorisation in the study by VanGilder *et al.*, (2008) was subjective as the assessor made the distinction between the categories and inter-rater reliability was not addressed.

An association between under-diagnosis and category 1 pressure ulcers in people with dark skin tones was suggested in some studies (Bergstrom *et al.*, 1996; Baumgarten *et al.*, 2004; Howard and Taylor, 2009) and has, as a result, led to category 1 pressure ulcers being excluded completely from these studies. Bergstrom *et al.* (1996) acknowledged that there are both functional and structural differences between races that would predispose people from a White race to develop pressure ulcers; however, the results from other studies in the review contradict this view. Contrary to the suggestion that people from a White race are more likely to develop all categories of

pressure ulcers, Harms *et al.* (2014) study found that all but category 1 accounted for more pressure ulcers in people from a Black racial background admitted to nursing homes. This could suggest that early-stage pressure damage was not being identified in people from a Black racial background. To further emphasise this point, whilst exploring nursing home residents who had been in a nursing home for more than 90 days, it was identified that people categorised as Hispanic and non-Hispanic Blacks (9.7% and 12.1%, respectively) were more likely to have a category 2–4 pressure ulcer in comparison with people categorised as non-Hispanic whites who had 7.6% probability of a pressure ulcer (Gerardo, Teno, and Mor, 2009). Tescher *et al.*'s (2018) study indicated that deep tissue injuries, which have been described as difficult to identify in people with dark skin tones occurred in less than 3% of people categorised as Black or Asian within their study. However, as presented in Bates-Jensen *et al.*'s (2021) study more heel deep tissue injuries were identified on Black and Hispanic participants.

VanGilder *et al.* (2008), Howard and Taylor (2009) and Li *et al.* (2011) established that residents with light skin tones had the highest rate of category 1 pressure ulcers whilst residents from a Black race or with dark skin tones had the highest rate of all other categories. Based on data gathered over 3 months following admission to a nursing home, Howard and Taylor (2009) established that African American residents experienced a higher incidence ~~of~~ risk at each category except category 1 pressure ulcer development. According to Li *et al.*'s (2011) secondary analysis of data (2003–2008), there was an overall unadjusted racial difference of 5.4% between Black and White residents for developing a pressure ulcer.

2.6.3 Pressure ulcers and place of care

Pressure ulcers for many years have been considered as a measure of care quality, and despite being highly prevalent in hospitals, they remain significantly higher in nursing homes and long-term acute care facilities (VanGilder *et al.*, 2008; Fogerty *et al.*, 2009; Bates-Jensen *et al.,* 2021). This finding is supported by Howard and Taylor's (2009) study where a total of 3.6% of the nursing home resident sample developed a pressure ulcer.

Quality indicator data of nursing homes can be interpreted negatively if risk adjustment procedures, as well as application and analysis strategies of pressure ulcer measurement tools, are not considered. The overall aim for care improvements identified within quality indicator data links to the overall reduction of pressure ulcers; they do not highlight the need to reduce widespread disparities amongst various groups; this could be an indication of why pressure ulcer figures have not changed (VanGilder *et al.*, 2008; Hefele *et al.*, 2017). As well as highlighting that people categorised as White across nursing home facilities were more likely to have a low-pressure ulcer risk, Hefele *et al.* (2017) findings indicate that in some nursing homes there were significant differences in relation to the quality of care received based on pressure ulcer risk between Black, Hispanic, and White residents. Li *et al.* (2011) indicated that figures of pressure ulcers in nursing homes have decreased from 16.8% in 2003 to 14.6% in 2008, and the rate of pressure ulcers amongst people categorised as White reduced from 11.4% 2003 to 9.6% in 2008; however, authors of the study made no claims of generalisability as it was based on nursing homes certified by the Centers for Medicare and Medicaid Services which only exists as a federal agency in the USA.

With most pressure ulcers being avoidable, links to quality of care in nursing homes are confirmed by national measurements and various government regulations within care facilities. Baumgarten et al. (2004) identified the prevalence of pressure ulcers within newly admitted residents to nursing homes was reported to be between 10%–33%. Fogerty *et al.* (2009) identified that 1.43% out of a total of 6,610,787 patients over 18 were discharged from hospital with a pressure ulcer. More in line with Baumgarten *et al.* (2004) results, Bergstrom *et al.*'s (1996) study reported 23.9% of newly admitted residents to nursing homes developed a pressure ulcer and Harms *et al.* (2014) found a 14% overall prevalence of categories 2–4 pressure ulcers upon admission to a nursing home. At total sample level within Bergstrom *et al.* (1996) study, it can be noted that people categorised as White had a higher incidence of pressure ulcers (15%) than people categorised as Black (5%). However, the number of people categorised as Black from each individual care setting within the study is not clearly reported; therefore, generalisability is compromised. In contrast, Harms *et al.* (2014) found that people categorised as Black had the highest prevalence of categories 2–4 pressure ulcers (26%) and people categorised as White had the lowest (15%).

These disparities have caused some authors to consider issues around equity in relation to the location of care provision as people classified as Black and Hispanic older adults often reside in lower-quality nursing homes (Cai, Mukamel and Temkin-Greener, 2010). Two studies (Gerardo, Teno, and Mor, 2009; Li *et al.*, 2011) highlighted that disparities in pressure ulcers are largely a system problem and variance in occurrence of pressure ulcers are linked to the lack of quality assessments within service provision rather than a person's skin tone however it could be argued that blaming the lack of quality assessments is insufficient with a failure to recognise skin tone as a reason for health inequity. Gerardo, Teno, and Mor (2009) identified that an older Hispanic

person living in a nursing home with more Hispanic residents was more likely to develop a pressure ulcer in comparison with a nursing home with more non-Hispanic White residents. In nursing homes with no Hispanic residents, the chance of developing a category 2–4 pressure ulcer was 5.63%–7.07% (Gerardo, Teno, and Mor,2009). In contrast, in a nursing home with ≥20% Hispanic residents, there was an 8.05%–8.92% chance of developing a category 2–4 pressure ulcer (Gerardo, Teno, and Mor, 2009). The results presented were reinforced by the study carried out by Li *et al.* (2011) where nursing homes with the highest concentration of people categorised as Black had at least 30% increased risk-adjusted odds of pressure ulcers in comparison to nursing homes with a small number of people from a Black population group. Unfortunately, in most of the studies reviewed, it is not distinguishable if residents had a pressure ulcer before admission to the facility or if the pressure ulcers were acquired once in the nursing home.

2.6.4 Socio-economic trends and pressure ulcers

Two studies (Fogerty *et al.*, 2009; Cai, Mukamel and Temkin-Greener, 2010) specifically reported on socio-economic impact compared to ethnic background. Unfortunately, due to the small sample size from different ethnic groups and data limited to nursing home populations, this component was difficult to explore and create comparisons. Baumgarten *et al.* (2004) identified that anyone from the overall population placed in a larger nursing home as well as people in "for-profit" facilities were more likely to develop pressure ulcers; however, the reasons for this were unclear. Cai, Mukamel and Temkin-Greener (2010) drew on literature to show that people categorised as Black were more likely to be in nursing homes with fewer financial resources and went on to explore the quality of care based on pressure ulcers within and across nursing homes. Drawing on data from the Nationwide Inpatient Sample

(NIS) 2003 (Whalen, Houchens and Elixhauser, 2003) Fogerty *et al.* (2009) found that African American subgroups had 50.69% of people in the lowest income quartile in comparison with 21.4% Caucasians, which remains fairly stable over the lifespan. Similarly, Howard and Taylor (2009) identified that nursing homes with high populations of African Americans tended to have more beds, with higher mean numbered care deficits as well as having higher mean poverty levels in comparison with White residents. It was also established within Cai, Mukamel and Temkin-Greener's (2010) study that in New York State nursing homes, people categorised as Black had a higher rate (odds ratio 0.83) of experiencing risk-adjusted negative outcomes than people categorised as white. The results state that people categorised as Black were not disadvantaged within a care setting but were more likely to be in a nursing home that provides lower-quality care, therefore making them more likely to develop pressure ulcers. This was further supported in Bates-Jensen *et al.*'s (2021) study where higher proportions of Black participants resided in nursing homes with high levels of long-stay residents with pressure ulcers. Moreover, nursing homes with >85% Medicaid payer residents had a greater percentage of Hispanics and nursing homes with 3% or more Hispanic residents were more likely to have an increased number of pressure ulcers (Gerardo, Teno, and Mor, 2009).

2.7 Discussion

Pressure ulcers have been reported more in people with dark skin tones (Baumgarten *et al.*, 2004; VanGilder *et al.*, 2008; Fogerty *et al.*, 2009; Gerardo, Teno, and Mor, 2009; Cai, Mukamel and Temkin-Greener, 2010; Li *et al.*, 2011; Harms *et al.*, 2014; Howard and Taylor, 2014; Ahn *et al.*, 2016; Hefele *et al.*, 2017; Bates-Jensen *et al.*, 2021). Overall, with terms such as "unable to stage" (VanGilder *et al.*, 2008) and the difficulty of detecting skin changes in people with dark skin tones (Sullivan, 2014), it is likely that

higher categories of pressure ulcers develop and could account for the reported findings suggesting residents categorised as Black or people with dark skin tones having the highest category pressure ulcers (VanGilder *et al.*, 2008; Howard and Taylor, 2009; Li *et al.*, 2011; Bates-Jensen *et al.*, 2021). In a more recent study by Bauer *et al.* (2016) people defined as African American had a median category 3 pressure ulcer whereas, amongst Caucasian and other populations, the median category of pressure ulcers was category 2. Although categories were not included in all the studies, various forms of guidance from the NPUAP were used to inform the process in all but one of the studies reviewed (Hefele *et al.*, 2017). Strategies for categorising pressure ulcers differed amongst the studies. One study (Anthony *et al.*, 2002) did not refer to categories, only focusing on service users either having an existing pressure ulcer or not, therefore, suggesting the inclusion of all categories. Another study (Baumgarten *et al.*, 2004) considered all ulcers reported on a skin sheet to be the result of pressure if no other aetiology was stated whilst Gerardo, Teno, and Mor (2009) defined the various categories.

Regardless of the NPUAP, EPUAP and PPPIA (2019) referring to variances of presentation when assessing category 1 pressure ulcers, it is important to highlight that all individuals across the continuum of skin tone do not necessarily display the same characteristics (Sullivan, 2014). It is not appropriate that service users are offered the same standard of care as everyone is unique; however, people with dark skin tones face a healthcare disadvantage as early skin changes in dark skin tones may not be recognised and as a result, a pressure ulcer may worsen, meaning that people can experience longer hospital stays, become prone to infections, experience deterioration of their psychological and physical wellbeing, and even premature death (Agrawal and Chauhan, 2012; Sumarno, 2017). Despite there being modifications in pressure ulcer

categorisation to include various skin tones, there are currently no valid or reliable tools available for assessment of skin changes particularly early skin changes in people with dark skin tones (Harms *et al.*, 2014; McCreath *et al.*, 2016; Bates-Jensen, 2019). As people with dark skin tones are more likely to have a category 2 pressure ulcer than a category 1 pressure ulcer, it is important to highlight Sullivan's (2014) research which indicated that non-blanchable erythema is a risk factor for more severe pressure ulcers in people with dark skin tones which is frequently associated with early-stage pressure ulcers in people with light skin tones. Appropriate assessment strategies need to be managed during risk assessments and/or at the identification of a category 1 pressure ulcer to prevent more damage (Gerardo, Teno, and Mor, 2009).

The literature revealed significant variation in the terminology used for the description of skin tones (Salcido, 2016). Throughout the studies included in the literature review exclusion and lack of appropriate ethnic minority sample sizes to draw solid conclusions about the identification of pressure ulcers was visible. In some US-based studies (Gerardo, Teno, and Mor, 2009; Harms *et al.*, 2014; Ahn *et al.*, 2016; Hefele *et al.*, 2017; Bates-Jensen *et al.*, 2021), figures were collated about people categorised as Hispanics; nonetheless, these do not relate to the population structure of countries such as the UK, Australia or Europe, meaning that generalisability outside of the USA is restricted.

Most of the studies (Baumgarten *et al.*, 2004; Fogerty *et al.*, 2009; Gerardo, Teno, and Mor, 2009; Howard and Taylor, 2014; Cai, Mukamel and Temkin-Greener, 2010; Li *et al.*, 2011; Harms *et al.*, 2014; Ahn *et al.*, 2016; Hefele *et al.*, 2017) were epidemiological, based on retrospective secondary data analysis where statistical analysis was not always used or appropriate. The studies analysed either explored the prevalence or incidence

of pressure ulcers and due to the variability of the aims as well as the timing of each individual study, meta-analysis and comparison of the results were deemed to be inappropriate (Moore and Cowman, 2011). Furthermore, with many of the studies having employed retrospective data analysis, attention is drawn to the possible limitations regarding reliability of the original data sets as well as coding inaccuracies and omissions which could confound results (Anthony *et al.*, 2002). The use of naturalistic observation using the Braden scale, a skin assessment tool and documentary analysis (Bergstrom *et al.*, 1996) remains unique within this literature review as the methods of Bates-Jensen et al.'s (2021) study despite being similar are unclear. Despite, Bergstrom *et al.* (1996) reinforcing that people categorised as White were more likely to develop a pressure ulcer it could be seen that the study faced methodological challenges. Within the clinical areas, the staff would have been aware that observations were taking place; therefore, desirable behaviour would have been displayed and the nurses carrying out the observations would have had a conflict between the role of a researcher and practitioner (Newell and Burnard, 2011).

With the exception of Bergstrom *et al.* (1996), Trescher *et al.* (2018) and Bates-Jensen's *et al.* (2021), all the papers from the United States used data collected from larger surveys that measured quality of care. One of the most popular surveys used which specifically looks at Medicaid, a social care programme and Medicare, a social insurance programme funded at the federal level, was the MDS (VanGilder *et al.*, 2008; Fogerty *et al.*, 2009; Gerardo, Teno, and Mor, 2009; Howard and Taylor, 2009; Cai, Mukamel and Temkin-Greener, 2010; Li *et al.*, 2011; Harms *et al.*, 2014; Ahn *et al.*, 2016; Hefele *et al.*, 2017). Although Shin and Scherer (2009) and Chomiak *et al.* (2001) note that the MDS is a high-quality survey and is contemporary, there are a number of potential limitations with the MDS because data are collected for regulatory rather

than research purposes by clinicians. Ahn *et al.* (2016) noted that the MDS, a federally mandated tool, was amended in 2012 to include suspected deep tissue injuries, this was several years after the guidance from the NPUAP (Fleck, 2007) which suggests that the MDS is not rapidly amendable in line with current evidence. Additionally, despite the MDS enabling the documentation of multiple or single pressure ulcers, either the most severe pressure ulcer recorded was used within data collection or this consideration was not acknowledged.

2.8 Gaps in the literature

This review presents a critical synthesis of the assessment and identification of pressure ulcers and the harm to people with dark skin tones. It shows the area is under-researched, limited by poor methodological quality, with only a limited number of contemporary studies. Moreover, studies mainly focus on secondary data collected by healthcare professionals. Moving forward, research has to focus not only on predisposing factors such as clinical characteristics or cultural impact but on nurse ability to assess people with dark skin tones in a variety of nursing environments which includes both inpatient and community settings.

This literature review has shown that a deficiency of knowledge and awareness of skin tone diversity, as well as a lack of accessibility to appropriate assessment tools by clinicians, is a key factor towards the development of more severe pressure ulcers in people with dark skin tones. Due to austerity, limited resources, competing priorities and the perception of nursing research (Keib *et al.*, 2017) the exploration of nurse-led processes such as pressure ulcer assessments have often been ignored despite causing significant pain and harm to patients (Jackson *et al.*, 2018) as well as having cost implications for the health care sector (NHS Improvement, 2018a). Furthermore, it is

important to highlight that there is a dearth of international literature where the population demographics of the country are people with dark skin tones. Literature within this review has originated from either the UK or US with only one study being international. Nine out of the fourteen papers included in this review were first authored by a person presenting with a light skin tone. By only having literature collected, analysed and published by authors or in countries with predominantly people with light skin tone the views and experiences of people with dark skin tones are seen to be undervalued, dismissed and silenced. Moreover, this biased approach restricts the revelation of international differences (Thelwall and Mas-Bleda, 2020).

2.9 Pressure ulcers and nurse education

Nurses have a mandate to provide high-quality care for all, now and for future generations (NMC, 2015; 2018a). However, with a paucity of readily available literature and clinical guidance on the identification and assessment of pressure ulcers across skin tones (McCreath *et al.*, 2016) exploring how (or if) this has been embedded in nurse education remains a challenge.

Pre-registered nurse education in Higher Education institutions comprises of both theoretical and practical components which contribute to and build on each other to support evidence-based practice and evidence-informed decision making (Yost *et al.*, 2014; NMC, 2018c). For student nurses, the interplay between these two forms of learning helps to develop an overall understanding of nursing care delivery (Brooke and Mallion, 2016). From the literature reviewed, it can be seen that there is a lack of guidance and evidence, people with dark skin tones are more likely in comparison to people with light skin tones to develop higher categories of pressure ulcers, and this could well be associated with failure to accurately identify early category 1 pressure

damage. It is therefore expected that nurse education on pressure ulcers emphasises this inequality and teaches in a more focused way about assessing and preventing pressure ulcers in people with dark skin tones. Further research regarding nurse education and pressure ulcers should be carried out to help establish the baseline knowledge of nurses in relation to pressure ulcer identification and assessment to help embed awareness of skin tone diversity.

2.10 Review limitations

To provide a comprehensive literature review every effort was made to include all the relevant studies however, it may be possible that some studies were not captured in the search and screening process. Also, the literature review was limited to the English language which may have limited the research to specific population groups.

2.11 Chapter summary

Nurses are crucial sentinels for patient safety and quality care delivery. Correct assessment and early identification of pressure ulcers is essential to implement interventions and prevent further deterioration. This review's findings acknowledge that the identification of pressure damage in people with dark skin tones when addressed at all, is mainly focused on ethnic background or race rather than skin tone diversity. The use of skin tone as a differentiator of service users enables wide-spectrum individualisation of care and prevents a categorisation approach. Also, from the literature reviewed, it can be seen that there is a lack of guidance and evidence, as well as people with dark skin tones, are more likely in comparison to people with light skin tones to develop more severe pressure ulcers, and this could well be associated with failure to accurately identify category 1 pressure damage. Further research regarding nurse education and pressure ulcers should be carried out to help establish nurse

baseline knowledge of pressure ulcer assessment and identification in people with dark skin tones.

Chapter Three: Methodological approach

Abstract

Within this chapter, the methodological approach of this thesis will be critically examined including the philosophical underpinning and paradigmatic developmental trajectory. Furthermore, case study research as a methodology and the relevant methods of data collection are presented all whilst providing the rationale for this choice. Further exploration of the benefits will be considered and presented to provide an in-depth understanding of how this methodological approach supported the investigation of the following aim:

> To critically evaluate the educational preparation of registered nurses in Higher Education institutions in relation to pressure ulcer assessment and identification, specifically focusing on skin tone diversity.

3.0 Introduction

This chapter explores the methodological approach of the study including the choice of pragmatism as the underpinning philosophy, the core components of case study as a methodology and the choice of mixed methods as a method. Through the explanation of these key components, the decision making and justification of the choice of approach reiterates that the most appropriate research paradigm for the study aim was chosen.

3.1 The role and status of research philosophy

The etymology of the word 'philosophy' comes from the two parts of philosophy, i.e. *Philo* meaning loving and S*ophia* meaning knowledge or wisdom (Online Etymology Dictionary, 2021). The roots of philosophy are thought to have first developed in the East however, due to the focus of this study being on western culture and western ways of thinking the focus will remain on western philosophy which originates from Greece (Bruce, Rietze and Lim, 2014). Philosophy in its broadest sense does not ask questions but focuses on understanding questions; philosophy refers to seeking answers to fundamental questions human beings have grappled with throughout history (Cheraghi, Yousefzadeh and Goodarzi, 2019). Examples of these fundamental human questions include: 'what is real?' (ontology), 'what is knowable?' (epistemology), 'is this just?' (ethics), and whether there is an art in healthcare (aesthetics).

The philosophical underpinnings of a piece of research provides an infrastructure for decision making and determines the orientation of activities (Bruce, Rietze and Lim, 2014). As Scott and Usher, (1996 p.17) note, 'research is a social practice carried out by research communities. What constitutes 'knowledge', 'truth', 'objectivity' and 'correct method' is defined by the community and through the paradigms which shape its work'.

Hence, the next section defines the term paradigm, the concepts of research paradigms and provides a further description of the various research paradigms.

3.2 Research paradigms

Originating from a Greek word meaning 'pattern' the term paradigm was first used by Kuhn (1962) to represent a 'philosophical way of thinking'. Kuhn defines a paradigm as 'an integrated cluster of substantive concepts, variables and problems attached with corresponding methodological approaches and tools' (Kuhn, 1962, quoted in Flick, 2009, p. 69). Researchers must locate their research in a 'paradigm' as it has implications for vocabulary, theories and principles, as well as the choice of research method and strategy for data collection; issues deemed worthy of pursuit are prioritised whilst others are suppressed (Cheek, 2000; Doyle, Brady and Byrne, 2009; Kaushik and Walsh, 2019). The paradigm of research consists of several concepts: ontology, epistemology, axiology and methodology (Lincoln and Guba, 1985; Denzin and Lincoln, 2008).

Ontology traces its meaning from the ancient Greek present participle ων/on/ which means 'to exist' and is the study of 'being' and is concerned with 'what is' Crotty, (2003, p. 10). Ontology is the beginning of any research and is followed by epistemology, methodology, and methods. It is the ontological question that helps to conceptualise the form and nature of the researcher's reality and what is believed to be known about that reality, be it a singular, verifiable reality or truth or socially constructed multiple realities (Kivunja and Kuyini, 2017). Epistemology is defined by Crotty (1998) as a way of looking at the world and making sense of it. Cooksey and McDonald (2011) use the phrase 'what counts as knowledge within the world' to explain the term epistemology. Epistemological assumptions focus on how a researcher will go about creating,

acquiring and transferring knowledge in the social context (Scotland, 2012). Axiology is the study of value or, more adequately, theory on the nature of value (Held, 2019). Axiology includes the definition, evaluation and understanding of right and wrong behaviour when planning a piece of research (Kivunja and Kuyini, 2017). Methodology is the logic and flow of action which decides the kinds of methods used so as to gain knowledge about a research problem (Crotty, 1998). The choice of methodology within research is dependent on the paradigmatic perspectives of the researcher and includes assumptions made, limitations encountered and mitigated or lessened (Singh, 2019). Having defined the concepts of research paradigms and explored their elements, to illustrate the paradigmatic developmental choices of this study the next few paragraphs provide an overview of the dominant research paradigms and addresses the correlation between ontology and epistemology and methodology.

3.3 Common paradigms referred to in research

There are a plethora of paradigmatic perspectives (Kuhn, 2012) with numerous recognised research paradigms (Creswell 2014; Denzin and Lincoln 2011; Lincoln, Lynham and Guba, 2011; Morgan 2007). In research, the four commonly agreed paradigms that offer distinct worldviews against each other are positivism, constructivism, transformative and pragmatism (Teddlie and Tashakkori, 2009). Positivism and constructivism are considered to be opposing paradigms (Betzner, 2008), positivism emphasises a single reality that 'all true knowledge is scientific' (O'Leary, 2017, p. 5) and closely identifies with quantitative research methods. A researcher's role within the positivist philosophy is that of explorer of universal realities, objectivity and verifier of theories or hypotheses (Polit and Hungler, 2013). Constructivism is less rigid and defined as 'unique experience of each of us' (Crotty, 1998, p. 58) and is mostly embedded in qualitative research methods. Transformative

and pragmatism are suitable for both quantitative and qualitative research methods known as a mixed method approach (Mackenzie and Knipe, 2006). Figure 3.1 presents a summary of dominant research paradigms in nursing (adapted from Kivunja and Kuyini, 2017, pp.30-36).

Table 3.1 Summary of dominant research paradigms in nursing (adapted from Kivunja and Kuyini, 2017, pp.30-36)

Paradigm	Ontology	Epistemology	Axiology	Methodology
Positivism	Naïve realist	Objectivist	Beneficent	Experimental
Constructivism	Multiple realities	Subjectivist	Balanced	Naturalist
Pragmatism	Pluralistic realities	Relational	Value - Laden	Mixed-method approach
Transformative	Historical realism	Transactional	Respects cultural norms	Dialogic

3.3.1 Positivism

This paradigm was derived from tested and systematic experiences (Kaplan, 1968). Positivists hold the rigid belief that the scientific method used in natural sciences should also be applied to the study of human behaviour with the deduction of universal laws to explain human and social phenomena (Weaver and Olson, 2005). Context is not important and informed quantitative reasoning is the predominant focus of positivism. It involves cause and effect relationships; putting hypotheses and theories to the test by the deductive process during the course of experiments (Lincoln and Guba, 1985).

3.3.2 Constructivism

Constructivists hold the belief that there are 'multiple realities' and that there are different perceptions of what reality is. In the context of nursing research, constructivism focuses on knowledge being constructed or co-created through human interactions between the researcher and the research subjects, among the research participants, and the environment (Nguyen, 2019). It also recognises that social phenomena and human behaviours are complex therefore researchers hold preconceived ideas which may have implications on the collected data which needs to be discussed or bracketed (Parahoo, 2014). To capture the interactions between humans which are not predictable, the methods used by constructivists are interactive and flexible and are not normally analysed statistically. The findings gathered have significance beyond the setting of the study however the findings have limited generalisation value (Adom, Yeboah and Ankrah, 2016).

3.3.3 Pragmatism

Pragmatic philosophy is created by drawing from both the philosophical underpinning and theoretical frameworks of both quantitative (positivism) and qualitative (constructivism) approaches (Creswell, 2013). Pragmatism is perceived as a 'methodological movement' and has historically involved criticism of the single method approach (Brierley, 2017, p. 3). In line with an ontological perspective, to successfully address the aim and objectives of this study, pluralistic emphasis otherwise known as 'multiple realities' needed to be explored (Creswell and Plano Clark, 2017). Furthermore, the pragmatic paradigm promotes and thrives as 'a problem-solving, action-oriented process of inquiry-based on democratic values and commitment to progress' (Kaushik and Walsh, 2019, p. 12). Based on these assumptions which embrace

the plurality of methods and ethics-based pursuit of equality the research paradigm of this study finds its philosophical foundation in pragmatism.

Unlike the positivist and constructivist paradigms which easily fit with ontology and epistemology through distinct belief systems, pragmatism deals with the facts and is not committed to a singular philosophical doctrine or reality (Creswell and Plano Clark, 2017). Derived from the Greek word 'pragma' meaning action the philosophical movement of pragmatism was expounded in the late 19th century by Charles Peirce (1877). It was further developed by others including William James (1907/1995), John Dewey (1938) and most recently by Richard Rorty (1982). With pragmatist scholars involved in dismissing traditional assumptions about the nature of reality, knowledge, and inquiry pragmatism does not belong to any philosophical system and reality; pragmatism focuses on the consequences of research and the research questions rather than the methods and is therefore often associated with mixed-methods or multiple-methods (Teddlie and Tashakkori, 2009; Creswell and Plano Clark, 2017). Expectedly this leads to researchers using various forms of triangulation however this is not always necessary (Timans, Wouters and Heilbron, 2019).

Whilst pragmatism holds methodological openness, it is important to recognise that philosophical arguments are not discounted by pragmatists (Yefimov, 2004), therefore, it can be argued that through the pragmatic paradigm, empirical research and a variety of perspectives can be gathered to address the aim of this study.

3.4 Philosophical assumptions of the author

Ontology examines the nature of reality and epistemology examines how you can examine ontology. There are several ontologies and epistemologies that exist and have

been presented in Table 3.1. Underpinned by the values of a registered nurse and district nurse the author holds a view of pluralistic realities where reality is seen to be constantly negotiated, debated or interpreted. Furthermore, the author understands knowledge, their thinking and how others know through a relational lens. A relational lens recognises that knowledge should be examined using whatever tools are best suited to solve the problem and involves a mixed-method approach. The tools incorporated into the mixed methods approach draw on the belief that knowledge can be measured using reliable designs and tools (experimental) alongside the belief that reality needs to be interpreted to discover the underlying meaning (naturalist). When ontology and epistemology are combined together, a holistic view of how knowledge is understood is formed which in the author's case is pragmatism. The following section provides an overview of case study research as a methodology that aligns with the philosophy of pragmatism.

3.5 Case study research as a methodology

In terms of research methodology, pragmatism recognises that it does not hold all answers and that research is cumulative where initial judgments must be made with the evidence at hand (Creswell and Plano Clark, 2017). Case study research has been employed as a methodology to address the study's aim as it provides an opportunity to delve deeper into distinctive features, commonalities across cases all whilst acknowledging and examining existing reality (Mills, Durepos and Wiebe, 2010). When identifying the term case study, it is important to acknowledge that the reference is to a research case study rather than for the purpose of teaching or as a learning tool about a particular case (Fisher, Esparza and Olimpo, 2019). There are commonalities between the two applications of a case study, however, the main difference in a

research case study is that rigour and presentation of empirical data are crucial (Yin, 2018).

Case study research has been used in different forms from the 1920s and has since been accepted in a variety of disciplines as well as practising professions (Burns, 2000; Cronin, 2014; Brogan, Hasson and McIlfatrick, 2019). However, in the last twenty-five years and coinciding with numerous publications (Yin, 1981; Stake, 1995; Marriam, 1998) case study has become a recognised methodology for conducting educational, nursing and social science research. A case study as a research strategy helps to establish the best possible methods to use to best answer a well-designed research question (Stake, 1995) and has been described as 'a bridge that spans the research paradigms' (Luck, Jackson and Usher, 2006, p. 103).

3.5.1 Definition of case study research

There are numerous ways in which case study research can be defined or categorised (Gustafsson, 2017). Despite facing definitional problems, Yin (2018, p. 15) defines case study research as 'an investigation of a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident'. As a methodological approach that enables 'the interpretation of complex interrelated phenomena' (Luck, Jackson and Usher, 2006, p. 107), case study research according to Yin (2018) is prescriptive, providing the overall direction of the research including the process by which the research is conducted. Stake (1995) is critical of Yin emphasising that a case study is an immersive experience where the researcher is fully engaged in the aims and objectives of the study and therefore chooses the most appropriate research process. Stake (1995, p. xi) defines case study research as 'the study of the particularity and complexity of a single case,

coming to understand its activity within important circumstances'. The definitions of case study research are largely influenced by epistemological commitments, however, Stake's (2000) definition emphasises the choice of the case rather than the choice of methods.

3.5.2 Case Study as the methodology of choice

Case study offers the opportunity to study a case or cases in real life. It is a popular approach within nursing research and offers the opportunity to answer the 'how' and 'why' questions all whilst having little control over events (Cronin, 2014). Case study is unique in how it involves the purposeful identification of a case or cases and involves multiple sources of information and data collection with an in depth understanding which is analysed based on the study objectives (Eisenhardt, 1989; Merriam 1994). Case study offers the opportunity and ability for the researcher in this study to handle and combine multiple kinds of data collection methods such as documents, interviews, questionnaires, objects and observations. This suggests that case study as a research method is non-prejudicial with all methods being of equal value. This in turn facilitates the detailed and relevant data analysis of a case(s) where concrete, contextual, in-depth knowledge can be gained about the educational preparation of registered nurses in relation to pressure ulcer assessment and identification, specifically focusing on skin tone diversity. The data collected using case study as a research method is normally a lot richer and of greater depth than can be found through other experimental designs (Cronin, 2014).

3.5.3 Defining the case and bounding the case

Establishing 'the case' has been debated amongst individual social scientists. It has been proposed that a case can be seen as an entity (Stake, 2005), a process of inquiry,

or an end product (Sandelowski, 1996). This is reinforced by Ragin and Becker (1992) where two key dichotomies of case conceptions have been recognised. The first dichotomy, the case as an entity, highlights that a case involves empirical units or theoretical constructs and the second that the cases are understood as general or specific. However, Kent and Maggs (1992) present that a case can be a combination of both physical and social elements such as an institution and the involvement of people within an institution. Thus, identifying boundaries within a case study approach can cause ambiguity as different views have been established exploring either the nature of the case or the phenomenon of interest (Appleton, 2002; Cronin, 2014). As a result, identifying the specific "case of" can be difficult, which has an impact on the method of conducting and analysis of the research (Copper *et al.*, 2012). In this study, a purposive sample which could be interpreted as 'a specific, a complex functioning thing' (Stake, 1995, p. 2) has been used which identifies a Higher Education institution as the case. To distinguish the specific details and uniqueness of the case, boundaries need to be put in place (Stake, 1995; Yin, 2018). The case boundary of this study was that the Higher Education institution needed to be delivering an approved NMC 3-year Bachelor level Adult Nursing course (NMC, 2010).

3.5.4 Designing case study - single vs several case(s)

Across various schools of thought, the use of a single case or several cases have been perceived differently; at times they have been seen to be overarched by case study research (Yin, 2018) whilst within anthropology and political science single case or several cases are considered as a different methodology. Within nurse education, choosing between the use of a single or several case(s) is dependent on research design rather than a focus on advantages or disadvantages (Yin, 2018).

A single case study is defined as a concentrated exploration of a sole entity that helps by confirming, challenging or extending theory and knowledge through research (Gustafsson, 2017). They can be used in different situations including where there is the need for criticality, limited knowledge or awareness, longitudinally or as a pilot study for multiple case study research (Gross, Giacquinta and Bernstein, 1971; Doody and Doody, 2015).

Stake (1995) has categorised case study into 3 types i) intrinsic: understanding a specific case (the case is most dominant), ii) instrumental: questioning the case (issues within the case study is the most dominant) and iii) collective: questioning more than one case. The first two types are single cases whilst the third makes use of several cases. Overall, the use of several cases despite often establishing tension through 'case-quintain dilemma' (Stake, 2005, p. 39) is seen to be more robust as it contains more than one single case (Herriott and Firestone, 1983; Gustafsson, 2019). Nevertheless, it is important to identify that the use of several cases does not usually replace a single case study as the expectations and outcomes largely vary (Stake, 2005). Collective case studies, which at times is portrayed as an extension of the instrumental case study, comprises of several cases and endeavours to understand a phenomenon, a population, a general condition or develop a theoretical understanding (Stake, 2000). As a result, the choice of cases used within a collective case study design is important. However, as reported by Parlett and Hamilton (1972) researchers need to be aware that an initially chosen case may not always be appropriate and may need to change. This in turn may require a redesign for future cases (Stake, 1995; Cousin, 2005) or a complete overhaul of the case study research design (Yin, 2018). Gillham (2000) identifies that the case to be explored offers the opportunity to distinguish between the use of a single or several case(s).

Various studies (Cowley *et al.*, 2000; Nelson *et al.*, 2015; Ali, 2017; Granel and Bernabeu-Tamayo, 2020) have used several cases to acknowledge potential differences amongst groups. For this study in line with Stake's view (1995), a collective case study was chosen which involves completion of cases with a notion of flexibility where the study cannot be charted in advance. Within the next part of this chapter, the exploration of case study research elements including the approach to data collection will take place.

3.6 Case study research and method of data collection

Case study research has historically been seen exclusively as a qualitative method (Yazan, 2015). However, with the need for in-depth analysis of a bounded system, changes have taken place to eliminate exploration constraints and ensure idiosyncratic complexity. Case study research enables in-depth exploration of not only a particular case or cases but evidence within a particular system which leads to the identification of variables, phenomena, processes and relationships that may need to be looked at in more detail (Stake, 2005). As a result, it can be seen that researchers have often used a quantitative, qualitative or combination of both approaches within a case study (Brogan, Hasson and McIlfatrick, 2019). Hence, case study researchers consider all types of evidence as having value (Gillham, 2000; Anthony and Jack, 2009).

Mixed methods work well with case study research as there is no inclination to lean towards a particular type of data collection classification or analysis as both case study research and mixed-method approaches are seen as opportunistic and evolving towards the identification of a problem (Jones and Lyons, 2004; Grbich, 2007). Integration of multiple sources of data enables various elements within a case to be

scrutinised with new insights being uncovered as well as drawing on the strengths from each data source adding rigour, depth and breadth (Anthony and Jack, 2009; Onghena, Maes and Heyvaert, 2019). There is a view that the use of mixed methods is beneficial in terms of the quality and fullness of the data it produces (Denscombe, 2017). The added value of a mixed-methods approach is the ability to view and explore concepts from various angles which offers benefits in terms of quality and producing evidence that addresses concerns regarding trustworthiness and validity (Heyvaert *et al.*, 2013).

3.6.1 Principles for designing a mixed-methods study

Mixed methods research has been defined by Johnson, Onwuegbuzie and Turner (2007, p. 123) as 'combines elements of qualitative and quantitative research approaches (e. g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration'. Methodological work on the mixed methods research paradigm has been informed by Dewey's pragmatic theory of inquiry (Dewey, 1948) as well as many other more recent publications (Tashakkori and Teddlie, 2003; Johnson and Christensen, 2004; Creswell, 2015). The mixed methods research paradigm remains open to various ontologies and epistemologies which offers the opportunity for a research study's aims and objectives to be addressed in the best possible way hence dismissing the notion of being limited by inflexible philosophical underpinnings (Simons, 2009; Creswell, 2013).

Mixed method research through a pragmatic paradigm often combines and draws on the positives of quantitative and qualitative approaches therefore it is important to identify how each data collection approach used within a study influences another. Mixed method research can be fixed or emergent, which in turn shapes the research

approach and influences how data collection tools are designed (Creswell and Plano Clark, 2017). Fixed mixed-method research highlights that quantitative and qualitative data collection strategies are predetermined and planned from the start of the research study design however emergent mixed methods designs are the opposite (Morse and Niehaus, 2009). Emergent mixed-method designs focus on the expansion of a research study where further data collection takes place to explore a research study in more depth. Emergent mixed methods have evolved where fixed method designs are only partially used, this occurs when the data collection tools are initially identified; however, the exact details such as specific questions are influenced and shaped by results collated from the first data collection tool (Feilzer, 2010). Within mixed-method research, it is crucial not to disregard unexpected data that may arise such as remarks by participants as this could lead to data being missed. As suggested by Crowe *et al.* (2011) when similar data collection tools are used the likelihood of having similar motives is present; however, if different data collection tools are used which counterbalance each other a more holistic picture of the phenomenon would be reached.

3.6.2 Mixed method sequential design

The sequential approach has been used in different forms with different design names (Morse, 1991; Tashakkori and Teddlie, 1998; Greene, 2007); however, Creswell (2003) recognises sequential approaches more specifically by distinguishing between which step comes first and why. By informing and supplementing each step of a study the use of a sequential design helps address, through the use of different research methods, different aspects of a study (Feilzer, 2010).

3.6.3 Explanatory sequential mixed method design

An explanatory sequential mixed-method study design was applied for this study. This design involved two distinct interactive phases of collecting and analysing quantitative data and then qualitative data within the same study. Also, known as a qualitative follow up approach, the explanatory sequential design uses the qualitative phase of the study to explain the initial quantitative results and offers guidance to the researcher around the specific reason(s) for the resultant trends (Creswell and Plano Clark, 2017). Therefore, quantitative research collection is completed then the qualitative research takes place. The design works well with case study research and offers the opportunity for the qualitative data to help explain and elaborate on quantitative data collection which offers a general understanding of the research problem. It was important to consider this approach to the research for this study to help establish the sequence and highlight the emphasis of the study design. Through an intermediate step, the two phases within this study were connected, where the statistical results of the quantitative data influenced the development and refined the questions asked as part of the interviews in the qualitative data collection. The decision to conduct and analyse the qualitative data after the quantitative data was guided not only by the purpose of the study but also by methodological discussions in the literature.

Due to the quantitative phase being placed first it may be perceived as of more value within a mixed-method study (Tsushima, 2015); however, within this study, both data sets were seen to be of significant importance. The quantitative phase of the study focused primarily on systematically analysing teaching when framing information on the identification and assessment of pressure ulcers in people with dark skin tones. The quantitative data collected was robust with the use of two data collection methods that intertwined with each other (See Chapter 4) and the data analysis employed

descriptive statistics. To gain a contextual field-based explanation of the statistical results from the quantitative phase, qualitative data collection from different sources (focus groups and interviews), as well as multiple levels of thematic data analysis occurred across the case sites (Higher Education institutions).

3.7 Chapter summary

This study finds its philosophical foundation in the philosophy of pragmatism. Furthermore, case study research as a methodology was chosen to facilitate the examination of a contemporary real-life issue across numerous case sites and settings using multiple sources of data. Through a pragmatist lens, data was collected using an explanatory sequential mixed method design where a qualitative component gave context to the quantitative results. Through the explanation of these key components, the decision making and justification of the choice of pragmatism as the underpinning philosophy has been supported.

Chapter Four: Design and conduct of the research

Abstract

This chapter presents the details of how the mixed method collective case study design was used to shape the collection and analysis of data to address 3 of the research objectives of this study:

- To systematically analyse campus classroom teaching for student nurses on the assessment and identification of pressure ulcers in people with dark skin tones across a selection of five Higher Education institutions.

- To critically examine student nurse awareness and confidence when assessing and identifying pressure ulcers in people with dark skin tones across a selection of Higher Education institutions.

- To critically examine the perception that nurse educators have when teaching assessment and the identification of pressure ulcers in relation to people with dark skin tones within the English health care system.

A paper based on the work presented in this chapter has been published as:

Oozageer Gunowa, N., Hutchinson, M., Aveyard, H., Brooke, J. and Jackson, D. (2021) 'Evidencing diversity: Development of a structured tool for investigating teaching on pressure injury and people with darker skin tones', *Nurse Researcher,* 29 (2). doi: 10.7748/nr.2021.e1761. (see Appendix B)

4.0 Introduction

Working to achieve equity challenges us all to consider the extent to which we operationalise issues of inclusion, diversity and race within our day-to-day professional practice (Thorne, 2017). Nurse educators have a legal, ethical and moral obligation to teach inclusively, incorporating an authentic and diverse lens that includes the rejection of whiteness as normal. When nurse educators are not racially inclusive, whiteness can be assumed as normal such as in the case of category 1 pressure ulcers always being visible on all skin tones as in fact, this is not the case in people with dark skin tones (Black and Simenden, 2020). Despite a stated commitment to diversity and inclusion in most nursing curricula the extent to which diversity in teaching is evident in the classroom is far from certain (Ahonen *et al.*, 2014). The exploration of how assessment and identification of pressure ulcers across skin tones are framed on campus in the classroom is important because of the higher burden of harm caused by pressure ulcers among people with dark skin tones as identified in the literature review (Oozageer Gunowa *et al.*, 2018).

4.1 Research strategy

An explanatory sequential mixed method collective case study design was applied. The quantitative phase was the assessment of teaching materials and classroom teaching and involved the development of a tool. The tool assessed whether pressure ulcer assessment and identification in on-campus undergraduate pre-registered nurse education considered skin tone diversity. This was undertaken through the analysis of educational material and teaching observations at five Higher Education institutions. The Higher Education institutions were recruited through purposive sampling, following University Research Ethics Committee approval (UREC Registration No: 171077).

The findings informed the qualitative phase of the study as per the requirement of a sequential mixed method study (Creswell, 2014). The qualitative phase included focus groups with student nurses and semi-structured interviews with nurse educators at each of the Higher Education institutions that formed the cases for the study (Figure 4.1). Once the qualitative phase was complete, the results were integrated by the researcher creating the discussion chapter (Chapter 7) explaining how the qualitative results extend the specific quantitative results.

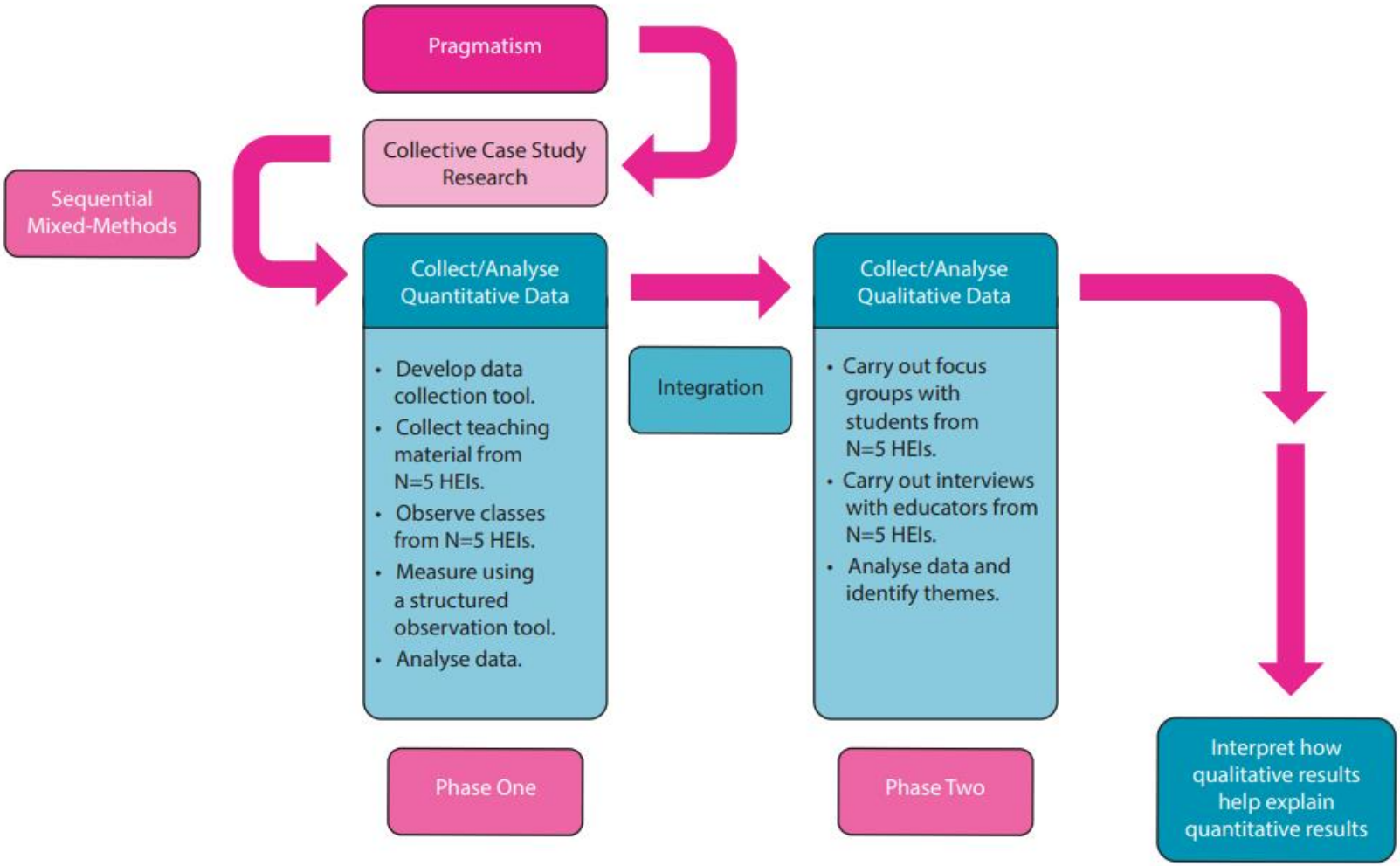


Figure 4.1 Conceptual framework of explanatory sequential design

4.1.1 Sampling and recruitment of collective cases

Entering the field

After carrying out online searches to help identify case sites and by word of mouth a letter (Appendix E) was sent via email between August 2017 and March 2018 to the Head of School and Programme Lead for undergraduate 3-year nursing programmes (Bachelor's in Nursing). Ten Higher Education institutions were approached across England to seek an appointment to discuss the study and gain permission for the Higher Education institution to become a case site for this study (Denscombe, 2017). To establish an open, transparent relationship each email was preceded by a telephone call seeking an 'in principle' agreement (Simons, 2009). If the response was favourable the Head of School or Nursing Programme Lead acted as a gatekeeper where an access relationship was created. However, three Higher Education institutions did not respond, and two other Higher Education institutions provided the following reasons for not participating, including undergoing a curriculum review, the use of guest speakers to deliver the teaching or unavailability of staff and staff shortages. The remaining five Higher Education institutions were included as 'cases' and consisted of modern universities, established post-1992 (Further Education Act, 1992). All of which delivered an approved NMC 3-year Bachelor level adult nursing programme leading to professional registration as a nurse (NMC, 2010).

Selecting the cases

A purposive sampling strategy, which is central to the case study design, was applied consciously to include Higher Education institutions across England to help demonstrate the demographic spread of people and population groups (Walshe, 2011; Denscombe, 2017). Higher Education institutions were also selected based on similarities between student numbers and student experiences (Times Higher

Education, 2017). Either the Head of School or Programme Lead for undergraduate 3-year nursing programmes consented (Appendix F) for the Higher Education institution to be a case for the study. All cases involved were similar in size but had demographic differences to ensure the representation of student nurses and nurse educators across England.

To maintain confidentiality and anonymity specific details of the five cases involved cannot be disclosed however Figure 4.2 presents the geographical spread of cases. Three of the five cases were members of the Advance Higher Education's Race Equality Charter where institutions work to reflect on institutional and cultural barriers standing in the way of Black, Asian and Minority Ethnic staff and students (Advance HE, 2020).

Figure 4.2 The geographical spread of cases

4.2 Quantitative data

The quantitative phase of this study addresses the following objective:

- To systematically analyse campus classroom teaching for student nurses on the assessment and identification of pressure ulcers in people with dark skin tones across a selection of Higher Education institutions.

To achieve this objective and in line with the sequential mixed methods approach the analysis of educational material and teaching observations at five Higher Education institutions was undertaken using a quantitative research approach. With the lack of a pre-existing tool, one had to be developed. This process occurred after the principles in the curriculum design of each Higher Educational institution was collated from the public domain.

4.2.1 Developing a data collection tool

Designing and developing data collection tools to guide the investigation of teaching practice remains challenging (Coates, 2008; Hunter and Kiely, 2016) and rarely discussed, indicating that this has not been prioritised in recent years. As a result, tools for the assessment of classroom activity and the analysis of teaching materials in the field of diversity, particularly skin tone, are lacking, with little available to guide nurse researchers in exploring the teaching materials and the respective teaching in the classroom.

In the absence of a specific tool a Diversity Observation Teaching Tool (DOTT) (Appendix G), drawing on Stolley and Hill's (1996) original content analysis framework was developed and applied, to scrutinise teaching material content and delivery mode,

using a tick box system. Informed by the literature this novel approach involved one tool to enable the analysis of teaching materials and the observation of teaching, assisting in determining the complementarity and consistency of the text and the observational data, and providing a deeper and more consistent analysis of how nurse educators teach a sensitive and otherwise invisible topic. Two forms of data were gathered (a) written teaching material and (b) observation of classroom teaching.

Design of the tool

In this study, it was important to establish if Stolley and Hill (1996)'s framework could be applied to the observation of teaching and analysis of teaching material of pressure ulcers relating to skin tone diversity. Ultimately their content analysis framework was used to shape the design of a structured tool for classroom observation and the analysis of teaching materials regarding pressure ulcers in people with dark skin tones. Applying structured lists or specific questions to be answered also provided a more systematic approach to data collection, which allows for replication and comparison between studies, and helps focus a researcher (Jackson *et al.*, 2016). Teaching is multi-dimensional with both text and practical elements enabling student learning (Horntvedt *et al.*, 2018). By creating an integrated, structured data collection tool, suited for document analysis and observation, the cycle of planning and teaching delivery could be examined, as well as provide a resource for comparative research across institutions. The terminology used to develop the DOTT's structured questions was from a combination of medical subject heading terms and terms gathered from empirical research and grey literature (Adams *et al.*, 2016). To frame the investigation four main parameters were used which were relatable to Stolley and Hill's (1996) work: duration analysis, context representation, portrayal in content and visual representation.

Duration analysis

This captured data on the space and time dedicated to pressure ulcers and skin tone diversity. Firstly, the nature of the DOTT meant it was important to consider the teaching modalities used, to ensure the correct terminology was being used. Subsequently, the space and/or time devoted to skin tone diversity was examined. Space quantified the amount of content in the lesson plan relating to people with dark skin tones, including PowerPoint slides or questions, as well as any other discussion of people with dark skin tones. Time focused on the time predicted in a lesson plan or the actual amount of time spent in the classroom focusing on people with dark skin tones.

Context representation

The location and context of the topic relating to people with dark skin tones was a crucial measure, as it can highlight structural mechanisms and White normativity that nurse educators are knowingly or unknowingly propagating (Kester, 2019). Consequently, information about where people with dark skin tones were represented from the entirety of the teaching material as well as the whole of the observed teaching session was gathered. Representation of people with dark skin tones was analysed based on whether they were seen or discussed throughout the teaching session or only in specific sections. There is a lack of language relating to people with dark skin tones, so visual descriptors of pressure ulcer presentation were also included in this section.

Portrayal in content

Exploring the content of the teaching material and teaching sessions offered the opportunity to explore how people with dark skin tones were presented and discussed. Therefore, it was important to identify the terms used to portray skin tone diversity. The topics under which people with dark skin tones were included in the classroom

needed to be taken into account as this offered an insight into whether they were integrated into the curriculum or seen as a level of complexity and variability to the norm: were people with dark skin tones included throughout the teaching material or were they marginalised and positioned as an extra, separate or complex component?

Classroom observation allows for detailed session analysis, by breaking down each component into smaller chunks and exploring its underlying meaning (Vindrola-Padros and Vindrola-Padros 2018). Consequently, this section was broken down to help determine if all the topics were intentional or incidental: were they formalised in the teaching document or raised as questions by students in the classroom.

Visual representation

Stolley and Hill (1996) developed a systematic method that used content analysis to not only explore textual content but also examine illustrations and visual content, drawing on subtleties and nuances in the messages conveyed. This enabled the exploration of where and how information and imagery were presented, which helped explore unspoken and hidden knowledge. Photographs and images influence students' perceptions and are important components of teaching (Norris, 2012), so the DOTT was designed to examine images. A baseline was developed by determining the number of images presented and the number depicting people with dark skin tones. Using a detailed colour chart measuring hues, values and chroma would not have been optimal, as images in teaching materials often come from internet sources, so can sometimes be of poor quality (McCreath *et al.*, 2016). The DOTT's image differentiation and categorisation was therefore based on Fitzpatrick (1988), which focused on physical traits and clear visual differentiation of skin colour.

The most effective way of improving learning is to mix didactic and interactive education (Forsetlund *et al*., 2009, Arends. 2015), so it was important to capture this data with the DOTT. The visual representation of people with dark skin tones across teaching modalities was considered – for example, when using teaching props such as mannequins (Conigliaro, Peterson, and Stratton, 2020).

4.2.2 Data collection

Principles in curriculum design

Before the observation of teaching documents and practice, some contextual information was sought about each of the Higher Education institutions. A Google search using the following terms was carried out for each of the Higher Educational institutions involved in the study: 'nursing', 'curriculum design', 'philosophy', 'programme specification' and 'pre-registration'. A further search was then carried out on each Higher Educational institution website using their site search tool. This background context seeking was undertaken without interaction with any staff members in the Higher Education institution.

Sourcing teaching documents

After receiving the participant information sheet (Appendix H) and gaining consent (Appendix I) the nurse educator who prepared the teaching material emailed the student researcher the required documents (see section 4.5.3). The teaching material was from a pressure ulcer teaching session and included a range of material including PowerPoint presentations, workbooks, lesson plans and lecturer notes. The teaching sessions occurred within the 1st academic year of the pre-registration nursing programme being delivered at that specific Higher Education institution.

Observation of classroom teaching

Observations are more than the recording of the spoken word – they capture activities and occurrences, which helps to identify shared systems of meaning (Fry *et al.*, 2017) and this is incorporated in the DOTT as described earlier. Following on from documentary gathering non-participant observation of the provided teaching material was undertaken. This was to increase the understanding of the previously collected teaching material focusing on pressure ulcer identification and assessment across skin tone diversity.

Observation of Teaching

In order to conduct observations the Head of School or Nursing Programme Lead forwarded the participant information sheet to nurse educators delivering pressure ulcer teaching (see section 4.5.3). The location and timings of the teaching sessions observed during the academic year 2017/18 were arranged with the nurse educators delivering the sessions after providing the participant information sheet (Appendix J) and gaining consent (Appendix K). The observed sessions were the operationalisation of the teaching material previously gathered.

Evaluation of data collection tool for classroom observations

The DOTT was piloted at a Higher Education institution which was not included in the five originally identified cases (Malmqvist *et al.*, 2019). After the pilot, the DOTT was refined to include a checklist for the terminology and a box for field notes to allow for flexibility in collecting data when observing teaching. The space component was removed from the tool, due to the difficulty of quantifying all teaching modalities. As a result, the lesson plan for a session was to be used alongside the teaching material, to identify the time dedicated to each part.

The DOTT was designed to organise and elicit meaning from the data collected and to draw realistic conclusions (Bengtsson, 2016) however there is the belief by some that content analysis cannot collate measurable data linked to observable events (Krippendorff, 1989). The structured approach provided through the use of the DOTT successfully enabled the organisation and elicitation of meaning by translating the observable event into textual material. Furthermore, the DOTT enabled the complexity of skin tone diversity within classroom teaching to be clarified and enhanced through the complementarity and consistency of two methods - Analysis of teaching materials and Non - Participant Observation of on-campus classroom teaching.

To reinforce the benefits of combining two methods of data collection for the exploration of classroom content it is important to consider the recognition of the text by acknowledging that curricula documents are often the only teaching resource used for institutional purposes such as programme revalidation and quality assurance (NMC, 2018b). Document analysis solely draws on textual content with limited inclusion of experiential and anecdotal accounts. Certainly, just using documentary evidence is not sufficient.

4.2.3 Transcripts, literal tools and data storage

Following the accuracy checks to ensure all components were complete, the data were entered manually into Excel software. Personal recollections and reflections of each event were documented in a reflective diary and supplementary field notes were written to enable easier recollection of what had occurred.

The completed DOTTs were stored in a secure drawer in a secure office at Oxford Brookes University whilst data was being inputted into Excel software. Due to the supervisory team being internationally based between the UK and Australia, in line with university regulations and the Data Protection Act (2018) the anonymised data were stored to the University Google Drive account, which was protected by a username and password. Data will be secured for ten years as per university regulations.

4.2.4 Quantitative data analysis

Documents and Teaching Observations

Within this study, a descriptive design was taken where data were gathered to examine trends and patterns in nurse education through the use of descriptive statistics to describe and summarise the data (Ingham-Broomfield, 2014). The analysis in this study commenced with understanding the recorded information in the four domains of the DOTT: duration, context subject, timing and visual representation of the subject. The four domains remained the key focus with the frequency of terms and points being the dominant method of analysis. Responses in each of the domains were tallied, with frequency calculations performed. Similarly, to Mackintosh-Franklin's (2017) work, exploring the inclusion of pressure ulcers and skin tones within teaching was important. However, due to the lack of language and terminological variances relating to people with dark skin tones patterns across the notes in the DOTT were identified by highlighting commonalities.

4.3 Qualitative data

After establishing the content of the teaching sessions delivered at each Higher Education institution it was important to explore two further objectives:

- To critically examine student nurse awareness and confidence when assessing and identifying pressure ulcers in people with dark skin tones across a selection of Higher Education institutions.

- To critically examine the perception that nurse educators have when teaching assessment and the identification of pressure ulcers in relation to people with dark skin tones within the English health care system.

This exploration helped to understand the extent and ways in which the qualitative results explain and add insight into the quantitative results and what overall is learnt in response to the study's aim. Furthermore, it has been seen that participants commenting on the same situation offers numerous perspectives of that same situation (Bergen, 1992); which in turn helps establish if student nurses gather information about skin tone diversity elsewhere and if nurse educators felt they did include skin assessment and early category pressure ulcer damage across skin tones.

4.3.1 Focus group with student nurses

Focus groups have been used successfully for students to voice their opinion on a range of issues from education to clinical perspectives as well as professional and managerial perspectives (Jayasekara, 2012; Stacey *et al.*, 2018). Furthermore, it offers a sense of security for participants to be involved in research and therefore has been seen as a prevalent research method in nurse education. For the researcher, focus groups provide distinct data, an opportunity to foster and facilitate interaction among a group all whilst observing and recording interactions between participants (Powell and Single, 1996). Focus groups, a form of group interview, also increases the depth of the enquiry by providing insights into the sources of complex behaviours, motivations and

reasoning (Jayasekara, 2012). Guided by the aim and methodological approach of the research study it was important for the researcher to be immersed into the group discussion and other people's views hence gathering meaning beyond what people say to how they say it, the intensity of their feelings and the language they use about the topic rather than a simple measurement technique (Doody, Slevin and Taggart, 2013).

Focus group recruitment

Sampling decisions were made to target those student nurses most likely to be the most relevant informants. Consequently, final year adult student nurses were selected as they were more likely to have been exposed to pressure ulcers throughout their nursing programme (Usher *et al.*, 2018) hence enabling the exploration of theory to practice learning (Silverman, 2019; Greenway, Butt and Walthall, 2019). One focus group was conducted at each case, and no more than seven student nurses were involved in each (Krueger and Casey, 2014).

A purposive sampling strategy was used (Palys *et al.*, 2008), recruitment flyers (Appendix L) were placed electronically on a virtual learning environment platform at each case site to recruit final year adult student nurses. Students then contacted the researcher either via email or over the telephone. Following the provision of a participant information sheet (Appendix M) and informed consent (Appendix N) via email, recruits were offered a focus group scheduled around their timetable, scheduled directly before or after a teaching session which they were required to attend. No relationship had been established with recruits before the study commencement.

Student nurse demographic data

Table 4.1 presents the number of student nurses in each focus group and the demographic data of the study participants. The demographic data was collected through the use of demographic data sheets (Appendix O) which participants were asked to complete and was based on the recommended ethnic groups in the 2011 Census of England and Wales (Office of National Statistics, 2011). The individual breakdown of the gender and ethnicity of study participants can be found in Appendix P.

Table 4.1 Student numbers and demographic data

Case	1 (N=7)	2 (N=7)	3 (N=5)	4 (N=6)	5 (N=2)	Total N (%)
Gender N (%)						
Female	5 (71)	5 (71)	4 (80)	6 (100)	2 (100)	22 (81)
Male	2 (29)	2 (29)	1 (20)	0	0	5 (19)
Ethnicity N (%)						
White	5 (71)	5 (71)	2 (40)	1 (17)	2 (100)	15 (56)
Asian	0	1 (14.5)	0	0	0	1 (3)
Black/African/ Caribbean/Black British	2 (29)	1 (14.5)	3 (60)	5 (83)	0	11 (41)

4.3.2 Semi-structured open-ended interviews with nurse educators

Semi-structured individual interviews contribute significantly to case study research as it offers the opportunity to gather information that is detailed and not overtly observable (Yin, 2003; Shah and Corley, 2006). The face to face interviews offered the opportunity to observe subtle nuances with regard to both verbal and body language (Gerrish, Lathlean and Cormack, 2015) which were recorded as field notes. However,

due to participant availability, one interview was conducted over the telephone (Vogl, 2013).

Semi-structured open-ended interview recruitment

At each Higher Education institution, an email was sent out with an introduction letter from the student researcher and the participant information sheet (Appendix Q or R) to nurse educators delivering pressure ulcer teaching at each of the Higher Education institutions by the Head of Department or Nursing Programme Lead. The recruitment took place purposively, to capture depth rather than breadth there were prerequisites set (Palaiologou, Needham, and Male, 2016).

Nurse educator demographic data

Five nurse educators volunteered, consented (Appendix S and T) and were recruited, one from each of the cases (Higher Education institutions). All of the recruited educators were registered nurses and had previously provided nursing care to people across a range of skin tones. Four educators had completed a Post Graduate Certificate in teaching and were NMC registered teachers (NMC, 2008). One educator was in the process of completing a Post Graduate Certificate in teaching. All participants were female and presented ethnically as 'white'.

4.3.3 Data collection

In each of the five cases, one focus group with student nurses and one semi-structured interview with a nurse educator was conducted. Providing a total of five focus groups and five interviews. All focus groups and interviews took place at various points in time between May 2018 - April 2019 in a convenient location (e.g. meeting room) and time (e.g. around the timetable) with one interview being over the phone.

After collecting quantitative data which focused on the representation of pressure ulcers and skin tone diversity in nurse education the data were used to inform the questions asked during the focus groups and semi-structured interviews (see Appendices U and V) as well as inform questions and discussion. To ensure an iterative and reflective working process when collecting data from the interviews the student researcher attended a course on qualitative data gathering and sat in numerous research interviews and discussion groups before data collection. Furthermore, both the interview and focus group guides were reviewed by the supervisory team prior to data collection. Appointments with participants were booked well in advance, numerous settling in questions were scheduled before easing into the main questions to ensure the participants felt comfortable all whilst creating a non-invasive and open dialogue. Furthermore, the researcher used notes from a reflective diary to facilitate data familiarisation and understanding of the previously collected data.

All focus groups and interviews were recorded with an audio tape recorder which enabled the researcher to fully engage in and focus on the direction of the interviews rather than writing up a summary of the conversation whilst listening to the discussion progress (Gerrish, Lathlean and Cormack, 2015). Following each data collection episode, supplementary field notes were written on the different issues discussed during the session to enhance the final data and to facilitate data familiarisation and understanding.

Focus Group

After sharing the recruitment posters with the final year adult student nurses Head of Schools and Nursing Programme Leads at each of the Higher Education institutions

created a key contact person. The key contact at each Higher Education institution was an educator and was instrumental to the running of the focus groups as they identified days student nurses were on-site and organised the interview space (e.g. meeting room) at the individual Higher Education institution. Accessing the student nurses without the assistance of the key contact person would have been difficult as it was unlikely that student nurses would engage in the study if they were not due to be on site.

Semi-structured open-ended interviews with nurse educators

Once a convenient date and time had been established to carry out the semi-structured open-ended interview the recruited nurse educators were offered the opportunity to choose where they would prefer the interview (Sivell *et al.*, 2019). Three interviews with nurse educators were conducted at their respective employing Higher Education institutions, one interview at a hospital and another over the telephone.

4.3.4 Transcripts, literal tools and data storage

The focus group and interview data were transcribed verbatim for analysis immediately after each event (Bailey, 2008). Furthermore, personal recollections and reflections of each event were documented in a reflective diary and supplementary field notes were written to enable easier recollection of what had occurred (Allen, 2017).

Once the recordings of the semi-structured interviews and focus groups were transcribed, the raw recordings were stored in a locked filing cabinet in a locked office at Oxford Brookes University, as were the anonymised transcripts and demographic datasheets. During the transcribing process, the recordings were stored in a secure drawer in a secure office at Oxford Brookes University. Due to the supervisory team

being internationally based, in line with university regulations and the Data Protection Act (2018) the raw recordings and anonymised data were stored to the University Google Drive account, which was protected by a username and password. Data will be secured for ten years as per university regulations.

4.3.5 Qualitative data analysis

The analysis was informed by the research questions as well as the student researcher and supervisory team's experience in the field of nursing practice and research interests regarding health inequities, patient safety and nurse education. Following transcription two members of the supervisory team, MH and DJ read through the transcripts multiple times, checking for errors, familiarising and immersing themselves in the data, including associated demographic information.

Transcript data from the focus groups with the student nurses and interviews with the educators were analysed independently then coded, developed into themes and analysed using thematic analysis.

Thematic data analysis

Using the phases described by Braun and Clarke (2006) a thematic analysis was conducted. Even with the lack of substantial literature and the inability for the researcher to make claims about language use compared to other forms of data analysis (Nowell *et al.*, 2017); Braun and Clarke (2006) provide a step-by-step approach with a clear description and pragmatic approach to conducting thematic analysis. This method consists of six steps i) familiarisation with the data, ii) coding, iii) generating initial themes, iv) reviewing themes, v) defining and naming themes and vi) writing up. To maintain the authenticity of each data set the data analysis of the focus groups and

interviews were carried out separately. Thematic analysis focuses on a tiered but flexible system that identifies, analyses and reports patterns transparently within the data (Castleberry and Nolen, 2018).

Coding, tabulating and developing meaningful themes

By familiarising, reviewing and identifying common ideas the researcher was able to extract data and generate initial codes from the data. After further immersion into the data, which included returning to and re-reading, emerging ideas, initial themes were identified. Weekly meetings with the supervisory team were held until a consensus of definitions and the name of each theme was reached. This approach enhances credibility and established data-driven analysis (Nowell *et al.*, 2017). Due to theme commonalities across the two data sets, focus groups and interviews, both were merged until satisfied that the data was representative and well organised. Written detailed analysis then took place, identifying the story of each theme.

Conclusion drawing and data interpretation

The methods used created a large volume of data from five different cases and many different perspectives and sources. In collective case study research, 'within case' and 'cross case' analysis are needed (Miles and Huberman, 1994; Stake, 2006; Creswell, 2013); within case analysis provides a comprehensive description of each case (Creswell, 2013; Houghton *et al.*, 2015); cross-case analysis examines themes across the cases to deepen understanding and explanations (Eisenhardt, 1989; Miles and Huberman, 1994). With the use of an explanatory sequential mixed method collective case study design, the main focus of this study was to use the qualitative phase of the study to explain the initial quantitative results. Therefore, the collected qualitative data have been amalgamated into one dataset to offer initial guidance to the researcher

around the specific reason for the resultant quantitative trends (Creswell and Plano Clark, 2011; Creswell and Plano Clark, 2017).

4.4 Integration

In line with the underpinning philosophy of pragmatism guiding this study and the explanatory sequential mixed method collective case study design, it is important to clearly identify where integration of the quantitative and qualitative data occurred. Integration occurs at more than one point of this study (see Figure 4.3 below).

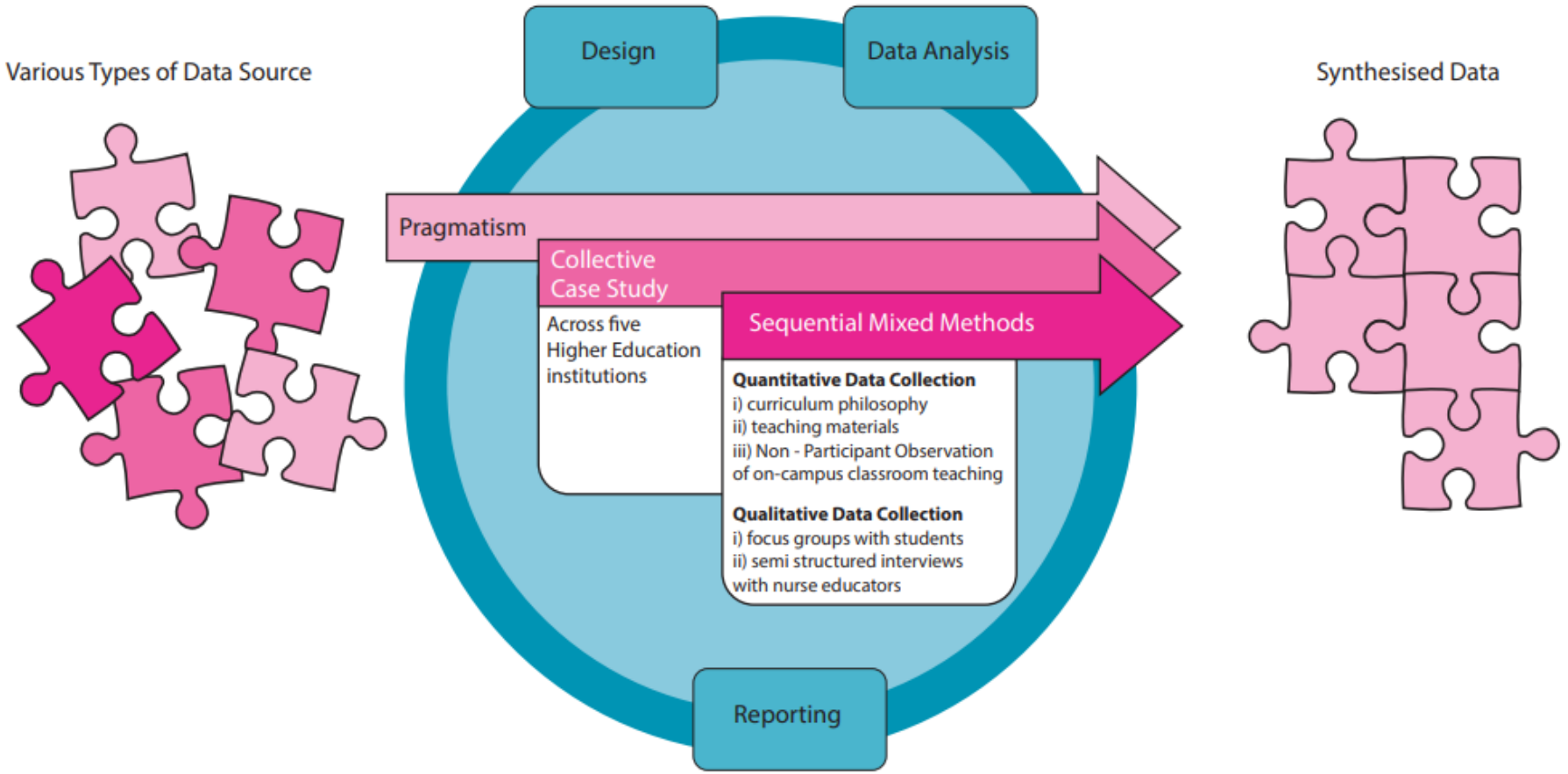


Figure 4.3 Data integration

4.4.1 Integrated at the design phase

Integration occurs when the quantitative and qualitative phases come together within the research process (Ivankova, Creswell, and Stick, 2006). In relation to an explanatory sequential mixed method study interactivity occurs after the collection and analysis of quantitative data. In this study, it was important to use the results gathered from the quantitative data (Chapter 5) to develop the qualitative data collection protocols and the structure of the interviews and focus group questions. This approach helps to investigate the research topic and offer insight into participants' feelings, interpretations, beliefs and/ or how they construct reality (Creswell and Plano Clark, 2017). Furthermore, the selection of participants involved in the focus groups and interviews came from the population of the case site where the quantitative data was collated.

4.4.2 Integrated at the data analysis phase

When used in combination, quantitative and qualitative methods allow for more robust analysis, taking advantage of the strengths of each (Johnson, Onwuegbuzie and Turner, 2007). The insights from the observational data were built upon in the qualitative data analysis addressing the following objectives:

- To critically examine student nurse awareness and confidence when assessing and identifying pressure ulcers in people with dark skin tones across a selection of Higher Education institutions.

- To critically examine the perception that nurse educators have when teaching assessment and the identification of pressure ulcers in relation to people with dark skin tones within the English health care system.

During analysis of the qualitative data narrative integration occurred where the two different qualitative data sets (focus groups and interviews) were merged.

4.4.3 Integrated at the reporting phase

Chapter 7 is the discussion chapter and presents a summary of the findings alongside the current literature. The data from the qualitative phase offers the explanation of why the results obtained in the quantitative phase exist and continue to dominate nurse education.

4.5 Ethical Considerations

In preparation for the study, numerous ethical requirements that seek to protect participants were identified which addressed the four fundamental principles of ethics in health research and practice: i) non-maleficence, ii) beneficence, iii) respect for autonomy and vi) justice (Beauchamp and Childress, 2019). Ethical approval was sought through the Oxford Brookes University Research Ethics Committee meeting in March 2017 (UREC Registration No: 171077, Appendix W). In April 2019 an extension request for data collection and an amendment for data collection via telephone interviews was made and granted by Oxford Brookes University Research Ethics Committee (Appendix X).

4.5.1 Non-maleficence

The principle of non-maleficence is the obligation of a health care professional not to harm the participant (Parahoo, 2014). The potential risk to participants being observed, interviewed or part of a focus group was minimal and would be equivalent to events encountered in the daily life of the general population or during the performance of routine peer observation of teaching (Kahn and Walsh, 2006).

Educators providing educational material for documentary analysis and who gave consent to observe teaching may have been worried that they were not delivering the correct material therefore emotional harm was a potential risk. Alongside documentary analysis and teaching observations, the semi-structured interviews and focus groups could have resulted in changes in thought processes and emotions leading to stress and feelings of guilt or embarrassment.

Numerous risk management procedures had been put in place to support participants:

- ensuring a research team with sufficient expertise and experience conducted the research.
- providing relevant information in the participant information sheet regarding the experimental design at each stage of the study.
- facilitating group discussion, keeping it focused without leading it. This was achieved by using interview guides that were clear and simple all whilst recognising researcher biases.
- in the unlikely event of any safeguarding issues, there was a duty of care to report to the local safeguarding teams.

4.5.2 Beneficence

The critical exploration of skin tone diversity within nursing education is complex with terms often used as a proxy to skin colour (Moorley *et al.,* 2020). The mixed methods study design used was performed in a manner that benefited those involved and minimised any adverse effects (Parahoo, 2014). Nurse educators and student nurses had the opportunity to vocalise their opinions in relation to skin tone diversity in nurse education; nurse educators had time to reflect on their teaching practice whilst students could report on their experiences.

4.5.3 Respect for autonomy

Autonomy refers to participants being able to make independent decisions and involves obtaining informed consent, anonymising participants' data and maintaining confidentiality (Parahoo, 2014). Two levels of permission were required at each Higher Education institution, one of which was fully informed voluntary consent from the Head of School or Nursing Programme Lead to use the Higher Education institution as a case study site and secondly, information was presented to the participants to gain informed consent and support throughout the research (Creswell and Plano Clark, 2017). All case sites and participants were numbered to maintain the anonymity.

At the first meeting the Head of School or Nursing Programme Lead at each Higher Education institution was provided with the details of the ethical approval which was granted by the Oxford Brookes University Research Ethics Committee. To avoid undue inducement and the Head of School or Nursing Programme Lead forwarded an introduction letter from the student researcher and the participant information sheet to nurse educators delivering pressure ulcer teaching. Participants willing to participate approached the student researcher directly via email. Informed consent was obtained from the nurse educators before the document gathering and observation of the teaching session. As the observational data from the cases focused on teaching materials and strategies and did not include data collection involving students, informed consent was not obtained from the latter. Prior to the focus groups and interviews a participant information sheet was provided at least 24 hours in advance, opportunities to ask questions about the research was made and informed consent was gained. Participants were aware of the voluntary nature of the study and that involvement in the study would not have an impact on either their employment or their educational programme (Palaiologou, Needham, and Male, 2016).

4.5.4 Justice

Justice involves acting in a manner considered equitable, fair and consistent with the rights of the individual (Beauchamp and Childress, 2019). Justice also ensures participants are treated equally, regardless of their background or condition. In this study, justice was ensured as student nurses and nurse educators were able to participate voluntarily, confidentially and were not discriminated against based on personal characteristics, beliefs or values. Prior to carrying out data collection the student researcher undertook unconscious bias training.

4.6 Research rigour of the study

To ensure research studies are carried out carefully and thoroughly to the highest standard researchers need to consider rigour (Parahoo, 2014). Rigour in the context of quantitative studies involves the validity and reliability of data collection and analysis whilst rigour for qualitative studies is more complex due to data collection being interactive in nature. The two next sections will explore the nature of rigour in quantitative and qualitative research.

4.6.1 Validation of the diversity observation teaching tool

Two tissue viability nurses and two nurse educators reviewed the initial version of the DOTT used in the quantitative phase of the study, providing usability feedback and face validity. The tissue viability nurses were selected because of their specialist interest, knowledge of the topic and expectations of undergraduate teaching content. The nurse educators were chosen to ensure the DOTT's practicability and applicability to various settings across various Higher Education institutions, such as classrooms and skills rooms.

Feedback from the nurse educators indicated teaching focusing on pressure ulcers often did not stand as an independent session and was usually incorporated into a broader topic teaching session, such as wound care or anatomy and physiology; therefore the 'session title' and 'learning outcomes' were included in the DOTT. More detailed recording of timings was also identified as important by the student researcher, as the timing schedule originally appeared superficial and did not answer the identified question concerning teaching content.

The pilot of the DOTT was at a separate study site, the pilot site's Head of School was contacted, detailing participant information requirements. A senior nurse educator from the pilot site made contact and consented to the pilot being conducted at the Higher Education institution. The nurse educator then provided the relevant teaching materials and lesson plans delivered to first-year undergraduate student nurses. The session 'An introduction to wound care' was chosen. After analysing the teaching materials and plans for the session, the respective teaching activity was observed, which took place in a traditional classroom and a nursing simulation suite. Data was not collected from the student nurses, instead focusing on the teaching content and material; by using the DOTT, it was reinforced that teaching cannot be accurately assessed from teaching materials alone. Following on from the quantitative phase of the study a pilot semi-structured interview using the interview questions which formed part of the qualitative phase of the study was also piloted at the same Higher Education institution. The pilot highlighted that the questions were comprehensible and well-paced (O'Leary, 2017)

4.6.2 Rigour in the qualitative components of the thesis

According to Barrett, Kajamaa and Johnston (2020) reflexivity is an ongoing critical process of engaging with and articulating both the i) place of the researcher and the context of the research ii) epistemology. Informed by personal reflections and recognition of societal and cultural norms a continuous interrogation of the status quo occurred throughout the study.

Place of the researcher and the context of the research

The positioning of the student researcher was included in the early part of the thesis (Chapter One) and can be defined as an 'insider researcher' due to personal experience as a registered nurse, nurse educator and a person classified as Brown, dark brown. Being an 'insider researcher' according to O'Leary (2017) is seen as advantageous due to the structural awareness of systems and processes within a Higher Education institution which facilities connecting the theoretical and the empirical parts of the study. However, it was important to consider the ease in which student lack of awareness or knowledge of a topic could be blamed on the student themselves rather than there being a concern with the teaching or curricula content. The use of the reflexive research diary, supplementary field notes and regular supervisory meetings helped engage in the process of self-critique and self-analysis which in turn helped identify areas in which stagnancy of ideology and thinking could occur. The diary, notes and meetings allowed the thought patterns and processes related to all elements of the data collection, management, transcription, translation, analysis and interpretation stages to be probed in order to put assumptions and past experiences of the researcher to one side.

The context of the research

Epistemological reflexivity focuses on the process of the study, the exploration and awareness of the impact of the choice of the particular research question, theoretical lens and its associated methods (Dowling, 2006). In writing reflexively and incorporating reflective components, a detailed account of ongoing processes, feelings, thoughts and emergent ideas were consciously and explicitly recorded in a reflexive research diary at multiple stages throughout the study. The diary offered the opportunity to document decision making processes and underpinning the rationale for the choices made. Furthermore, regular meetings with the supervisory team for reflexive discussion took place. The write-up and development of publications throughout the study offered the opportunity to receive detailed peer review feedback which reaffirmed the choices that had been made.

4.7 Chapter summary

An overview of the data collected from the mixed methods can be found in table 4.2. In this study, five different Higher Education institutions each representing a 'case' were used.

Table 4.2 Overview of mixed methods data collected

	Data Collection	Total Data Collected
Quantitative Data Collection	Curriculum design	Principles in curriculum design (n=2)
	Analysis of teaching materials	Workbook (n=1) PowerPoint presentations (n=4) Teaching schedules (n=5)
	Non - participant observation of on-campus classroom teaching	700 minutes on 6 separate occasions from the academic year 2017/2018
Qualitative Data Collection	Focus groups	Interviews (52 - 80 minutes) (n=5)
	Semi-structured open-ended telephone interview	Interview (51 minutes) (n=1)
	Semi-structured open-ended face to face interviews	Interviews (22 - 60 minutes) (n=4)

Initially, the principles of the curriculum design from each case site were collated, following which quantitative documentary analysis and a structured teaching observation at each of the five Higher Education institutions using the DOTT was completed. Qualitative data collection then took place which incorporated focus groups with student nurses and semi-structured interviews with nurse educators. The integration of these multiple sources of data enabled various elements within each case to be scrutinised and new insights uncovered providing depth and breadth in the examination of the educational content delivered.

Chapter Five: Findings

Abstract

Within this chapter, the quantitative data findings of the study will be presented collectively. Three forms of data were gathered (i) principles of the curriculum design (ii) written teaching material and (iii) observation of classroom teaching. The observed sessions were the operationalisation of the teaching material. Six structured observation sessions were completed with the use of the Diversity Observation Teaching Tool equating to a total of 700 min. In one case, two teaching sessions were observed at one Higher Education institution, and this was amalgamated to represent one overall teaching session delivered to undergraduate student nurses at that Higher Education institution. Quantitative data found minimal time allocated or given to the teaching of pressure ulcer care in people with dark skin tones; this was typically one slide or one question without any accompanying discussion. Furthermore, terms referring to visual changes in skin tone and appearance were often White centric with words such as pinkness, redness and mottling frequently used.

A paper based on the work presented in this chapter has been published as:

Oozageer Gunowa, N., Brooke, J., Hutchinson, M. and Jackson, D. (2020) 'Embedding skin tone diversity into undergraduate nurse education: Through the lens of pressure injury', *Journal of Clinical Nursing*, 29, pp. 4358-4367. doi: https://doi.org/10.1111/jocn.15474. (see Appendix C).

5.0 Introduction

This chapter presents the results from the quantitative data of the study which systematically analyses teaching and learning in a selection of Higher Education institutions when framing on-campus classroom-based information to student nurses on the assessment and identification of pressure ulcers across skin tones. To present the data systematically the analysis of documents and observations will be aligned to the structure of the DOTT originally designed and presented in Chapter 4.

5.1 Research findings

Quantitative data collection from five Higher Education institutions included three components (i) principles of the curriculum design (ii) written teaching material and (iii) observation of classroom teaching. The programme specifications accessible on each Higher Education institutions website revealed that principles of the curriculum design were featured minimally. Only two out of the five Higher Education institutions involved in the study clearly stated which philosophy was being implemented, one of which was underpinned by the transformational learning theory. The written teaching material gathered included four PowerPoint Presentations from individual Higher Education institutions and one workbook from another. All Higher Education institutions provided teaching schedules for the sessions. Non - participant observation of on-campus classroom teaching equated to 700 minutes on 6 separate occasions at five Higher Education institutions during the academic year 2017/2018.

5.1.1 Demographical characteristics

The Higher Education institutions all had a range of student numbers attending the timetabled sessions, varying from small groups of 20 students to large groups of a over 100 students. All sessions observed were in year one of the undergraduate nursing

programme, and three were before student nurses' first clinical practice placement. Three teaching sessions had more than one nurse educator leading the session all of which were in a skills laboratory designed for nursing programmes. Four teaching sessions were delivered by nurse educators employed by the Higher Education institution, and one was delivered by a tissue viability specialist nurse employed at a local NHS Trust and appointed as an honorary lecturer

5.1.2 Session type and title

Analysis of the teaching material revealed PowerPoint presentations were used at four Higher Education institutions. Other forms of teaching included videos, completion of an assessment tool, group work, a quiz, a workbook as well as practical examples of students physically lying in one position and reporting the pain they experienced when they were asked to lay still.

The titles of all the sessions were broad and included various aspects of nursing knowledge such i) anatomy and physiology across the life span and ii) care, compassion and communication. Only three Higher Education institutions used terms associated with pressure ulcers within the title of the teaching session being observed. Documentary analysis of the sessions highlighted that lessons that focused upon skin integrity and wound care did not always include learning outcomes on pressure ulcers with one observed session omitting learning outcomes completely.

5.1.3 Duration of classroom observations

All Higher Education institutions delivered a session covering pressure ulcers. Three out of the five Higher Education Institutions delivered a 1-2 hour session with two others delivering a 3-hour session which included content on pressure ulcers; however,

as illustrated in Table 5.1, the length of time spent on topics surrounding people with dark skin tones within the sessions was minimal. Overall, only very limited time was allocated to talking about skin diversity across all the cases.

Table 5.1 Length of time spent on pressure ulcers and skin tone diversity

Case Number	Pressure ulcer teaching (minutes)	Cultural issues, ethnicity, skin tone variation teaching (minutes)
Case 1	51-100	1-5
Case 2a*	1-10	1-5
Case 2b*	26-50	0
Case 3	11-25	1-5
Case 4	51-100	1-5
Case 5	101+	1-5

* Case 2 comprised of two teaching sessions that were observed at one Higher Education Institution and were amalgamated to represent one overall teaching session delivered to undergraduate student nurses at that Higher Education institution.

5.1.3 Language and location of people with dark skin tones

Five different terms were used in both the observation and documentary analysis to explain pressure ulcers: pressure injury, pressure sore, pressure ulcer, bedsore, pressure damage. All documents analysed across the five cases used the term 'pressure ulcer'. During the teaching observation, the nurse educator(s) across four of the cases used the term 'pressure ulcer'; this term was used interchangeably with other terms except for in one case (Case 1). The Braden scale risk factors, which focus on overall risk, was included in 100% of observed classroom teaching. In all five cases, classroom teaching

referred to the Waterlow Score, one of which highlighted erythema as '*redness*' or as a '*dusky presentation'* and another as *'red in colour'* which was historically linked to the Waterlow assessment tool (Waterlow, 1985) and visual inspection of risk areas.

Four out of the five Higher Education institutions superficially in the form of one PowerPoint slide or last question on a list included information on people with dark skin tones within the teaching material and interchangeably used the terms '*darkly pigmented skin*' and '*dark pigmented skin*'.

5.1.4 Presentation of people with dark skin tones

All nurse educators presented information regarding people with dark skin tones during the observed classroom teaching either as a question or as the content of a slide in a PowerPoint presentation. In one case, concerning early skin damage the phrase '*whatever the colour of the skin*' was used. In another case, cultural variance was loosely associated with diversity after a student asked a question surrounding language barriers and self-reporting. In this instance, the nurse educator referred the student to a television programme regarding culture; however, the details provided were not clear.

The teaching material surrounding skin tone diversity was very superficial and with a lack of an in-depth exploration. The terms *'darkly pigmented skin' and 'dark pigmented skin'* only appeared on one PowerPoint slide, comment or question in each session. In four cases, both in the observation and documentary analysis, identification of skin tone diversity in relation to pressure ulcers was made. However, the terminology varied including the following terms: dark skin, darker skin, dark skin colour, darker skin tones, darker skin colours, darkly pigmented skin and dark pigmented skin. No specific categorisation of skin tone was made.

5.1.5 Visual representation

Pictures and photographs of patients with pressure ulcers were included in four cases, Figure 5.1 presents the frequency of content type in these images. In total 158 images were reviewed in the gathered teaching materials. The vast majority of these materials (96%) depicted people with skin type i (pale white skin) and ii (white skin) (Fitzpatrick, 1988). The category 'dark skin tones' represented 4% (n =7) of images and included a range of pictures of patients and pressure ulcers that depicted people from an Afro Caribbean (deeply pigmented dark brown to black skin - type vi) and Mediterranean (moderate brown skin - type iv) background.

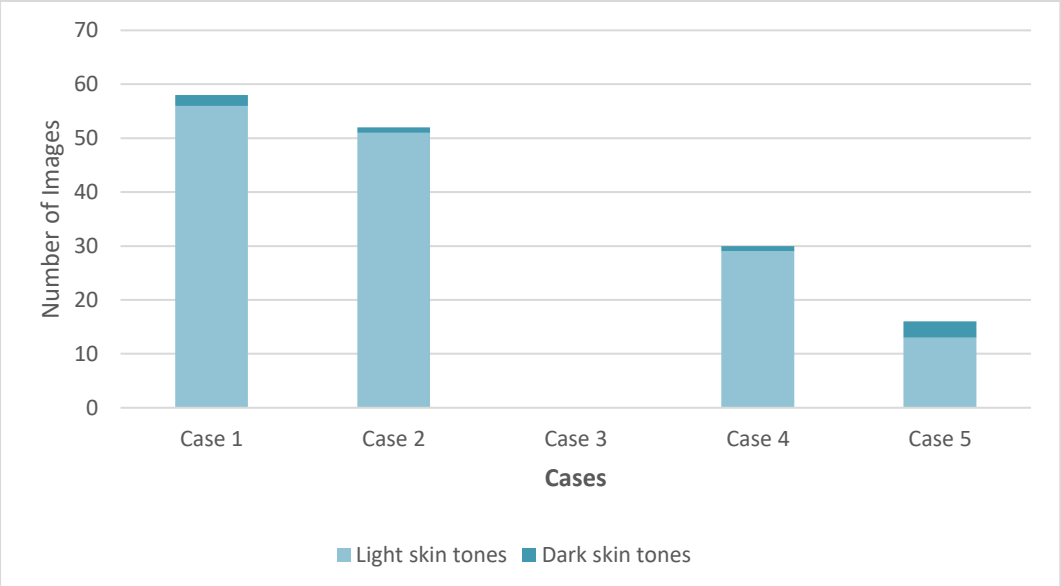


Figure 5.1 Range of images

Mannequins were used as teaching props in two cases. In one of the cases, one mannequin was as per the manufacturer description defined as 'light skin tone', in the same session a plastic model displaying presentations of pressure ulcers on both light skin tones (Fitzpatrick type i and ii) and dark skin tones (Fitzpatrick type iii-vi) was presented (Fitzpatrick, 1988), however, the presentation on dark skin tones was not

discussed in the classroom. In the other case, all four mannequins were used to help students learn to grade and practice grading pressure ulcers and all four (n=100%) were described in the manufacturer descriptions as 'light skin tone'.

5.2 Limitations

A limitation of this study is that the observation was not covert, the participant information sheet disclosed the nature of the information being gathered; therefore, nurse educators being observed despite not being aware of the specific questions in the DOTT were aware of the focus towards skin tone diversity and pressure ulcers. Although the nurse educators were required to follow the teaching plan for the session, participants could have been prone to the Hawthorne effect. The Hawthorne effect occurs where participants being observed actively change their behaviour as a motivational response as they know that data were being collected and monitored (Jones, 1992). Sedgwick (2015) suggests that participants may change their behaviour regardless of the experimental manipulation however it has been suggested by Paradis and Sutkin (2016) that significant alteration of behaviour is unlikely in health professions education research and that the term 'participant reactivity' is more appropriate. The insight into the research study may have allowed nurse educators to include material not usually included, which could explain the brevity and superficiality.

Due to the participants having prior knowledge of the study aims the exploration of individual nurse educator demographics including teaching experience, age, race, ethnicity was not included. The teaching sessions observed took place in year one of the nursing undergraduate programmes, the whole curriculum was not explored as skin integrity teaching and learning, a fundamental of nursing care was reflected in the

curriculum documents to occur at the beginning of undergraduate nursing programmes.

The sample size was too small in this study to perform psychometric analysis. Similarly, only one observer undertook the data collection, and so inter-rater reliability was not established in this study. However, this is a further step that could be undertaken in subsequent research.

5.3 Chapter summary

The DOTT (Chapter 4) was used to collect data from documents and their respective classroom session. The newly developed tool allowed the assessment of the documents and teaching sessions. The tool identified that teaching records and practice are indeed different but also showed a lack of diversity in teaching. In line with the sequential mixed methods approach the findings in this chapter offered an insight into the overall aim of the study. The next chapter, therefore, moves on to present the qualitative findings of the study.

Chapter Six: Findings

Abstract

This chapter presents the cross-case qualitative findings from this study which includes information from 5 focus groups discussions with 27 student nurses and 5 semi-structured interviews with nurse educators. These addressed the following objectives:

- To critically examine student nurse awareness and confidence when assessing and identifying pressure ulcers in people with dark skin tones across a selection of Higher Education institutions.

- To critically examine the perception that nurse educators have when teaching assessment and the identification of pressure ulcers in relation to people with dark skin tones within the English health care system.

The qualitative data sheds light on why there is such a lack of inclusion of people with dark skin tones and pressure area care. The data illustrates how both staff and students of all skin tones assume whiteness as a normal perspective and this is reflected in the teaching delivered.

A paper based on the work presented in this chapter has been submitted for publication as:

Oozageer Gunowa, N., Hutchinson, M., Brooke, J., Aveyard, H. and Jackson, D. (2021) 'Pressure injuries and skin tone diversity in undergraduate nurse education: Qualitative perspectives from a mixed methods study', *Journal of Advanced Nursing,* 00, pp. 1– 14. doi: https://doi.org/10.1111/jan.14965. (see Appendix D)

6.0 Introduction

Four major themes were identified i) dominance of whiteness in the teaching and learning of pressure ulcers in undergraduate nurse education, ii) the impact and implications of whiteness as the norm in pressure ulcer teaching on student nurses, iii) the role of external inputs on the teaching and learning of pressure ulcers in on-campus undergraduate nurse education and iv) suggestions as to how the educational practice of skin tone diversity can change: improvements within the classroom. Each theme (n= 4) and sub-theme (n = 12) are described using illustrative exemplars from the focus group and semi-structured interview narratives. Figure 6.1 offers a summary of each theme and subtheme.

Table 6.1 Main themes and subthemes

Theme	Subtheme	Definition
Dominance of whiteness in the teaching and learning of pressure ulcers in undergraduate nurse education	*Claims of inclusion and commitment*	Representation of how Higher Education institution policy and theoretical frameworks were implemented in on-campus undergraduate nurse education
	Claims of inclusion not borne out in teaching	Skin tone diversity was assumed to be largely visible in on-campus undergraduate nurse education of pressure ulcers
	Marginalised, vague and incorrect inclusion	Teaching and learning of skin tone diversity in relation to pressure ulcers was superficial and at times incorrect.
	Motivation for inclusive teaching	For the inclusion of skin tone diversity within on-campus undergraduate nurse education of pressure ulcers there needed to be a reason.
	Displaced responsibility and notions of unintentionality	Other topics were seen to be of more importance for a range of reasons.
The impact and implications of whiteness as the norm on student nurses	*Diversity (un)awareness: dissimilarity, the other or outsider*	Skin tone diversity was seen as everything 'other' than white.
	Dominance of white-normed language	There was a lack of language to describe the range of skin tones and presentation of pressure ulcers in people with dark skin tones.

	A state of uncomfortableness	Students displayed and reported a level of discomfort and lack of empathy towards the discussion of skin tone diversity in particular people with dark skin tones.
	Dilemmas in the clinical setting	Students were made to expect a lack of skin tone diversity in practice causing decision dilemmas to occur.
The role of external inputs on the teaching and learning of pressure ulcers in on student nurses	*The role of external resources on the inclusion of people with dark skin tones*	Nurse educators reported that there was a lack of external resources focusing on people with dark skin tones and a change to these could result in a change in teaching content.
	The role of external speakers and the inclusion of people with dark skin tones	Nurse educators were unsure if external speakers would deliver teaching across skin tones.
	Practice learning: entrenched white normativity	Students relied on practice learning to inform their overall learning and reported that skin tone diversity in practice and practice related campaigns were limited.
Suggestions as to how the educational practice of skin tone diversity can change: improvements within the classroom		Nurse educators and students recognised the need for change in teaching and suggested change.

6.1 Dominance of whiteness in the teaching and learning of pressure ulcers in undergraduate nurse education

This theme illustrates the classroom dynamics described by students that sustained whiteness as the norm in relation to the teaching and learning of pressure ulcer assessment and identification. The failure of educators to meaningfully acknowledge differences in skin tone cascaded down to students, who largely failed to see or acknowledge the importance of these differences. This white-normed learning was further reinforced through experiences in clinical practice. By failing to acknowledge that skin tone differences should be considered or even noticed, these pervasive practices endorsed whiteness as the norm. The five subthemes which made up this first theme were, i) claims of inclusion and commitment, ii) claims of inclusion not borne out in teaching, iii) marginalised, vague and incorrect inclusion, iv) motivation for inclusive teaching and v) displaced responsibility and notions of unintentionality.

Claims of inclusion and commitment

Reference to University mission statements were used by some students to emphasise that diversity was included, instilled and seen as important *'they* [university as a whole] *talk about it* [diversity] *a lot…yeh, I think in fact they've encouraged you* [students] *to* [talk] *about it'* (FG3, P2: 30)[2]. Among this group of students, there was a strong belief in the university delivering the correct information: '*they* [university as a whole] *teach us* [diversity] *mostly good way…generally, the information, the education* [university teaching] *we receive here definitely helps us to urr provide proper care for any type of skin'* (FG3, P5:30). In contrast, another student indicated it was the university as a whole entity that was at fault for the lack of inclusion of diversity stating '*do you think*

[2] Focus Group extracts: (HEI number, Participant Number: Transcript page number)
Interview extracts: (HEI number, Transcript page number)

they [university] *also being politically correct* [by not addressing diversity]*?* [laugh]' (FG3, P1: 70).

Nurse educators argued that in theory inclusive teaching would be included in a holistic approach to care highlighting how higher education system processes enforced the inclusion of people with dark skin tones within teaching *'if we are teaching holistic patient-centred care then yes it should be urr as part of you know the culture and diversity that we umm teach'* (I3: 29). Whereas others related to the following inclusion statement *'everybody's responsible for recognising risk and doing something or reporting it* [pressure ulcers]*'* (I3: 30).

Nurse educators reported that the inclusion of pressure ulcer teaching was important '[pressure ulcers] *I consider as a basic nursing care'* (I1: 96). Though these claims of importance were made, as noted in the response of the following educator, the information presented to students appeared to be inconsistent, disposable and brief when exploring pressure ulcers and people with dark skin tones *'I do try and incorporate it* [people with dark skin tones] *in when I'm talking, looking for skin changes and it's* [people with dark skin tones] *on our slides when we are talking about grade 1 we talk about darkly pigmented skin'* (I1: 32). Later on, in the same interview, the nurse educator said, *'it might be purple or mauvy colour so we do try and incorporate it* [people with dark skin tones] *but we don't go into it in great detail'* (I1: 33). Uncertain of what was taught, one nurse educator dismissed the need for personal commitment to skin tone diversity through claims that it had already been addressed *'some of it* [teaching about people with dark skin tones and pressure ulcers] *has been going on for years it's not ignored or anything like that…it's almost routine* to *be honest, well I think'* (I4: 11).

Students and nurse educators made claims about diversity inclusion through reference to Higher Education institutions policy and vague claims of inclusion through theoretical frameworks. For nurse educators, these frameworks were referenced in a manner that diffused personal responsibility or minimised the need for any further action.

Claims of inclusion not borne out in teaching

Despite claiming allegiance to a commitment to teaching inclusively, the topic of pressure ulcers and people with dark skin tones was reported to be superficial, tokenistic and even non-existent. Two nurse educators reporting *'the way things stand, what's in the student nurse curriculum it barely covers skin inspection at all* [particularly concerning people with dark skin tones]*...it's* [people with dark skin tones and pressure ulcers] *not really looked at'* (I1: 43) and *'to my knowledge at* [names institution] *skin tone isn't discussed'* (I3: 28).

Another nurse educator acknowledged a level of superficiality in her teaching expecting people with dark skin tones and pressure ulcers to be included elsewhere in the curriculum saying '*I think it's umm brushed over, I think it's probably something that ticks a box as opposed to really considering it...we probably do briefly touch on it ummm...one slide I think it, it's probably taught more in clinical skills than in the ummm a&p* [anatomy and physiology] *sessions'* (I2: 14). There appeared to be a sense of dismissal with nonspecific information on the assessment of people with dark skin tones and pressure ulcers with another nurse educator voicing *'as far as different skin tones is concerned I've only ever really seen it as a general discussion of this is how you assess skin'.*

Regarding the nursing course content and visual representation of people with dark skin tones, students also reported an overall absence of images capturing pressure ulcers amongst people with dark skin tones admitting '*yeh like on the slides it all like, all same coloured skin* [white]' (FG3, P4: 67). Among other students, there was a sense of nurse educators teaching to a normative White script resulting in the dismissal of skin tone diversity. Reflecting on this experience, one student recounted *'you get taught* [by nurse educators] *the standard* [White skin tone] *don't you, between your different grades and what your treatments are'* (FG5, P1: 28).

One nurse educator recalled how an incident triggered her to recognise a personal knowledge gap, even so, she appeared to remain oblivious to White dominance as a wider educational issue saying *'we had ummm to internationalise or something I can't remember what they called our work I think I got the wrong end of the stick I had not long been here* [case 2] *...I had included some slides of pressure area care for people with dark skin and that it was in doing that and putting that together that I discovered actually it's not just about the skin looking different but actually you know black skin is not going to look red'* (I2: 10).

There was an overall consensus that, when included, pressure ulcers and people with dark skin tones were scarce, with a near-total reliance on the visual presentation of pressure ulcers among people with light skin tones. Furthermore, the dominance of whiteness in teaching and learning was not apparent to these educators. They appear unaware that they teach to a White worldview which reinforces that there is no consideration of their privilege or the impact of their power as nurse educators on student learning and development. For these participants, whiteness has no meaning; an unquestioning privileging of White as dominant.

Marginalised, vague and erroneous inclusion

Early-stage pressure ulcers and people with dark skin tones were not addressed in the classroom, a student reported '*I think I've only seen one picture where it is dark skin, it was a severe I think it was a four* [grade] *or something like that where you see more past the skin basically'* (FG1, P1: 36). Nurse educators explained that while images were included in teaching, one recollected *'you have to show pictures of wounds so there would be slides of wounds etc we have loads and loads of them'* (I4: 14) but then reflected on the specific images and if they were inclusive of people with dark skin tones *'I'm just thinking some of the ones I can remember they would be of different skin tone that would just be randomly* [in the teaching]*, but it wouldn't necessarily be about pressure* [ulcers]*'* (I4: 14).

Students from one Higher Education institution reported nurse educators addressed the assessment of pressure ulcers and people with dark skin tones in different ways, which did not rely solely on a visual skin assessment.

'*they* [nurse educators] *talk about hotness and then because they talk about black skin you can't see it, blanche or anything but feeling it with the back of your hand you can feel that, that place is hot and then talking to the person as well'* (FG3, P1: 41).

A nurse educator expressed the current content at one Higher Education institution in relation to people with dark skin tones which indicates that there is an omission as early signs of pressure ulcer damage can often be invisible *'I show pictures and I mention about the research behind it, it's only one slide but I teach them* [students] *what to look for in terms of the skin colour and the changes to grade 1, 2, 3 and 4 and about any discolouration, any blanching of the skin urr or erythema rather of the skin'* (I5: 25).

Motivation for inclusive teaching

For nurse educators, student expectation was seen to be a significant reason for the inclusion of pressure ulcers and people with dark skin tones within classroom teaching *'the students ask how does that look different?'* (I5: 23). The inclusion of skin tone diversity was seen to be out of the sphere of common knowledge and burdensome *'you can relate it back to them* [students with dark skin tones] *but you have to do that, you have to make the effort consciously to do that otherwise your teaching what you know, it's not going to be as effective and well relates to them'* (I5: 23). One nurse educator reported that questions relating to people with dark skin tones had never been posed *'Do you know it is interesting I don't think I have ever had a student ask me about* [people with dark skin tones]*'* (I1: 32).

The demographic location of a Higher Education institution influenced nurse educator's belief that skin tone diversity should be included in the curriculum with one nurse educator reporting *'yes it* [skin tone variances] *should, I think it's important for all nurse education but particularly you know for our local community here definitely'* (I4: 15). In some cases, the educators appeared to have been pressurised into delivering the topic due to student demographics *'you couldn't not address it in class because people sit in front of you would say what about black skin?'* (I4: 10). Some educators recognised a need for change due to increasingly diverse population demographics *'*[this research] *made me realise you have to relate it [to everything] you're teaching a diverse audience…and you need to relate that to them'* (I5: 24).

Justifying limited inclusion, students suggested the demographics of the local and student population might render nurse educators oblivious and disconnected to diversity within the classroom: *'yeh I'm just thinking, I'm just thinking as we are talking*

whether it would be the same …where they have a lot of diversity whether they will also have the same issues, or it would be a bit different' (FG3, P1: 72).

Tokenistic in nature, the consideration of pressure ulcers and people with dark skin tones was overshadowed by whiteness with a tendency of the topic only being included due to student inquiry. Nurse educators lacked the ability to consciously acknowledge the need to address skin tone diversity no matter where or who was in the classroom, hence reinforcing a white-dominant curriculum.

Displaced responsibility and notions of unintentionality

In discussion about their limited learning, students spoke of how the literature and intellectual underpinning was limited or absent in relation to people with dark skin tones. This absence seemed to further displace the ownership of classroom exclusion relating to skin tone diversity and masked the need for research in this area:

'*most books are written by the white, so they* [nurse educators] *would give you what they have I don't think it is intentional…you can't write about, you can't give what you don't have, you can only give what you have and that is what I think is happening'* (FG3, P3: 73).

The minimisation of skin tone variances in the classroom was illustrated in comments that the curriculum did not allow space to include this topic and was seen as '*you have to put such a lot of information into such a short amount of time I guess maybe sometimes* [people with dark skin tones and pressure ulcers are not included]' (FG1, P4: 37) hence reinforcing the White dominance in the classroom and the idea of White as

normative. Another student highlighted that if nurse educators did not consider it important, why would students:

'it [people with dark skin tones] *doesn't cross some people's mind…I am sure that maybe lecturers have not even thought about it themselves'* (FG3, PI: 74).

As exemplified in the following quote one nurse educator minimised and instantly erased the importance of pressure ulcers and people with dark skin tones by illustrating that the inclusion of diversity was complex, justifying that due to time restraints there was only time to teach White dominance:

'*a generalistic point* [focus on whiteness] *of view* [is taught] *then when we are face to face with the patients, we would then be more specific* [dark skin tones] *in terms of what we are discussing, what we're assessing'* (I3: 30).

Student nurses sought to justify the lack of consideration and exploration of pressure ulcers and people with dark skin tones by nurse educators, reflecting acculturation into a white-dominant view of nursing. The lack of awareness and in some cases dismissal of people with dark skin tones appeared to be undetected by some students and seen to be a superficial concern by others. Nurse educators lack critical awareness of White dominance within nursing curricula and often blame their lack of inclusion on differing factors such as time restraints which reinforces that it is acceptable to exclude the needs of people with dark skin tones in teaching.

6.2 The impact and implications of whiteness as the norm on student nurses

This theme illustrates the effect 'whiteness as the norm' has on student perceptions of the assessment and identification of pressure ulcers and people with dark skin tones within nurse education. This theme is constituted by four sub-themes i) diversity (un)awareness: dissimilarity, the other or outsider, ii) dominance of White-normed language, iii) White apathy: A state of uncomfortableness and iv) dilemmas in the clinical setting. Together these sub-themes encapsulate how student nurses perceived skin tone diversity.

Diversity (un)awareness: dissimilarity, the other or outsider

The pervasiveness and influence of white-normed teaching and clinical experience was evidenced in the meaning and understanding of skin tone diversity described by students. People with dark skin tones were viewed as distinct or marginalised from the mainstream culture of whiteness, which was the taken for granted dominant norm among the students.

For many students, people with dark skin tones were largely a notion of dissimilarity or appearing to be different. This was described as *'families of like overseas'* (FG1, P4: 38), or *'it usually comes back to a race thing and think* [people being seen as] *different, I think'* (FG1, P6: 23). In focusing upon people with dark skin tones as 'different' or the 'other' most students defining themselves as White reported that they had not previously thought of the presentation of pressure ulcers in people with dark skin tones. One student voiced: *'it's not something that would cross* [my mind]*'* (FG1, P3: 36). Another student highlighted the invisibility of skin tone, commenting that they *'never*

thought about why it would be any different…I've never have thought of any difference between their [people with dark skin tones] *skin tone though'* (FG5, P1: 27).

Despite face value recognition of skin tone diversity some students strongly held views that were White dominant and were used to justify using blindness to skin tone variance: *'I don't think it's particularly important* [the issue of skin tone diversity and pressure ulcers]*, but it doesn't really affect me all that much'* (FG1, P1: 27) and '*I wouldn't even expect it* [pressure ulcer] *to look yeh, it's not different than saying a young person of 19 with like smooth soft skin and a 90-year-old wrinkled shrivelled up lady, you know I wouldn't think about that either, yeh I true though, the skin is completely different just like black and white*' (FG1, P3: 36). Another admitted dismissing people of dark skin tones based on geographic locale and White dominance suggesting they would only be nursing people seen as 'White': *'I don't think it's a big deal* [skin tone diversity and pressure ulcers]*…it's just a White area'* (FG1, P2: 27). Furthermore, for some there was an element of unconcern that led them to ignore the possibility of considering skin tone diversity:

'it hasn't even occurred to me to ask [about skin tone variances] *coz I think my assumption is it* [pressure ulcer] *will just be really obvious, it will just be obvious that they're in pain and their skin will be of some sort of discolouration compared to the rest of their skin'* (FG4, P3: 24).

Other students denied the use of a white-dominant curriculum but associated whiteness with normativity:

'*I mean yes, ok, there is probably photos* [of light skin tones], *but I don't think it's like intentional* [being White centric]…*and I don't think that they* [educators] *never actually speak of like one skin tone, just talking in general [whiteness]'* (FG3, P2:70).

Students repeatedly displayed discomfort and a range of defensive moves when asked to explore the concept of skin tone diversity. Some students highlighted perceptions of difference, others employed exclusionary or marginalising descriptors of people with dark skin tones. This included focusing upon perceived differences in health care practices, with comments such as '*they* [people with dark skin tones] *don't use normal creams, they use coco butter*' (FG1, P4: 35) or using visual descriptors that made sharp distinctions of difference:

'[a patient with dark skin tone had] *completely different type of skin tone* [to a White person] *to the point where her feet were actually scaly, they were cracked and dried, so we had to heavily moisturise her skin, was completely different say from my skin* [White Female]*'* (FG5, P1: 27).

Similarly, another student commented on perceived biological differences: *'because also I think their* [people with dark skin tones] *skin is a bit stronger'* (FG1, P7: 39) and *'they do have thicker skin though*' (FG1, P1: 39). For other students, blindness to skin tone variance and health inequities was justified by attempting to deny any physiological differences: *'the depth of skin is is the same, I presume is the same I may just be being ignorant, but I presume the the actual physiology of skin is the same on everybody. So, to me I wouldn't see* [the increased risk of people with dark skin tones developing a pressure ulcer]*'* (FG5 P2: 29).

The apparent ease with which skin tone diversity was discounted generally among students was further echoed among students who defined themselves as Black, African, Caribbean or Black British. These students spoke of being the minority and accepted the exclusion or marginalisation of skin tone variances within the classroom: *'because you wouldn't really think about it* [that the university would consider people with dark skin tones]*'* (FG3, P4: 70). In a learning environment where the topic of diversity was marginalised and excluded, these students remained silent in the classroom on issues of race:

'*I think as a Black person, some of the things you might not voice it out, but it just comes to your head you just think'* (FG3, P3: 83). Another participant stated, *'to be honest I thought of it* [pressure ulcers and people with dark skin tones] but *I just didn't want to bring it up'* (FG4, P1: 20).

In the absence of coherent and meaningful teaching and learning opportunities, students who defined themselves as Black, African, Caribbean or Black British, and who recognised the need to include teaching on people with dark skin tones, largely silenced themselves in the classroom. Other students reproduced the deficit thinking of nurse educators and employed a range of defensive moves in not recognising the need to be taught about pressure ulcers and people with dark skin tones.

Dominance of white-normed language

The impact of white-normed learning on students included a white-normed language. A lack of language focusing on the presentation of early-stage pressure ulcers across skin tones, specifically concerning the presentation of pressure ulcers in people with

dark skin tones, was either not thought about, or consistently identified as challenging by students.

Some students reported the lack of language as comforting, as it limited their need for personal engagement in the process of labelling a person according to their skin tone. Thus, alleviating any doubt or responsibility they grappled with when assessing pressure ulcers in people with dark skin tones: '*no, but that* [identifying skin tone] *would be a very pc* [politically correct] *thing though, wouldn't it, I wouldn't want to say, but if someone else* [patient] *made the decision'* (FG2, P2: 36). For this student, the dominance of a White clinical language and script displaced their feelings of responsibility in decision making, with the student happy to leave the responsibility of identifying dark skin tone with the patient or not at all.

Even though students who described themselves as Black, African Caribbean or Black British showed that they were being silenced, they had unanswered questions which did raise concerns of missing early detection of pressure ulcers in people with dark skin tones. More specifically it was voiced that there was a lack of language relating to pressure ulcers and people with dark skin tones:

'*saying if you were Black like me, like checking pressure ulcer, like the blanching thing stuff, it doesn't work on us, so how do you check pressure ulcers redness, you can't see like the redness on our skin most of the time so how do you actually assess if like someone like that comes into hospital, there is actually no way of checking it…you can't actually see when it's like getting worse you can't actually see it'* (FG3, P4: 23)

However, students describing themselves as White highlighted that redness was visible on a person with dark skin tones '*you can still see redness'* (FG3, P5: 22). Even so, there was an overall consensus of student nurses participating in the focus groups reporting that the identification, visualisation and assessment of pressure ulcers in people with dark skin tones would be more difficult:

'probably the more red, urr red the more better I would be able to detect it if the skin was more dark it would have been ummm more harder for me' (FG3, P5: 45)

A state of uncomfortableness

All students initially evaded the nuanced topic of skin tone diversity. On numerous occasions, they referred to their personal experiences of diversity, which were unrelated to skin tone diversity. In one focus group, most students appeared reluctant to use specific terms such as Black, White or Brown in relation to skin tone (FG3: 49). At times, a sense of nervousness was displayed around the topic of skin tone diversity, with laughter used by students to lessen the impact of their answers.

Political correctness was used as a silencing mechanism, introducing barriers and preventing the exploration of topics relating to people with dark skin tones. In this vein, one participant voiced:

'*I think people are very shy talking about* [skin colour]*, I think everybody wants to be correct, politically correct and so not many people talk about this thing* [people with dark skin tones]*, they just they, they do what they want to do'* (FG3, P3: 31).

For students describing themselves as Black, African, Caribbean or Black British, they confirmed that there was a lack of insight into skin tone diversity due to political correctness. This view is exemplified in the following quote from a student:

'*it's like the politically correct thing is like Afro Caribbean skin then you kind of assume that everyone from Africa like that's why I always say to people if they say Afro Caribbean I'm like do you know there are White people in Africa …that's how most people like define I've never seen in placement where they'll say Black or White or stuff like that'* (FG3, P4: 47).

Other students highlighted that, with a deficit in nurse education and the literature in relation to pressure ulcers and people with dark skin tones, they would lack the confidence to challenge bad or poor clinical practice even though they had a dark skin tone stating '*to challenge a mentor you must know more than the mentor, especially where wound management is concerned, where you want to learn from them because you in uni* [university] *you're just taught about skin* [White skin]' (FG3, P3: 14).

Feeling uncomfortable and lacking confidence was a major contributory factor influencing student questions and possible care delivery in practice, with one student avoiding the topic '*even if I want to ask in placement* [about dark skin tones], *I wouldn't ask. I would try it like go through like all the corners I wouldn't just go and ask'* (FG3, P4: 54). Another student demonstrated White fragility reporting '*see I think I would feel uncomfortable, I think I would feel* uncomfortable [to ask if a person with a dark skin tone used a different cream]' (FG1, P3: 42).

When asking the students about their confidence in asking patients about skin tone, they described a level of discomfort and lack of empathy. The identification and exploration of people with dark skin tones were compared by more than one student with the uncomfortableness of discussing resuscitation. One student said *'it just feels, like so blunt and so forced like, but that's not a question that you would manage to probably get out of them otherwise and I just feel like sometimes that's really difficult, I don't know personally how to approach that situation in a nice way'* (FG3, P2: 54). It was voiced by some that a prescriptive tool or tick box would limit their discomfort. In a similar vein, another student positioned skin tone diversity as a difficult question, with the need to prepare the individual being assessed with an apology before asking the persons ethnic background in case of offence. Describing their discomfort, this student recalled '*I find that if you're going to ask a difficult question, I always start by apologising first before* [laugh]' (FG3, P4: 56). This is noteworthy that the student felt uncomfortable about initiating conversations around diversity even when required to provide fundamental care.

A student spoke of the fear of litigation as a factor which rendered him inarticulate about managing pressure ulcer care and triggering a reliance on whiteness: '*and there is more* [legal issues] *nowadays if you do say something* [in relation to diversity issues] and *that could get you into trouble'* (FG2, P1: 37). For others the feeling of discomfort was so prevalent and entrenched that people with dark skin tones and pressure ulcers were made to be invisible in documentation such as patient notes and records:

'yeh I feel easier discussing it with someone [patient] *saying oh because you have darker skin or whatever, but I would be quite cautious about what I actually wrote down*' (FG2, P2: 37) and '*you're nervous so you don't write anything'* (FG2, P7: 37).

A passive self-preservation response from students highlights the impact of White dominance in nurse education. Students felt the need to avoid the topic of pressure ulcers and people with dark skin tones to evade feeling uncomfortable, fear of getting it wrong and experiencing unease.

Dilemmas in the clinical setting

The dominance of a White normed language and deep-rooted institutional systems created the dilemma of feeling obliged to inaccurately record information or use an inaccurate predetermined language when assessing people with dark skin tones. In the following quote this student is struggling to accurately record skin assessment for a person with a dark skin tone on a prescriptive and set wound chart that only incorporated options for White skin:

'you know when you fill out the wound care [chart] and it asks you 'is it red?' I'm always like, how am I supposed to tell it's red on someone that's darker than me [Black/African/Caribbean/Black British]*... isn't really inclusive to that* [people with dark skin tones]*, so it's like I'm always like, ohh ok and then I cross it out and put a different colour '* (FG4, P4: 21).

For this student, the white-normed clinical environment created a moral challenge. Resisting the dominant colour-blind approach to skin assessment scripted by the institutional chart, this student instead attempted to acknowledge the personhood of the person with a dark skin tone. Moreover, another student described the limitations of recording systems and lack of language to identify early-stage pressure ulcers can be seen in the following quote:

'*you could just go into more detail when you're writing it* [about people with dark skin tones] *rather than having different paperwork* [relating to wound assessment]' (FG2, P2: 35).

It appeared that students had effectively been trained to filter out clinical situations that did not fit the 'White as norm' hence narrowing their imaginative and moral sensitivities, creating justification for further lack of understanding.

6.3 The role of external inputs on the teaching and learning of pressure ulcers in on student nurses

External input either from experts, resources or practice were seen as key components of undergraduate nurse education. Nurse educators relied on external resources to inform the content and focus of their teaching. With an overall consensus of the lack of inclusion of people with dark skin tones within nurse education (Chapter 5), there were suggestions that research, as well as resources and guidance, do need to adapt and reflect the reality of the population. This theme was constituted by three sub-themes that captured detail on external influences and input: i) the role of external resources, ii) the role of external speakers and the inclusion of people with dark skin tones, and iii) practice learning: entrenched colour blindness

The role of external resources on the inclusion of people with dark skin tones

Nurse educators highlighted a lack of external resources which could assist them with inclusion, but there was an element of uncertainty about their own ability to find information, reporting:

'I'm talking about pictures things like that if you go onto to the European Advisory Panel website…the general pictures you get are standard ones [white] *grades 1 to 4…that don't have a lot of skin tones variances I think in probably some of the urr teaching resources that can be available I think they need to be made available urr generically…for people so you can just go on and grab have those I don't know maybe I haven't looked enough'* (I5:35).

Nurse educators appeared to dispel the responsibility of inclusion with suggestions that information could be made available to inform teaching *'Health Education England could do that, they could put out a suggested set of slides on that topic, you can take out what you want and leave what you want but at least you have got something you can go back too, it would be good resource if they're all evidence-based and updated every year or 2 years then that would be great'* (I5: 31). It was seen that the availability of external resources could overrule the input of a specialist nurse with a comment emphasising *'it would be a good resource to have something like that* [external resource] *not necessarily having a tissue viability nurse person specialist here at the university'* (I5: 30).

The role of external speakers and the inclusion of people with dark skin tones

Expert clinicians such as tissue viability nurses were seen to be invaluable towards the contribution of the nursing curriculum on numerous occasions. However, one nurse educator voiced '*I think we can deliver the same standard* [of teaching to year 1 student nurses]' but then went on to say '*I really like it when we* [nurse educator] *work collaboratively with practice…*[TVN] *they have a say in what is being delivered'* (I2: 20). Another nurse educator reported they had confidence in their own ability to look for information but felt that contact with a specialist would reaffirm the content '[nurse

educators] *obviously need to research the subject matter… if I had to teach something* [relating to tissue viability] *and I wasn't sure I would probably email you know clinical nurse specialist but the information is all there'* (I4: 18). But another nurse educator reported a lack of trust and that more could be done to ensure inclusion of skin tone diversity *'I think there is an awful number of clinical roles that should be involved in nurse education ummm no disrespect for the lecturer at university but I think a lot of the time a lot of them have been out of clinical practice for a while'* (I1: 37).

However, when a nurse educator was asked if specialist nurses would include skin tone variances there was an element of doubt.

'*We lack so much diversity here* [case area] *that… they* [TVNs] *would just do it a little bit of lip service. I don't think it will be an equal weighting of this is what you would expect of pale skin and this is what you would expect with darker skin tones. I think it wouldn't be a 50:50 split I think you would see…maybe an 80 to pale skin…so, you could tick that box but not necessarily.'* (I2: 17).

For others, there was an assumption of knowledge stating, *'I would imagine a clinical nurse specialist would always address it…so I actually think a clinical nurse specialist would know more* [about skin tone diversity]*'* (I4: 15). As well as an assumption of knowledge there was an element of hope with one nurse educator reporting:

'*yeh and and I hope they* [TVNs] *would* [include skin tone difference] *if that's their area of specialism isn't it, so umm if you know we had a lecturer here who had been a tissue viability nurse specialist…then obviously I would…congregate to her'* (I2: 19).

This was further reinforced when a nurse educator with a specialist background in tissue viability highlighted that she was called upon for advice *'but they [module leads], often the module leads who are delivering those sessions* [tissue viability] *will often check in with me saying they were thinking about this do you have any evidence around…that or something in practice or I've helped them write scenarios that they have used in group work'* (I3: 8).

The nurse educator with a specialist background in tissue viability, later on, talked about her exposure to people with dark skin tones and said *'I really probably started to think about it* [dark skin tones] *or become more* [aware] *about it when I started with tissue viability…we tend to get referrals from a multitude of practice environments…because…we get referrals from nursing homes, from mental health teams, children teams, urrr community nursing based teams and practice nursing teams so I guess there will be more of a chance of diversity across the cultures than and the urrr demographics of the area'* (I3: 22).

Practice learning: entrenched White normativity

The deficit of skin tone diversity learning in the classroom led to students feeling that they had to rely on clinicians in practice. Most students voiced there was a clear limitation of classroom education; emphasising that most of their learning took place in practice. '*… I think being told about it* [people with dark skin tones] *is not anywhere near what it's like to actually have to manage it*' (FG1, P1: 15). For the majority of students, their personal experience in practice was seen to be the major contributing factor to the learning of early-stage pressure ulcer presentation. Theoretical knowledge was often seen to be side-lined, dismissed and seen to be irrelevant: '*the lectures, I*

couldn't tell you about the lectures, it's been more the hands-on things that I've learnt from' (FG4, P4: 10). One student specifically said:

'yeh I would say you get the basic knowledge of it at uni [university]*, you get the theory, you get obviously they teach you about skin, nutrition and healing and regular pressure relief, they* [university] *teach you that and about skin assessment and all that kind of thing so you do get the theory background but actually you can't, you can't really apply that to physically see it'* (FG5, P1. 11).

However, in practice the same lack of diversity was identified *'I think a lot of people, most people, care what diversity is but in practice ummm'* (FG3, P1: 30) and not seen at the grassroots where the students felt it was most important, one student reported '*they* [people in practice] *talk about caring about diversity, but you don't see it* [diversity] *in practice'* (FG3, P3: 21). Speaking further about pressure ulcers and people with dark skin tones in clinical practice, this student recalled *'No, it's not risen…umm I think if you don't really come across it* [diversity] *in placement it doesn't come up. It is one of those issues that, if you don't really come across it, it doesn't really come up'* (F3, P1: 82). With another student reporting:

'when we talk about pressure ulcers most times they [mentors] *forget, so say about the skin tone and especially the dark skin tone because most of the people…[I have] looked after they're old umm frail and very sick, I don't think I've seen anyone on the dark skin that's got pressure ulcers, I haven't'* (FG4, P1: 27).

For some students, despite having on-campus teaching and seeing people in practice with dark skin tones, their learning was solely dependent on their mentor and the

quality of their mentoring during a practice placement. One student emphasised: '*you have to use the experience of our mentors'* (FG3, P5: 83). One student voiced *'like I'll never know anything about pressure ulcers* [on dark skin] *until I've asked my mentor how to spot it'* (FG2, P3: 63). There was an overall view that unless a mentor specifically spoke about a topic it was not seen as important and therefore created a circle of self-justification for the student about ignorance. One student felt that nurse confidence confirmed knowledge as she reported:

'the nurse looks confident when they fill out that section [about skin assessment], *no ones like said like I've never heard my mentor say oh I don't know coz like the skins dark or anything, they all seem confident so I'm sure if I asked her she would probably know the answer but I haven't asked because they're* [pressure ulcers] *already there'* (FG4, P4: 27)

Whilst there was an over-reliance on mentor experience by some students' even though they were unsure of their mentor's exposure to skin tone variances others linked nurse seniority to an increased level of knowledge *'for me it's, it's only because my mentor thought it was like something else and I thought it was something else, so we got someone else to come and look and see yeh she actually got someone else to like come and see and then that person made the decision…so we actually got a more senior nurse to come and check'* (FG3, P4: 14).

Furthermore, this authoritative institutional top-down approach can be seen in a comment made by a student:

'we're not allowed to say redness now [in practice], *we got to say blanching or non-blanching…I have no idea* [reason why introduced] *I just know we got it, got cascaded*

down from the band 7 that we weren't to put red, we were to write on the ummm admission form … it had to be blanching or non-blanching' (FG5, P1: 4).

However, some students questioned nursing knowledge in practice and were dismissed with an acknowledgement that there lacked guidance: *'I did ask* [about pressure ulcers and people with dark skin tones] *once in placement like and no one really had the answer for it so yeh…I don't think people really talk about it* [skin tone diversity] *that much'* (FG3, P4: 31) and *'there was no clear…guidance on what you do* [pressure ulcer treatment] *it was almost like trial and error we'll give it a go this way and see if it works and it did'* (FG5, P1: 14).

Even though there was a consensus amongst students that practice learning was of high importance differing placement opportunities and contexts resulted in a lack of consistency in what students experienced when on placement *'with me, it's only third year my last placement that I really saw a pressure ulcer…'* (F3, P1: 82). The lack of coherent learning about pressure ulcers and people with dark skin tone led some participants to presume and make further assumptions about their own competence and ability to assess and identify pressure ulcers among people with dark skin tones commenting *'I think if it came down to it we wouldn't hesitate to* [care for a pressure ulcer]*, it might be a bit harder to notice but I don't think any of us would look at it* [a pressure ulcer and a person with dark skin tones] *and be like I have no idea'* (FG1, P1: 37). With this idea of relevant placement opportunities, there was not only the perceived requirement that the students needed to care for a person with a pressure ulcer and dark skin tones but the exposure also needed to be reoccurring and frequent with one student voicing: '*so I have not seen much yeh, so identify grade you know grade 1, 2 and*

grade 3 I think it's fading out of my brain because I'm not really doing it on a daily basic especially when it get to is it grade 4?... I can't differentiate, is it 4?' (FG4, P6: 13).

In clinical practice, commonly referenced national campaigns were very influential and seem to set the scene for the assessment of pressure ulcers amongst a defined population group. After asking the students the applicability of the national campaigns on people with dark skin tones one interviewee acknowledged her ignorance and how she felt she had been systematically blinded to skin tone diversity *'should you, could you, should you call it 'react to red'. I suppose if you look at it that way* [assessing people with dark skin tones]*...that's totally inappropriate...if it's not applying to what maybe half the population that you're treating...that's quite worrying ain't it really'* (FG5, P1: 60). It was evident that the *'react to red'* institutional campaign had further reinforced student assumption of White as the norm; with this student only reflecting upon the significance of this exclusionary focus during the interview.

Skin assessment of people with dark skin tones appeared to be undervalued and often took the shape of opportunistic learning relationship drawing on the experience of the mentor and situational circumstances rather than the theoretical underpinning of a task or procedure being carried out.

6.4 Changing educational practice of skin tone diversity: improvements within the classroom

With most nurse educators and student nurses identifying and recognising that skin tone diversity was superficial in on-campus nurse education, change needed to occur. Within this theme suggestions for change have been included from both the perspective of nurse educators and student nurses.

Nurse educators recognised that elements of skin tone diversity were included by Higher Education institutions however it was questionable if this appeared at grassroots with one saying *'I think we do receive training on diversity you know…as part of the introduction to the university but I'm not too sure how regular we update that ummm but also I think from an assessment, skin assessment point of view…I think it would be beneficial to have additional training in that* [people with dark skin tones] *if that's what we are doing'* (I3: 34) with another educator reporting how inclusion is changing, reporting '*it's just gradually changing…I think it probably could of been umm done more of a directive say that education needs to be not talk about diversity in general like HR perspective…or religion, focusing more on the clinical side of things…what changes differences are there between different ethnic groups in terms of how things how things present'* (I5: 27).

Students felt that nurse education was limited and reported that awareness of pressure ulcers and people with dark skin tones was needed however there remained an element of self-doubt on the suggestion. For example: *'I think awareness needs to be created on dark skin tone'* (FG4, P1: 29) and *'well I think there's a lot to learn about the human body and everything, yeh I think you would always continue to learn but maybe it's* [pressure ulcers and dark skin tones] *something that needs to be highlighted more to make sure it is something that's learnt about'* (FG2, P2: 52). In-depth exploration of pressure ulcers and dark skin tones was voiced by a minority of students with one commenting:

'I was going to say I think the same way that they are teaching us basic life support and stuff and they are telling to look for cyanosis and things and they'll say oh in a darker person it looks like this I think that also needs to be broaden up when they're teaching

on a darker person or darker skin tones it can look like this, like it's not enforced but in like basic life support that's someone's life it's in there' (FG4, P4: 32)

The need for different teaching aids and strategies to help grasp information and create a better learning experience was suggested by the students with a strong emphasis on the need for visual prompts in the identification and assessment of people with dark skin tones with one interviewee voicing: '*not just pictures, videos for example that would be nice to have…if you are able to find for example wound assessment and wound treatment* [of people with dark skin tones] *on you tube, why shouldn't it be on the urr* [curriculum]' (FG3, P5: 75). Furthermore, a student referred to the need of tangible visual prompts in the form of protheses within the classroom. *'I'm sure it's not too hard to find like prosthetic stuff* [of people with dark skin tones]*, I know that they have fake limbs and stuff with certain skin colours, I'm, it wouldn't be too hard to find it a fake bit of skin of different variation of various* [colours]' (FG1, P1: 57). A few participants reported the need for people with dark skin tones and lived experiences of pressure ulcers to be involved in the curriculum with one student saying: '*have them* [people with dark skin tones and pressure ulcers] *actual patients come in'* (FG1, P2: 56).

The students not only considered the content and props for the teaching required but also the format in which it could be delivered. Some students suggested a skills session whilst others prompted towards a workshop. This emphasises that a change is required. However, the suggestions appear to further segregate and reinforce the complexity and differences of people not seen to be the norm, people presenting as 'white'.

'the skills session should be related…to that [various skin tones] *specifically because we we talk loads about all through the three years about prevention and courage and all of that kind of stuff and we have some skills sessions but if they're* [university] *asking us to go out into practice and prevent all of these multitudes of things then we we kind of need to know what it is that we are preventing so that needs to be more of a skill session than a here's a Power Point presentation for you to look at'* (FG4, P3: 31)

Also, timings and frequency were seen to be important for the students with sessions focusing on pressure ulcers and people with dark skin tones being viewed as refresher sessions:

'continuous education exposure that's what students need it's no good just teaching them giving them a a 3-hour lecture in year 1 and leaving it at that…on the understanding that you're gonna get exposure because some of us don't, like I say you've had more exposure than I have, you could effectively get through nearly all your placements with hardly any exposure to it [pressure ulcers and people with dark skin tones]*…and then you qualify and as a qualified nurse you're expected to be able to grade'* (FG5, P1: 60).

6.5 Limitations

Social desirability bias may have influenced the results, participants were aware of the study context as they had been provided with a participant information sheet before data collection (Bergen and Labonté, 2019). Some quotes from the participants referred to the awareness of the researcher's interests.

6.6 Chapter summary

This chapter presents the findings from both focus groups with student nurses and semi-structured interviews with nurse educators. These findings through the use of themes and subthemes provide insight into student nurse awareness and confidence when assessing and identifying pressure ulcers across skin tone diversity as well as identify factors and the perception that educators have when teaching the identification and assessment of pressure ulcers. Overall, nurse academics acknowledge that the inclusion of people with dark skin tones in classroom teaching is superficial and tokenistic. Student nurses lack exposure to meaningful and challenging conversations in the classroom about health inequities and skin tone diversity.

Chapter Seven: Discussion

Abstract

This chapter synthesises the findings presented throughout this thesis using contemporary nursing literature, whilst also addressing the last objective of the study which is to contribute and provide relevant information that could inform Higher Education institutions teaching and practice in the assessment and identification of pressure ulcers among people with dark skin tones. Furthermore, cross-case issues are presented which have been informed by the individual cases within this study. New insights into the topic of skin tone diversity inclusion and the educational preparation of registered nurses in Higher Education institutions in relation to pressure ulcer assessment and identification will also be presented.

Overall findings from both the quantitative and qualitative stages of the current study highlight the need for undergraduate nurse education to adequately include comprehensive information to address health inequities in relation to skin tone diversity. The current study found that with limited research concerning pressure ulcers and skin tone diversity, educators were being overly cautious of political correctness and topic sensitivity, skin tone diversity was brushed over in the classroom.

There are currently no specific guidelines on how to ensure skin tone or even racial inclusivity is incorporated within nursing curricula, therefore the teaching content remains heavily dependent on the views and experiences of the nurse educators who are working directly with students in the classroom. Nurse educators have a role to play in contributing to equity in health care. This chapter highlights both a need and a means for in-depth exploration of diversity within nursing education, thus enabling

nurse educators to truly compare intentional curriculum content in comparison to actual educational content delivered to students in the classroom.

7.0 Introduction

This study captures the experiences, attitudes and views of on-campus undergraduate pre-registration nurses relating to skin tone diversity and pressure ulcers. From the data gathered across five Higher Education institutions in England, there were very limited teaching occurrences and far too little proportionately for the student/ patient population addressing skin tone diversity and the assessment and identification of pressure ulcers. There was no specific introduction of the risk factors for people with dark skin tones, or the fact that there was a higher prevalence of pressure ulcers in people with dark skin tones (Oozageer Gunowa *et al.*, 2017). Furthermore, this situation was only raised in the classroom by one student on one occasion upon which the student was immediately dismissed by the nurse educator.

Despite each Higher Education institution having a statutory duty under the Race Relations (Amendment) Act 2000 and Equality Act (2010), as well as individual mission statements and policies addressing equality, diversity and inclusion, the results of this study show that classroom educational content was one-dimensional, predominantly framed through a White lens. As a consequence, White normativity was strongly reinforced through teaching and learning activities. White normativity is defined as 'Whites as the norm or standard for human, and people of colour as a deviation from that norm' (Di Angelo, 2018, p. 25). There is poor and inadequate research and understanding of White norms in nurse education despite it dominating academic narratives and educational practices (Harding, 2021). In turn, this dominance of White norms has resulted in politically soft nursing curricula with stagnant and rigid classroom sessions where questions relating to skin tone and other issues related to racial diversity remained unexplored (Hassouneh, 2006; Di Angelo,

2018). This is incompatible with the professional values of the registered nurse (NMC, 2018a) and the requirements of universities to ensure equality, diversity and inclusion.

The lack of skin tone diversity inclusion in the classroom could be perceived as a simple omission on behalf of the nurse educators who neglect to teach in an inclusive manner (Scammell and Olumide, 2012). This thoughtless fail with devastating consequences could be exacerbated perhaps by the use of teaching materials that are not reviewed but reused year on year and perhaps intercepted by the tokenistic representation of people with dark skin tones. However, there is evidence in this study that this is more than a simple omission; instead, there is a lack of expectation that skin tone diversity should be taught, indicating that nurse educators are unaware of the prevalence, dominance of White normativity and how it perpetuates racial ignorance (Bell, 2021).

This chapter incorporates five main discussion points i) Nurse educators and White normativity in pressure ulcer teaching [7.1], ii) The impact of White normativity on pre-registered student nurses [7.2], iii) White normativity in nurse education and systemic racism [7.3], iv) Implications for practice [7.4] and v) Recommendations [7.5].

7.1 Nurse educators and White normativity in pressure ulcer teaching

Nurse educators hold responsibility as registrants of the NMC to educate the next generation of nurses about topics that address contemporary issues and health inequity (NMC, 2018c). Nurse educators in the United Kingdom have not only been provided with standards from the NMC (2010; 2018c) but also guidance from their employing organisations on the need for equality, diversity and inclusion, for example with the exposure to mandatory unconscious bias training (Equality challenge unit, 2013). Despite these structures being in place, very limited inclusion of information around

skin tone diversity relating to pressure ulcers was evident in the classrooms within the current study. This lack of skin tone diversity in teaching could be associated with nurse educator apprehension or their lack of knowledge of how to care for people with dark skin tones (Lyder *et al.*, 1998; Ranzijn *et al.*, 2008; National League of Nursing, 2016). According to Coates (2008), this pattern of racial ignorance by educators has been system-wide as well as generational.

The next section includes three parts that will explore some of the possible underpinning reasons for the very limited inclusion of information around skin tone diversity relating to pressure ulcers in the classroom delivered by nurse educators. The sections presented were initially highlighted by the participants in this study and further supported and explored using existing literature.

7.1.1 A feeling of uncomfortableness

As registered nurses, nurse educators are not new to uncomfortable conversations (Warnock, Buchanan and Tod, 2017). However, such discomfort is often related to breaking bad news and managing other challenging situations rather than nurse educators facing their privilege and social constructs (Di Angelo, 2016). People in England are still profoundly uncomfortable with race and difference and this profound discomfort is passed onto students in the classroom (Eddo-Lodge, 2017; Bennett, Hamilton and Rochani, 2019; Burnett *et al.*, 2020). Being profoundly uncomfortable with race and difference has resulted in a lack of exposure to conversations about skin tone diversity leaving a generation of nurse educators ill-equipped to handle the discomfort of these conversations.

Some nurse educators in this study, despite appearing colour aware, were non-inclusive in the classroom as they were unsure of how to articulate and talk about skin tone and racial diversity with students. The dismissal and exclusion of skin tone diversity broadly supports the presence of White fragility. Defined as, 'discomfort and defensiveness on the part of a White person when confronted by information about racial inequality and injustice' (Di Angelo, 2018, p. 2) both White fragility, as well as the discourse of 'political correctness' (Tengelin *et al*., 2020.), can stifle conversations about skin tone diversity and influence discussions that occur in the classroom. Nurse educators need to be prepared to not only hold and lead uncomfortable conversations but to also experience discomfort themselves. Furthermore, nurse educators need to recognise that skin tone diversity goes hand in hand with race and race is a social construct. For students to change deeply embedded societal White normative views, nurse educators themselves need to go through a multistage journey to understand the privilege that shapes their worldview and extend that privilege to dismantle it (Koch, 2020; Bell, 2021). Race and therefore skin tone diversity is everyone's issue and it is unacceptable that nurse educators remain silent because of their own personal feelings of uncomfortableness. Silence by nurse educators dismisses the importance of why skin tone needs to be discussed and further segregates and places the burden on Black and Brown people which perpetuates White dominance (Iheduru-Anderson and Wahi, 2021).

Despite discussions about racial inequity happening more often after the resurgence of the Black Lives Matter movement (2020), there is no evidence of such conversations taking place within nurse education (although it is acknowledged that data for the study were collected before 2020). This is concerning as student nurses look to nurse educators for leadership on these deeply emotional topics and how they apply to the

nursing profession (Benner, 2001). Nurse educators need to have racial conversations, by raising the consciousness of racism uncomfortableness is not relieved but racial conversations validate student concerns and ensure they are heard and understood as well as recognise that the nursing profession and nurses cannot walk away from real-life issues surrounding racial health inequity (Hall and Fields, 2013; Bell, 2021).

7.1.2 Organisational pressures

Despite there being more Black (6.5%) and Asian (10.7%) people working within healthcare in comparison to the working-age of the same population group in England there remains a majority number of people who identify as White (UK Government, 2021). Student demographics directly shapes the curriculum, therefore if people with dark skin tones are not present in large numbers in the geographic locale of the Higher Education institution, then they are more likely to be excluded (Wong *et al*., 2021.). Furthermore, student evaluations and expectations drive curricula content as nurse educators in Higher Education institutions cater for the majority of the student population, communities and populations therefore teaching continues to have a White focus (Boatright-Horowitz and Soeung, 2009). However, representing the needs of only 76% of students (Universities UK, 2019) and 86% of the general population respectively (UK Government, 2021) it is not an acceptable position and silences a sizeable minority of 24% of students and of course the patients they represent.

Nurse educators on numerous occasions within this study referred to holistic care at the bedside being the place to teach about the identification and assessment of pressure ulcers and people with dark skin tones due to time restraints in the classroom. This reinforces that teaching about skin tone diversity is seen to be only beneficial if the case arises and inconsequential for all students to know about. An attitude of

limited time for inclusion of skin tone diversity in the classroom inflicts White normativity and a hierarchical paradigm of who is seen to be the most important (Liyanage, 2020), this status quo is unacceptable. This suggests that nurse educators only expect student nurses to be prepared for the majority of the imminent population and that educating students routinely about skin tone diversity was of no significance. Moreover, the exclusion of diversity implies that considering people with dark skin tones leads to superficiality and reduction in academic rigour of the overall topic of pressure ulcers as time appears to be wasted on a topic that is not important.

7.1.3 White normativity and the hierarchy of knowledge

The language evident in the lexicon of nurse educators in this study focused on words such as pinkness, redness, blanching, discolouration and mottling. These terms are very White focused and no language was evident that communicated an understanding of skin tone diversity. Nurse educators failed to truly acknowledge that skin tone diversity should be considered and recognised, and therefore, whiteness was endorsed as the norm (Bell, 2021). Despite access to the internet, imagery surrounding people with dark skin tones was also limited within the classroom in this study.

For many years, the profession of nursing has been called to address the dominance of whiteness in education and practice (Vaughan, 1997, Puzan, 2003; Tilki *et al.*, 2007; Bell, 2021). White focused perspectives are not only found in the classroom but can also be found in nursing research (Burnett *et al*., 2020). Research-based teaching and learning are crucial for student nurses to become critical thinkers (Felicilda-Reynaldo and Utley, 2015) however nurse educators and clinicians are limited in what they can offer to future generations of nurses in terms of theoretical underpinning and visual representation due to the lack of literature available. The lack of skin tone diversity

can be seen in empirical studies where investigators, unless specifically researching a topic in relation to people with dark skin tones, frequently include an exclusion clause within their sample or make a tokenistic point about racial identity in their results (Redwood and Gill, 2013; Dawson *et al.*, 2018). Therefore, it is important to consider if nurse educators are truly questioning nursing research that has not been explored in significant detail due to whiteness being the norm (Watson *et al.*, 2021).

The language used within national guidelines further reinforces White normativity and the hierarchy of knowledge. The National Pressure Ulcer Advisory Panel (2016a, p. 1) refers to the term 'may appear differently in darkly pigmented skin' which is not informative enough and can be confusing as it does not provide additional strategies for nurses to more effectively assess skin in people of all skin tones. The phrase used leaves the visual assessment of early-stage pressure ulcers open to interpretation. Moreover, the phrase can limit the exposure of student nurses to the variability of pressure ulcer presentation particularly for people with very dark skin tones (Fitzpatrick Skin Type vi, Fitzpatrick, 1988). Exploring visual presentation of pressure ulcers amongst a limited range of skin tones risks continued perpetuation of disparities in health care as competence is not developed across an entire population (National Institutes of Health, 2014). Unsurprisingly, Roth (2009) suggests that the history of photography is, in itself, white-centric, and therefore, it has historically been difficult to photograph clear images of people with dark skin tones (Roth, 2009). With equipment improving, the availability of imagery should be more accessible; however, this remains limited within the academic field due to the dominant discourse remaining firmly White focused (Puzan, 2003).

7.1.4 Racial colour blindness

Throughout this thesis the importance of why skin tone diversity as a term needs to be used to facilitate the assessment and identification of pressure ulcers has been presented however it is important to reaffirm that there remains a link between skin tone (colour) diversity and race (Jablonski, 2021). Racial colour-blindness is rooted in the dismissal of racial group membership and race-based differences which in turn implies consensus and neutrality as well as minimisation and erasure (Apfelbaum, Norton and Sommers, 2012). By nurse educators being racially colour blind, they fail to dismiss and deconstruct White normativity in nurse education (Mueller, 2017). Nurse educators and clinicians need to recognise colour-blindness - where colour is seen to be invisible - and appreciate physical differences between races so that a problem is recognised, and actions can be taken for change.

When Dr Martin Luther King Junior (1968 quoted in Sundquist and Miller, 2009, p. 15) made his speech in America 'I have a dream that one day this nation will rise up and live out the true meaning of its creed — we hold these truths to be self-evident: that all men are created equal' the intention was not to dismiss black ways of knowing but for all to be valued with an equal footing. Unfortunately, equality came with an assumption of whiteness, that everyone would be treated as a White person (Burke, 2017). With the intention to assimilate everyone as White came the falsehood of appreciation, where whiteness was seen to be the only way of knowing and that White privilege is fictitious. It is no longer acceptable to treat everyone the same, people are different with varying levels of privilege and therefore healthcare cannot be delivered in the same way for all (Chauhan *et al.*, 2020). Nurse educators must not strive for equality in healthcare but must set the precedent for equity in healthcare where there is an

acknowledgement through nurse education that people with dark skin tones are more likely to experience harm in the form of developing more severe pressure ulcers.

7.2 The impact of White normativity on pre-registered student nurses

As a consequence of White normativity and nurse educators being – albeit unwittingly-complicit in upholding racial ignorance, no student in this study described classroom learning that was purposeful or comprehensive on pressure ulcers and people with dark skin tones. Furthermore, the results from this study also indicate that students had an overreliance on nursing knowledge being disseminated directly from nurse educators resulting in a lack of critical imagination, applicability to other situations and/or to oneself (Carter *et al.*, 2016). Some students within this study did recognise that there was an issue of exclusion and dominance of white-based literature, but they excused this lack of inclusion with explanations that they were in a predominantly White geographic location. This perception seemed to help nursing students displace the ownership of exclusion, reinforce complicity, mask the need for research among people with dark skin tones and hold incorrect concepts of race being genetic (Moorley *et al.*, 2020). These restrictive views demonstrate the lack of understanding of the importance of health equity by nursing students holding the perception of an already established equitable society, where ignoring skin tone is inconsequential to patients (Hilario *et al.*, 2018).

Two subtitles have been created within this discussion point i) students with dark skin tones [7.3.1] and ii) students with light skin tones [7.3.2]. The deliberate separation of groups is not to segregate the two groups but to acknowledge that the impact of White normativity differs based on a person's skin tone and race (Zigerell, 2018).

7.2.1 Students with dark skin tones

The dismissal and exclusion of people with dark skin tones is long-standing and continues to occur in modern-day Britain (Equality and Human Rights Commission, 2016). This in turn has a direct impact on people in society and this is no different for students completing a nursing programme. Regardless of the student's personal demographic background or skin tone in this study, the students appeared to be blinded to inequities and a system of racial privilege within teaching, accepting the exclusion of skin tone diversity as the norm. Within this study, White normed teaching was so engrained and subtle in the fabric of the nursing curriculum that students who defined themselves as Black, African, Caribbean or Black British fell silent and justified the exclusion of skin tone diversity. The students who defined themselves as Black, African, Caribbean or Black British were made to feel that due to their minority it would be acceptable for others to hold a colour blind perceptive, instead of admitting to a lack of awareness, ignorance and White normativity within nurse education (Cunningham and Scarlato, 2018). It is possible, therefore, that nurse educators through the use of White normativity are stifling diverse viewpoints and presenting White as not only superior to others but universal, this, in turn, dismisses the underpinning reasons and efforts to diversify the UK's nursing workforce (Qureshi *et al.*, 2020).

Downplaying race: Masking personal identity

Whiteness can be a mindset in all population groups because people have all been socialised in that way (Liu *et al.*, 2019). The results from this study suggest that when Black, African, Caribbean, Black British or Asian students register onto a nursing programme their racial positionality within nursing and society is reinforced through asymmetric power relationships emphasising that White in England is the norm. Examples of power relationships were described and presented throughout the student

focus groups within this study, and it was evident that the students downplayed their race through the age-old practice of code-switching (Durkee, 2019). This downplaying of race is a survival technique and persistent reality in society, it is a performative task and is mentally draining for Black and Brown people (Saad, 2020). Code-switching was originally linked to linguistics and the interchangeability of languages in the same sentence however it has evolved to include behaviour adaptations, that is, a person altering their behaviour to fit in with the dominant environment (Saad, 2020). With code-switching occurring in the classroom students are ultimately having to mask their personal identity. This loss of personal identity creates an element of segregation among student nurses which leads to othering and the persistent fear of failure which is exhausting and emotionally taxing (McCluney *et al*., 2019). Despite code-switching often being unconscious it would not need to happen in nurse education if Black and Brown people were not penalised for their social and cultural differences in England.

Weathering: Worse health outcomes

As identified in this study Black, African, Caribbean, Black British and Asian students have been seen to forfeit their own psychological and emotional welfare so they may work and thrive in a White normative nursing world. This taxing approach to self-survival has been shown to have a direct biological ageing effect associated with worse health outcomes which bear the name of 'weathering' (Geronimus, 1992; Duru *et al.*, 2012). The cumulative impact of repeated experience with educational adversity and social apartheid through subtle forms of othering within a Higher Education institution delivering a nursing programme sets the precedent of exclusion in the nursing profession for Black, African, Caribbean, Black British and Asian student nurses (West *et al.*, 2017). Students look towards Higher Education institutions as exemplars that bear, create and reinforce intellectual knowledge and if Black and

Brown people are not seen or seen to be included in the curricula there is a knock-on effect of 'not belonging' to the profession and poor academic outcomes (Jack, Hamshire and Chambers., 2017).

7.2.2 Student with light skin tones

Students who categorised themselves as White in this study expressed fear and uncertainty about how to express themselves on matters surrounding skin tone diversity. Students rely on and believe in the information presented by educators to be true which may result in an inherent pattern of ignorance of some topics (Coates, 2008; Jack, Hamshire and Chambers, 2017). For instance, if nurse educators are colour blind and are unwilling to engage in the process of racial awareness, then students may assume those same characteristics, in turn negatively impacting patient outcomes and the healthcare environment as a whole (Cunningham and Scarlato, 2018). The narratives within a classroom set a precedent for student nurses at the start of their careers as they mostly absorb the information presented (Benner, 2001). Superficially or briefly dealing with skin tone diversity by nurse educators sends a message that skin tone diversity is not an important issue, reinforcing colour blindness and White supremacy.

With little awareness of the impact of non-inclusion of skin tone diversity in the nursing curricula students with light skin tones are left unprepared to deliver safe and effective evidence-based nursing care. Therefore, it is important to recognise that future generations of registered nurses cannot solely take the blame for racial ignorance, White silences and inaction as they have simply not been educated about the topic and its importance. To truly make a difference nurse educators need to

cultivate an attitude of open-mindedness, curiosity and humility and enable students to self-examine their own implicit bias (Scammell and Olumide, 2012).

7.3 White normativity in nurse education and racism

Racism in education is not new however it has been evaded for many years by simply not using the word (Barbee, 1993). Racism refers to the aspects of a society that prevents people of some racial groups from having the same privileges and opportunities as people from other races (Collins English Dictionary, 2021). As a society, we have historically been taught and commonly believe to think about the impact of more overt, blatant forms of racism which manifest as despicable behaviour as the most harmful (Drevdahl *et al.*, 2001). However, the definition of racism has evolved over time and now recognises that not only overt racism exists and causes harm but also involves discrete acts committed by individual people and systemic discriminatory practices within organisations (Nazroo, Bhui and Rhodes, 2020).

In the context of nursing practice and pedagogy, race and racialisation have been assumed to be in the past and therefore it has easily been dismissed and assumed to have been resolved (Varcoe, Browne and Cender, 2014). In contrast to claims that teaching with an emphasis on personalised care will lead to a culture that is free from racial injustice (Ghane and Esmaeili, 2020) the findings from this study reaffirm that racial discrimination through White normativity continues to be deeply embedded within nurse education. Borne of ignorance or not, White normativity is central to racial classifications, race relations and consequently racism (Iheduru-Anderson, 2021). In the UK racism continues to be steeped in denial, in a recent report published by the Commission on Race and Ethnic Disparities (2021) there is an indication that institutional racism does not exist in the UK and that the differences in outcomes of

members of the ethnic minorities are due to the variability of socio-economic factors. This view towards racism reinforces the assumption that racism does not exist in modern Britain and further constrains the exploration and analysis of a complex interconnected system (Runnymede, 2021).

Coates (2008), Cunningham and Scarlato (2018) and Hilario *et al.* (2018) highlight the power and harm associated with institutional racism is at multiple levels and is far more difficult to deal with than more overt acts of racism which occur on an everyday basis. By not seeing colour (racial colour blindness), the notion of minimisation and erasure of colour occurs, colour blind individuals continue to believe racial discrimination to be in the past and falls into racist passivity however not seeing race does little to deconstruct racist structures (Burke, 2017). Colour blindness is often described as a subtle form of racism which is incorrect (Plaut *et al.*, 2018); it upholds the racial status quo, initiates significant health inequities, can lead to direct physical harm and creates an assumption that equality is of a higher value that equity (Richeson and Nussbaum, 2004).

7.3.1 Systemic discriminatory practices

The contour of racism is hard to track, however, the absence of skin tone diversity in teaching is not a mere omission, it is an example of systemic discriminatory practices within organisations (Hilario *et al.*, 2018). Systemic discriminatory practices within organisations also known as structural racism are often seen as hidden, ritualistic, unintentional and unconscious due to dominant socialisation processes and can take many forms (Coates, 2008). One interesting finding of this study indicated that Black, African, Caribbean, Black British and Asian students felt that they could not ask the nurse educator about pressure ulcers and people with dark skin tones as they did not

expect the educator to have the answer. This assumption of ignorance is easy to blame on the nurse educators as they hold a responsibility to address discrimination despite organisational and wider social factors however, the nurse educators themselves had in this study been educated by White normed curricula and frequently drew evidence from White normative literature.

Bennett, Hamilton and Rochani (2019), Mayes (2020) and Ngunyulu *et al.* (2020) report that the lack of inclusion is more than an individual failing by nurse educators, but a systemic problem where educators remain unprepared to address the issue of racism and the impact on health. Senior academics in Higher Education institutions need to consider the pervasiveness of whiteness in more detail by exploring the wider concept of oppression in the historical formation of academic knowledge and institutions. One way in which some Higher Education institutions have demonstrated that they are trying to be more inclusive is through the recruitment of nurse educators from often-excluded groups (Black and Brown people) (Advance HE, 2020). However, Pilkington (2013) suggests this form of tokenistic representation is not only wrong as it offers a false sense of representation and commitment to change but it also penalises the Black or Brown people or person employed as they must bear the difficult burden of breaking barriers and attempting to undo complex system changes.

Currently, in the UK, the number of undergraduate nursing university applications from a Black, mixed and Asian background are increasing (Universities and Colleges Admissions Service, 2021) but the numbers of people from Black, mixed or Asian employed as university academics are not following suit. In a report published by the Council of Deans (2020), it was found that 92.1% of the academic nursing, midwifery and allied health profession workforce who responded to a survey declared themselves

as white. This dominance of whiteness of the teaching staff does reinforce the whiteness of the curricula as well as the association between whiteness and intellect (Hatt, 2016). Therefore, in the UK, nurse educators are not representative of the diverse national population, which can be a challenge as the dominant race may lack insight and commitment to diversity issues (Solanke, 2017).

7.4 Implications for practice

Inequities in health care have led to the variation of health care outcomes of people from Black, African, Caribbean, Black British and Asian minority groups for centuries (Puzan, 2003; Baptiste *et al.*, 2020; Public Health England, 2020; Yancy, 2020). Student nurses whilst completing a nursing programme must spend at least 2,300 hours in clinical practice to successfully register with the NMC as a registered nurse (NMC, 2010) therefore it is inevitable that student nurses' education and knowledge will have a significant impact on clinical practice. Moreover, the student nurses of today will be the registered nurses and leaders of the future who will educate previously registered nurses and lead changes in practice to ensure care is equitable for all. Registered nurses hold a professional responsibility to advocate for all members of society (NMC, 2018a), by ignoring systemic racism in nurse education or by denying the existence of racism it leads to people with dark skin tones suffering from more severe pressure ulcers and experiencing adverse health and psychological effects related to the late identification of pressure ulcers (Hall and Fields, 2013).

7.4.1 Lack of a language

Effective communication is often described as fundamental care and the duty of a registered nurse as it enhances the patient experience (NMC, 2018a) however because neither 'colour' nor 'whiteness' is understood to exist in practice, pedagogy, research or

in the processes of knowledge production in nursing scholarship nurses have not been able to deliver holistic health to all (Moorley *et al*., 2020; Bell, 2021).

There is an overall lack of language in relation to the identification of pressure ulcers among people with dark skin tones, there is no vernacular to talk about. The language used in nurse education guidelines, campaigns and assessment tools (NHS England, 2019; NHS Improvement, 2018c; Waterlow, 2005) often refers to redness, discolouration and non-blanching skin as indicators of early-stage pressure ulceration. The use of these terms as sole indicators of early-stage pressure ulcers create a level of inequity in the risk assessment for people with dark skin tones as these indicators may not be apparent in this group, even in the presence of pressure damage (McCreath *et al*., 2016). In the absence of a diversity dialogue, registered nurses, regardless of their own background, may become complaisant and constantly reconstitute the conditions that ensure the development and perpetuation of racial inequities.

7.4.2 White normative pressure ulcer algorithms

In all five cases within this study, nurse educators presented pressure ulcer risk assessment tools (Moore and Patton, 2019) to student nurses in the classroom. All nurse educators highlighted the Waterlow Pressure Ulcer Risk Assessment (Waterlow, 2005), and in two cases, students had the opportunity to link the risk assessment to a case study (Popil, 2011). The individual case studies used in each case was based on a person with a light skin tone. As a result, when the nurse educators were discussing scores under the title of "visual risk areas," discolouration was associated with descriptive terms relating to light skin tones.

In nursing practice, pressure ulcer prevention algorithms are reported to disavow differential treatment of patients (Cunningham and Scarlato, 2018). However, this assumption is incorrect as pressure ulcers in England are predominantly assessed, identified and categorised using visual prompts, clinical judgement and pressure ulcer risk assessment tools such as the Braden Scale for Predicting Pressure Sore Risk (Bergstrom *et al.*, 1987) and the Waterlow Pressure Ulcer Risk Assessment (Waterlow, 2005). By using a risk assessment tool, it can be reaffirmed that there is a reliance on the visual presentation of a pressure ulcer (Moore and Patton, 2019). The term "discolouration" within the Waterlow Pressure Ulcer Risk Assessment does in part reflect inclusivity; however, it can be suggested that the tool is only as effective as the clinician carrying out the assessment, likewise, discolouration may not always be visible (Owen *et al.*, 2018).

7.4.3 Caring for people with dark skin tones based on assumptions

In this study, student nurses were only superficially exposed to skin tone diversity in the classroom therefore their level of knowledge could be expected to remain limited with an inherent focus on people with light skin tones. However, with a range of practice experiences and exposure to care delivery throughout their programme student nurses could develop the confidence and awareness to enable critical analysis to take place including a better understanding of pressure ulcer prevention knowledge (Usher *et al.*, 2018). This approach to nurse education remains undeniably risky and reckless as students are exposed to different learning opportunities while in practice and as highlighted by Lyder *et al.* (1998) clinicians overall are not accustomed to the long-standing central theme of assessing pressure ulcers in people with dark skin tones.

Most of all academic disciplines have been influenced by White normativity (National Union of Students, 2011), but in nursing, the effects of White normativity can lead to adverse outcomes, where patients suffer the consequences of racial ignorance such as a person developing a pressure ulcer because a nurse does not know how to assess a person with dark skin tone. Moreover, patients and nurses are thrown together in random couplings therefore it is unacceptable that there is a reliance on assumptions of knowledge relating to the presentation of pressure ulcers among people with dark skin tones.

Failure to establish and include a language of skin tone diversity in teaching results in student nurses being ill-equipped and unprepared to handle the discomfort of racial conversations resulting in clinical omissions in care delivery where pressure ulcers are not suspected, resulting in infrequent checks, turns and repositioning. With less frequent checks people with dark skin tones are more likely to develop a pressure ulcer, stay in hospital for longer and experience overall poorer health care outcomes (Bauer *et al.*, 2016). This is a huge disservice to people with dark skin tones and leads to a distrust in healthcare (Scharff *et al.*, 2010; Razai *et al.*, 2021).

7.5 Recommendations

The resurgence of the Black Lives Matter movement has shifted dialogue and discourse within society however as Higher Education institutions are held in such high esteem with so few Black and Brown people it has historically been very difficult to identify where change needs to occur (Allen, 2006). Firstly, systemic racism needs to be accepted and acknowledged as nothing can be done to create change if it is not recognised [7.5. 1]. Secondly, alluding to cultural and racial inclusivity is insufficient and senior leaders creating and delivering nurse education programmes at Higher

Education institutions must be forensic and bold enough to explore the challenges and commit to the eradication of racism [7.5.2].

7.5.1 The acknowledgement and acceptance of racism in nurse education

Racial literacy is rated highly as a solution to bridging the gap between practice and education, conversations need to occur in the open to allow the formation of self-knowledge and promote the development of critical consciousness (Wong *et al.*, 2021). There is evidence in this study that an uneasy and unpalatable status quo of White normativity exists within nurse education. Academic nurses teach from a perspective of White dominance and this is, in the main, accepted by their students.

Nurse academics hold a moral and ethical responsibility to advocate for their students' right to fair nursing education which is representative of all population groups. Failing to listen and look after people with dark skin tones is dehumanising and a form of racist practice, resulting in essentially discriminatory nursing practice (McCoy, 2020). To dismantle obstacles, blocks and ideologies that sustain racism nurse educators need to acknowledge and accept racism is present in nurse education. By antiracist we mean that nurse academics must move away from being passive bystanders, where their teaching reinforces White normativity, they must instead make conscious efforts and take actions such as self-reflection to acknowledge differences and work against racism however uncomfortable they may feel (Kendi, 2019).

7.5.2 Anti-racist lens in nurse education

For many years Ramsden (2002) in accordance with cultural safety has rightly recommended that nurse educators need to embrace post-modernism, critical social

theory and transcultural nursing theory in their teaching. These theories enable nurse educators to self-critique and offer a roadmap for embedding diversity into all activities, not only clinical activities but also teaching and learning activities. However, Schroeder and Di Angelo (2010) argue that by focusing more narrowly on culture nurse educators are diluting how racism is being addressed and an anti-racist pedagogy needs to be implemented. Anti-racist pedagogy enables students to explore topics that have previously been excluded and makes racialised power relations explicit all whilst highlighting systems of privilege (Hassouneh, 2006).

Whilst condoning the attempts made to ensure that inclusive teaching material is embedded in the curriculum (Mukwende *et al.*, 2020; Tagg, 2020), short-term skill acquisition initiatives such as being made aware of skin tone diversity are useful however they do not fix racism, systemic racism or create anti-racist practices (Bell, 2021). One way in which Higher Education institutions are creating a platform for discussion is through the implementation of the Race Equality Charter which has been taken on board by many Higher Education institutions in the UK (Advance HE, 2020). This charter offers the opportunity to explore and put into practice systems and to minimalise and eradicate racism within academia. However, it is important to note that the statements within the charter are broad (Bhopal and Pitkin, 2020) and despite offering an opportunity to address racism and systemic racism; nursing practice needs more than a change of policy within the safety of an academic environment.

Despite anti-racist pedagogy and strategies becoming more prevalent in nursing education, racism continues to be neglected in nursing curricula due to the guise of academic freedom (Oermann, 2019) and the ignorance of White normativity by nurse educators. Student nurses lack exposure to meaningful and challenging conversations

about health inequities and skin tone diversity as if racism is not talked about, it does not go away but minimises and negatively erases race (Saad, 2020). The need to dismantle systemic racism challenges all nurses to consider the extent to which we really consider the hidden curricula messages that speak to students and operationalise issues of inclusion, diversity and race in our day-to-day professional practice (Thorne, 2017).

Professional programmes such as nursing where students are reliant on nurse educators in the classroom and in practice to successfully complete their programme require a system-wide change where both in classroom teaching and learning in the field are interlinked to avoid omission and an opportunistic approach to the crucial topics of skin tone diversity and health inequity. Nurse education must be inclusive and anti-racist to solve the overall systemic racism in nursing education, there needs to be a commitment to discussions of what is often portrayed as uncomfortable topics (Di Angelo, 2011), and incorporate an authentic and diverse range of examples, rather than assuming 'whiteness as normal'. Nurse educators have a significant role in educating nurses of the future about health inequity and the need to eliminate racist practices that may lead to patient harm (Thornton and Persaud, 2018). As recognised by Bell (2020) for this to truly occur nurse academics need to comprehend the persistence and pervasiveness of White normativity and dominance in nursing and their own enactments of White privilege. Nurse educators no matter of their skin tone need to interrogate their complicity within a system of White privilege (Bell, 2021). This power of knowledge, and the ability to look back and critically reflect on one's actions through the use of anti-racist pedagogy, offers the permission for nurse educators, senior staff and students to have a voice, a language for conversation and explore the deep-seated connections of systemic racism. In the current study nurse

educators only briefly acknowledge pressure damage among people with dark skin tones in the classroom, rather than self-educating about the topic to facilitate change nurse educators were seen to ask for advice and guidance on how to successfully include people with dark skin tones which highlights a lack of ownership.

All nurse educators need to critically reflect on every teaching activity and need to ensure that skin tone diversity is addressed not just as meaningless words in documents, but at every teaching and learning encounter with students. The study results highlight the need for pre-registration nurse education to adequately include comprehensive information to safeguard all service users in relation to the assessment and identification of pressure ulcers. Nurse education needs to be adapted to ensure that all skin tones are seen as equally important, inclusion and diversity must be more than just words, more than simply a statement appearing in curricula documentation. Nurses have an ethical and moral responsibility to be 'colour aware' by correcting interventions and assessment techniques that are based on White as the norm (Sommers, 2011). Upon completion of nursing programmes, graduates must be able to practice in an anti-racist manner, challenging assertions of neutrality and promoting health equity in their work.

7.6 Chapter summary

The importance of this study is to recognise the need for equity rather than equality. There is a difference in pressure ulcer presentations across skin tones and by ignoring these differences nurses are causing more harm to a defined population group. With White normativity being powerful, embedded, and enculturated, but also subtle, nurse educators can unwittingly transmit colour blindness to students (Cunningham, 2018). This contributes to creating another generation of nurses who practice in a colour-

blind way. Nurses and clinicians, need to move away from a colour-blind approach where colour is seen to be invisible and appreciate the differences so that actions can be taken for a change in healthcare and nurse education. These actions need to encompass the awareness that the presentation of pressure ulcers may not always be visible and that the language used in empirical research and guidelines focus on people with light skin tones which is actually encouraging health inequities and fuelling the view that White is the 'norm'. Moving forward, nurse educators need to truly call out racism and White normativity in all its forms by recognising that being tokenistic and ignorant to differences can lead to health inequities faced by people with dark skin tones. An anti-racist curriculum needs to be used to not only help acknowledge systemic racism in nurse education but to facilitate conversations and educate nurses of the future about privilege.

Chapter Eight: Conclusion

This chapter summarises and brings together the main areas covered through the thesis. A discussion of the strengths and weaknesses of the current study and the consequence of these issues on the research findings. Recommendations drawing from the novel contribution of the current study will also be presented under three headings i) recommendations for nurse education ii) recommendations for nursing research and iii) implications for nursing practice.

8.0 Conclusion

Chapter One presented the link between pre-registration nurse education and equitable care through the lens of pressure ulcers and people with dark skin tones. To ensure consistent quality care is provided by nurses it is important to acknowledge that student nurses often receive different learning experiences within practice and as a result students require wide-ranging educational strategies which offer an opportunity to be involved with both familiar and unfamiliar teaching techniques within Higher Education institutions. At this stage, it remained unclear what research evidence existed in relation to the identification of pressure ulcers on people with dark skin tones.

In *Chapter Two* the literature was critically reviewed and synthesised in relation to the risk factors for pressure ulcers and the harm on people with dark skin tones. A search of the literature revealed 14 relevant articles. The foci of studies included the following: (i) risk of sustaining a pressure ulcer based on skin tones, (ii) identification of pressure ulcers in people with dark skin tones, (iii) pressure ulcer and place of care and (iv) socio-economic impact on pressure ulcer development. Overall, findings indicate that

people with dark skin tones were more likely to develop higher stage pressure ulcers. Reasons for this were not fully elucidated; however, it could have been associated with current skin assessment protocols being less effective for people who have dark skin tones resulting in early damage arising from undetected pressure damage. From the literature reviewed, it could be seen that there was a lack of guidance and evidence, and people with dark skin tones were more likely in comparison with people presenting with light skin tones to develop higher stage pressure ulcers.

Chapter Three presents the methodological approach as mixed methods research underpinned by the pragmatic philosophy. This included collective case study as a research strategy and the use of the sequential mixed-method approach. *Chapter Four* focused on the conduct of the research and analysis of data. Five Higher Education institutions each representing a 'case' were used. Initially, the underpinning philosophy of education from each case site was collated, following which quantitative documentary analysis and a structured teaching observation using a novel diversity observational teaching tool was completed. Qualitative data collection then took place which incorporated focus groups with student nurses and semi-structured interviews with nurse educators. The integration of these multiple sources of data enabled various elements within each case to be scrutinised and new insights uncovered providing depth and breadth in the examination of the educational content delivered. Findings were presented in two separate chapters: Quantitative findings in Chapter 5 and qualitative findings were discussed in Chapter 6.

Chapter Five presented the results from the first phase of the study which addresses health inequities in on-campus undergraduate nurse education through the analysis of teaching and teaching material exploring pressure ulcers and skin tone. The

documentary analysis confirmed all Higher Education institutions overwhelmingly directed teaching and learning activities about pressure ulcers towards people with light skin tones. Observation of teaching indicated all teaching sessions only contained brief, separate and superficial information on people with pressure ulcers and dark skin tones. There was no discursive language or awareness of colour or colour blindness.

Chapter Six presents the results from the second phase of the study. Classroom learning was predominately framed through a White lens with White normativity being strongly reinforced through teaching and learning activities. This reinforcement of White normativity was evidenced through four main themes i) dominance of whiteness in the teaching and learning of pressure ulcers in undergraduate nurse education, ii) the impact and implications of whiteness as the norm in pressure ulcer teaching on student nurses, iii) the role of external inputs on the teaching and learning of pressure ulcers in on-campus undergraduate nurse education and iv) suggestions as to how the educational practice of skin tone diversity can change: improvements within the classroom.

Chapter Seven synthesises the findings from the four originally set objectives to provide information that could inform Higher Education institutions teaching and practice in the assessment and identification of pressure ulcers in people with dark skin tones. In this chapter, the importance of the study was recognised with the need for equity rather than equality for people with dark skin tones. With White normativity being powerful, embedded, and enculturated, but also subtle, nurse educators can unwittingly transmit colour blindness to students which contributes to creating another generation of nurses who practice in a colour-blind way. Moving forward, nurse educators need to truly call out racism and White normativity in all its forms by recognising that being

tokenistic and ignorant to differences can lead to health inequities faced by people with dark skin tones.

8.1 Unique contribution to knowledge

In this study examining nurses pre-registration education served as an invitation to critically explore in a meaningful way the inclusion of people with dark skin tones in the teaching and learning of the assessment and identification of pressure ulcers. The true extent of diversity and inclusion in nurse education is unknown, by using pressure ulcers as a lens to examine how skin tone diversity is incorporated meaningfully into nurse education this study through documentary analysis, observation as well as interviews and group discussion shows that actually people with light skin tones are still presented as the norm. It also shows that through the passing on of knowledge information is not only presenting whiteness as the norm but also unwittingly promoting colour blindness and this is underpinning pre-registration nurse education despite having statements about diversity and inclusion. People with dark skin tones were positioned as complex and different which in turn highlights the notion of colour blindness. The study has disrupted the sanctimonious positioning of diversity and inclusiveness which underpins pre-registration nurse education as despite having overarching curricula statements at each Higher Education institution it remains clear that diversity has not been embedded in all aspects. This study has offered the opportunity for the topic to be taken out of the margins and placed in the limelight by creating spaces for conversations to occur in the open allowing the formation of knowledge. This power of knowledge offers the permission for nurse educators and students to have a voice, a language for conversation and systemic change.

8.2 Strengths and limitations of the overall study

Pressure ulcer development has been widely researched and documented; however, much of this work does not address ethnicity or race and assumes whiteness. The perceptions of people with dark skin tones and the influence of skin tone on the identification and management of pressure ulcers remains under-examined. From the literature reviewed, it could be seen that there is a lack of guidance and evidence, and people with dark skin tones are more likely in comparison to people with light skin tones to develop higher stage pressure ulcers. Whilst the review was unique there was a clear limitation, the review was limited to the English language. With over 7000 languages (Eberhard, Gary and Charles (2021) across the globe, this limitation may have restricted the inclusion of specific population groups with dark skin tones where the language may have differed.

Since data collection occurred across the five case sites the NMC have published new standards for pre-registration nursing programmes (NMC, 2018c) which became effective in January 2019. The data collected for this study is based on the 2010 standards for pre-registration nursing education (NMC, 2010) as all five sites were delivering programmes in line with these standards at the point of data collection. Both sets of standards identify and highlight an element of flexibility within individual Higher Education institutions and include principles of equality and diversity therefore it could be suggested that despite there being a change in standards the expectations around diversity within nurse education remain the same.

8.3 Strengths and limitations of the methods

Case Study

The method used has been successfully implemented by researchers investigating curricula within education which solidifies the choice of methodology (Percival, 2017). Despite case study as a method remaining popular, there are limitations, one of which is the numerous definitions and explanations through which research is carried out and analysed (Gerring and McDermott, 2007). Furthermore, case study evidence has been seen through a positivist lens as poor due to its limited ability to contribute broadly to evidenced-based research (Bryar, 1999). However, Morgan (2007) reports that if data is superficially explored upon data analysis it may unconsciously sway the research and as a result limit the value of the collected data. Therefore, within this current study, the need to implement a mixed-methods design was crucial.

Being described as paradigmatically free, assumptions have been made that case study research lacks rigour. However, within this study using case study research as a mode of inquiry reinforced the systematic procedures to collect data and draw conclusions (Yin, 2018). Likewise, the generalisability of results has been questioned. The study was conducted across five study sites in England and may not represent experiences and views internationally. At this stage, it is important to recognise that the purpose of case study research is not to draw or make statistical generalisations but to expand and generalise theories otherwise known as analytic generalisations (Yin, 2018). The generalisation of results within case study is not a priority as the very nature of the research prevents this from occurring due to the limited numbers of cases involved. Even with the collective case study, representation is limited and does not ascertain a statistical basis for generalisation as numerous cases are not solely for the purpose of comparison as slight differences are present (Stake, 1995). The aim of case study

research is not to extrapolate probabilities based on large population groups or to enumerate frequencies (statistical generalisation) but to expand and generalise theoretical propositions all whilst maximising learning (Stake, 1995; Yin, 2018). Although case study can rarely be generalised, it can provide a unique understanding of the individual, organisational, social and political processes in context (Yin, 2003).

Data Collection

The classroom observations were not covert, the participant information sheet disclosed the nature of the information being gathered; therefore, nurse educators being observed despite not being aware of the specific questions in the observational tool were aware of the focus towards skin tone diversity and pressure ulcers. The nurse educators were provided with a participant information sheet prior to the observation and previously published work was accessible on the world wide web, this would offer the nurse educator insight into research currently being carried out however the nurse educators were not provided with a copy of the structured observational tool. This insight may have allowed nurse educators to include material not usually included in the observed session, which could explain the brevity and superficiality. The teaching sessions observed took place in year one of the nursing undergraduate programme and the whole curriculum was not explored as skin care teaching and learning, a fundamental of care would be expected to occur at the beginning of undergraduate nursing programmes (NMC, 2010; NMC, 2018d).

The observations carried out in this study on one hand could be considered as a complete observation which focused on the use of a detached observer where the researcher is neither seen nor noticed by participants as pressure ulcer teaching was observed and there was no direct input into the teaching material or sessions being

observed (Kawulich, 2005). However, on the other hand with the observer being a nurse educator with a specialist interest in pressure ulcers and people with dark skin tones it was found that the observed nurse educators in the classroom sought confirmation and reassurance through non-verbal communication e.g. a smile or nod when talking specifically about people with dark skin tones. This demonstrates that those being observed could be staging a performance to include a particular topic or focus (Frey, 2018).

The sample size was too small in this study to perform psychometric analysis. Similarly, only one observer undertook the data collection, and so inter-rater reliability was not established in this study. However, the use of a structured approach towards observation addresses in part the concern of inter-rater reliability as there is less likelihood of deviation from the data that needs to be collated (Wilkes *et al.*, 2010). Moreover, to maximise inter-rater reliability of the DOTT it is important to equip observers with information about perception, as two observers may perceive different things when observing a scenario or situation depending on their individual lens and view of the world hence resulting in unreliable data collection and quality. Although being of key value, inter-rater reliability is not the sole influencer of data collection (Lim., Palethorpe and Rodger, 2012). As a result, observer competence becomes the key focus, because no matter the number of observers collecting data they are all exposed to the influences of perception and interpretation of the world.

The study involved a small homogenous sample of educators who may not have represented all views within the included institutions. Furthermore, during the semi-structured interviews and focus groups social desirability bias may have influenced the results, participants were aware of the study context as they had been provided with a

participant information sheet before data collection. The impact of the researcher on the interviews and focus groups was visible as quotes from the participants referred to the awareness of the researcher's interests. It could also be argued that students or nurse educators who had experienced or witnessed racism were more attracted to participating in the study consequently, the sample was more likely to be more comfortable talking about racial matters than a random sample of nurses. Equally, it is possible that those who were most concerned with the prevention of pressure ulcers or keen to learn how to identify and assess them were more willing to participate.

8.4 Recommendations

White normativity is deeply embedded in our thinking, policies and our practices and therefore our education so we need to have a deeper understanding of ourselves, systems and how racism actually works in order to dismantle it.

8.4.1 Recommendations for nurse education

The current study findings highlight the need for pre-registration nurse educators to adopt a truly inclusive approach to nurse education and to ensure that teaching reflects all patient groups and not just a subset. Nurse educators are guided by their institutions and professional body at a strategic level with overriding policies and principles focusing on equality, diversity and inclusion however there lacks specificity to demonstrate inclusion within the nursing curricula. The teaching content remains heavily dependent on the views and experiences of the actual nurse educators who are working directly with students. With White normativity being powerful, embedded and enculturated but also subtle, nurse educators can unwittingly transmit colour blindness to students, this contributes to creating another generation of nurses who practice in a colour-blind way.

Higher educational institutions and nurse educators have a duty to use teaching techniques and deliver teaching material that addresses pressure ulcer assessment and identification, specifically focusing on skin tone diversity. Nursing holds onto values, and it fully embraces values such as equity (NMC, 2010; NMC, 2018a) and if nurse educators are going to be true to that they have to engage in processes of rigorous self and peer critique. With race being a deeply held social construct nurse educators need to facilitate future nurses to interrogate their complicity within a system of White dominance. To truly dismantle racism within nursing, nurse education needs to change. The findings of this study have a number of practical implications.

Actions need to encompass an awareness that the presentation of pressure ulcers may not always be visible as pinkness or redness, and that a reliance upon colour-blind language is often deeply entrenched. A radical critique of all teaching and learning activities needs to occur, to help explore, improve and meaningfully and authentically include anti-racism in nurse education, and in particular, how people across the skin tone spectrum are included and represented in teaching and learning activities. This can be achieved through the use of the DOTT which was created for this study and has been published in an internationally recognised peer-reviewed nursing journal (Oozageer Gunowa *et al.*, 2021). It is anticipated that the DOTT can be applied in a variety of contexts and enables researchers to record written teaching plans and materials and the respective classroom teaching.

Further work must be done, the academic workforce that design nursing curricula must ensure that anti-racist teaching practices run through to the classroom, this can be achieved when teaching and learning approaches are designed to reflect the transformational ethos of the philosophy. So, the transformation of the nursing

education workforce including sessional staff needs to occur. Nurse educators at the frontline of teaching need to be prepared, if workshops are necessary, they need to be run, nurse educators need to feel confident, with debriefing strategies in place. For authentic transformational change to occur nurse educators must look to the literature on cultural safety and anti-racist practice when developing and implementing curricula (Ramsden, 2002; Hassouneh, 2006). Likewise, ensuring authentic inclusion of Black and Brown people perspectives in curriculum reform through membership of steering committees, reverse mentoring programmes and inclusive executive board members must occur.

There is, therefore, a definite need for nurse educators to understand that anti-racist teaching practices are not policy, they are a set of values and principles against which to measure all work. Diversity policy does not work, the focus needs to be on anti-racist policies as using the term diversity dilutes messaging.

8.4.2 Recommendations for further nursing research

Health inequities continue to exist and disproportionately affect people with dark skin tones. Racial consideration within research needs to be brought from the periphery to the fore of the research processes in nursing. From the literature reviewed, it can be seen that there is a lack of guidance and evidence, people with dark skin tones are more likely in comparison with people with light skin tones to develop higher stage pressure ulcers, and this could well be associated with failure to accurately detect early signs of pressure damage. Despite identifying and addressing pertinent aspects in relation to people with dark skin tones other new questions remain.

Firstly, nurse educators and students raised the concern that empirical evidence focusing on people with dark skin tones was limited. This resonates with the issue that there is an element of White centricity where investigators unless specifically researching a topic in relation to people with dark skin tones frequently include an exclusion clause within their sample or make a tokenistic point about racial identity in their results (Burnett *et al*., 2020).

Secondly, it is recommended that further work is conducted on the DOTT focusing particularly on the content validity and reliability of the tool. As only one observer undertook the data collection, inter-rater reliability was not established in this study however, this as a further step could be undertaken in subsequent research. As an established structured data collection tool, nurse educators would truly be able to use the tool and compare intentional curriculum content to actual educational content delivered to students in the classroom.

Thirdly, research that repeats this study is needed on a larger international scale where further generalisability can be achieved to explore if and how people with dark skin tones are included in nurse education to help address the health inequities patients experience on a day to day basis in the care environment. Further research is recommended to comprehend the knowledge and skills nurses in practice have in relation to the identification of pressure ulcers among people with dark skin tones. Further studies may also investigate partnerships with communities avoiding spectator research, research could include conversations with people with dark skin tones and their carers on their views and experiences of early signs of pressure ulcer damage.

Last but by no means least further research is needed to test the reliability of non-invasive methods for monitoring the early identification of pressure ulcers among people with dark skin tones including the sensitivity and specificity of subepidermal moisture (Okonkwo *et al.*, 2020) as well as muscle-based and circulatory biomarkers (Schwartz *et al.*, 2020).

8.4.3 Implications for nursing practice

With the realisation of inequity, healthcare professionals in particular nurses need to be aware of anti-racism in relation to maintaining skin integrity and providing harm-free care. Furthermore, nurses need to continuously commit to the code of conduct (NMC, 2018a) in relation to diversity in healthcare and recognise the real-life impact of remaining silent, race neutrality and being racially colour blind. It is recommended that healthcare organisation leaders are held to account and consider how their current workforce acknowledges the needs of people with dark skin tones and prevent the dismissal of concerns raised. Organisations need to offer a safe space to listen and discuss topics that are perceived to be sensitive, this will enable conversations to occur. Following this, policies, procedures and educational updates can be reviewed to identify if healthcare organisations consider and cater for the needs of people with dark skin tones and ensure health equity. For example, are clinicians given time or supported through clinical supervision to talk about health inequities and the impact it has on patients. Within this study student nurses voiced that in practice they only learnt how to assess the skin integrity of people with dark tones through opportunistic learning. Students assumed that clinicians had the knowledge and were competent to deliver teaching in regard to the presentation of pressure injuries and people with dark skin tones.

The focus of pressure ulcers across all skin tones must be embedded across all practice areas. This study through the insight of nurse educators highlights that there is a lack of clinical teaching guidance surrounding the identification of pressure ulcers and people with dark skin tones and therefore clinicians need to be aware of the limitations to the visual assessment of pressure ulcers. Nurses in clinical roles must be provided with resources and guidance on how to assess skin integrity rather than react to a visual presentation of the skin. Both students and educators referred to the 'React to Red' campaign in England and expressed how this was unrepresentative of the population groups and a change is required.

8.5 Reflecting on skin tone diversity and language

Racism is difficult because we have to consider the ugly side of humanity. There is evidence in this study that an uneasy and unpalatable status quo exists within nurse education. Nurse educators teach from a perspective of White normativity, and this is, in the main, accepted by their students. Nurse educators and clinicians need to recognise colour-blindness - where colour is seen to be invisible - and appreciate physical differences so that actions can be taken for change. Examples of how deeply entrenched colour-blindness is in the lexicon of English institutions involves both the national 'react to red' campaign focusing on redness and the term pressure ulcers (NHS Improvement, 2017). Both the campaign and term fail to acknowledge skin tone diversity in the presentation of pressure ulcer risk and perpetuates widespread blindness to health disparity by fuelling the view that White is the 'norm'.

To dismantle obstacles, blocks and ideologies that sustain racism nurse educators need to comprehend and combat the underlying cause and adopt an antiracist language. By antiracist, nurse educators must move away from being passive bystanders, where their

teaching reinforces White normativity, they must instead make conscious efforts and take actions such as self-reflection to acknowledge differences and work against racism however uncomfortable they may feel. Nurse educators hold a moral and ethical responsibility to advocate for their students' right to fair nursing education which is representative of all population groups. Failing to listen and look after people with dark skin tones is dehumanising and a form of racist practice, resulting in essentially discriminatory nursing practice. Failure to establish and include an anti-racist lens in clinical teaching results in clinical omissions in care delivery where pressure ulcers are not suspected, resulting in infrequent checks, turns and repositioning. With less frequent checks people with dark skin tones pay a tragic price where they are more likely to stay in hospital for longer and experience overall poorer health care outcomes (Bauer *et al.*,2016).

8.6 Reflexivity

'The intention of this section is to depict how I started as a novice nurse researcher navigating the swamps of research and talking about the impact of the study on me and my impact on the study and how it has changed me. In Chapter 1 I explained my history and personal background and continue to recognise that this has an impact on the way new knowledge is constructed. I feel privileged to have been awarded a doctoral scholarship and right from the beginning, as all doctoral students, I wanted my research to make a change in practice. Naively at the start of the study I felt that my chosen topic would have been welcomed however this was often far from the truth with senior colleagues reporting that there were more important priorities than health equity. Only after reading and exploring the literature I myself recognised that my family and I had experienced health inequities and in turn racism.

My impact on the study can be found throughout from the identification of the philosophy to the discussion of results. The chosen philosophy came from my values as a nurse and the recognition that multiple realities exist. Holding 'insider knowledge' as a PhD student

and nurse educator during data collection allowed me to feel part of the milieu however my visible appearance as someone with dark skin may have influenced the conversations. When analysing the data initially it was easy to blame the lack of inclusion of people with dark skin tones on the population demographics however, I then recognised that health inequity was not population dependent and that all patients no matter of their skin tone should be cared for in the best possible way and that colour blindness was a dismissal of race rather than inclusivity.

Looking back through my journey I can now relate to equality, diversity and inclusion (EDI) leaders who report that EDI work is tiring. As a nurse educator with a dark skin tone I had been colour blind and perpetuated white normativity in the classroom, since the study this has changed, I now recognise that people with dark skin tones need to be heard and represented in nurse education. In the study, it was interesting to see that students with dark skin tones did not feel that their skin tone was of importance in nurse education and that students with light skin tones wanted a safe space to talk about a topic that made them feel uncomfortable. For me, the study has allowed me to confidently open conversations about skin tone diversity and to say that there is no single straightforward answer to address health inequities in nursing but that it is everyone's business.'

8.7 Contribution to knowledge

The early stages of the study and respective publications informed and influenced strategic decisions made by NHS England and Improvement including the National Wound Care Strategy Programme. The study had a direct impact on the 'React to red' campaign used by the National Wound Care Strategy Programme where it was recognised that a change in the language used was required to ensure inclusivity and raise awareness of inequity within pressure ulcer assessment and identification. No new campaign has been launched however the National Wound Care Strategy Programme have publicly announced that health care professionals should move away from the 'React to red' campaign and focus on the 'Stop the pressure' campaign. This study has led to board members of the National Wound Care Strategy Programme to

consider inequity within wound care with the most recent acknowledgement being made in the practical recommendations for the use of digital images in wound care (NWCSP, 2021).

This study has changed perceptions at an international, national and local level due to the recognition that health inequities are still present in nursing and impacts directly on patient health care outcomes. The study has been presented on numerous occasions and led to the first ever Best Practice Statement on wounds and people with dark skin tones which was published by Wounds UK at the end of 2021.

8.8 Concluding statement

Inaction is the unearned right of White privilege. Racism causes great harm, but nurse educators can do something about it. The aim of this study was to critically evaluate the educational preparation of registered nurses in Higher Education institutions in relation to pressure ulcer assessment and identification, specifically focusing on skin tone diversity. After carrying out a literature review to ascertain the risk factors for pressure ulcers and the harm on people with dark skin tones it was important to gain a deeper understanding of the inclusion of skin tone diversity through the lens of pressure ulcers in nurse education. This was achieved through a collective case study which included a range of data collection strategies. From the data gathered it could be seen that no one person is at fault. Everyone who educates or creates curricula for student nurses within Higher Education institutions has a responsibility to identify and interrupt persisting remanence of White normativity, reconfigure nursing education and include anti-racist healthcare which acknowledges and helps to address acts of racism that can no longer be denied or debated.

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Appendices

Appendix A: The full text of the published literature review

A published article has been removed from this version of the thesis due to copyright restrictions:
Oozageer Gunowa N, Hutchinson M, Brooke J, Jackson D. Pressure injuries in people with darker skin tones: A literature review. J Clin Nurs. 2018 Sep;27(17-18):3266-3275. doi: 10.1111/jocn.14062.

Appendix B: The full text of the published methods paper

A published article has been removed from this version of the thesis due to copyright restrictions:
Oozageer Gunowa N, Hutchinson M, Brooke J et al (2021) Evidencing diversity: development of a structured tool for investigating teaching of pressure injury on people with darker skin tones. Nurse Researcher.
doi: 10.7748/nr.2021.e1761

Appendix C: The full text of the published quantitative paper

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ORIGINAL ARTICLE

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Embedding skin tone diversity into undergraduate nurse education: Through the lens of pressure injury

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Abstract

Objective: To explore health disparity in on-campus undergraduate nurse education through the analysis of teaching and teaching material exploring pressure injuries.

Background: As a discipline, nursing espouses ideologies of inclusion, equity and valuing diversity. However, little is known about how these ideologies translate into clinical care. Pressure injury prevention is a routine aspect of nursing care; yet, there is evidence of inequity in relation to clinical care and patient assessment, as people with darker skin tones have a higher prevalence of severe pressure injuries before detection of damage occurs. Despite limited literature being available surrounding the topic of pressure injuries and skin tone diversity, it remains the responsibility of nurse educators to address contemporary issues and health disparity within the nursing curriculum.

Design: A multiple method collective case study. The STROBE checklist was followed in reporting this study.

Methods: Documentary and observational data of lectures regarding pressure injuries were collected during 2017 and 2018 from five Higher Education Institutes in England delivering approved nursing undergraduate programmes.

Results: Documentary analysis confirmed all Higher Education Institutes overwhelmingly directed teaching and learning activities about pressure injury towards people with Caucasian skin tones. Observation of teaching indicated all teaching sessions only contained brief, separate and superficial information on people with pressure injuries and darker skin tones. There was no discursive language or awareness of colour or colour blindness.

Conclusion: Radical critique of all teaching and learning activities needs to occur, to help explore, improve and meaningfully and authentically include diversity and inclusivity in nurse education, and in particular, how people across the skin tone spectrum are included and represented in teaching and learning activities.

Relevance to clinical practice:

- Critical examination of current teaching practice is crucial to address disparity and ensure care for people with darker skin tones is optimised.
- Nurse educators have a responsibility to educate for the care needs of all, as the quality of nurse education has a direct impact on care delivery and health disparity.
- This paper highlights the importance of addressing skin tone diversity and offers the opportunity for reflective practice, not just in formal education, but in clinical settings by preceptors and senior staff.

KEYWORDS

education, healthcare disparities, nurse midwifery, pressure ulcer

1 | INTRODUCTION

Registered nurses and nurses of the future need to be confident and competent when caring and supporting patients of all backgrounds. Often portrayed as a global quality indicator, patient safety failure is regularly associated with severe patient harm and major economic burden. These harms can include pain, distress, complications and hospitalisation (Jackson et al., 2017; Padula & Pronovost, 2018). International campaigns and initiatives have contributed to the development of patient safety programmes and specifically raised awareness of the long-term damage caused by pressure injuries (European Pressure Ulcer Advisory Panel, 2019; NHS Improvements, 2018). Pressure injury is defined as a "localised damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device" (National Pressure Ulcer Advisory Panel, 2016a, 2016b, p. 1). Pressure injury prevention is a nurse-initiated patient safety action (Usher et al., 2017), heavily reliant on visual assessment and clinical judgement, which allows for conscious and unconscious subjectivity from assessing clinicians (Borzdynski, McGuiness, & Miller, 2016). Therefore, it is crucial that pressure injury prevention remains a nursing priority to improve patient's health outcomes and reduce preventable harm and suffering.

Undergraduate nursing programmes are often shaped and delivered in the context of competing content demands, informed by layers of rules and guidelines from governing and regulatory bodies, that tend to generate broad topic direction and dictate areas for inclusion (European Network for Patient Safety, 2010; Lukewich et al., 2015; Nursing & Midwifery Council, 2010, 2018). However, the specific content of teaching sessions is not imposed, and individual institutions can interpret priorities, which leads to variance in how content is covered, presented and delivered. Both patient safety and diversity have been acknowledged as key priorities within nursing curricula (Bednarz, Schim, & Doorenbos, 2010; Tregunno, Ginsburg, Clarke, & Norton, 2014). Even so, it is acknowledged by Ginsburg, Castel, Tregunno, and Norton (2012) that student nurses are not fully informed of overall patient safety and diversity issues, particularly surrounding pressure injuries (Simonetti, Comparcinia, Flaccoa, Giovanni, & Cicoliniac, 2015) and, specifically, pressure injuries amongst people with darker skin tones (Oozageer Gunowa et al., 2017).

2 | BACKGROUND

Nursing knowledge directly impacts on the incidence of pressure injuries (El Enein & Zaghloul, 2011) and is a key factor in reducing patient harm caused by pressure damage (Greenwood & McGinnis, 2016). However, nurses continue to be exposed to reactive pressure injury teaching as part of case reviews by wound care specialist nurses due to time restraints, staff shortages, system processes, organisational priorities and quality improvement requirements (Bungeroth, Fennell, & Aiken, 2018). To reduce variability of knowledge surrounding pressure injuries, we argue that nurses need to have quality and relevant information from the beginning of their nursing careers as student nurses. Currently, contemporary researchers (Usher et al., 2017) suggest that nursing students may have knowledge deficits and lack confidence in addressing patient safety concerns particularly relating to pressure injuries.

To ensure equitable health care for all, especially relating to pressure injuries, it is important to acknowledge variation and recognise that not all service users are the same. People with darker skin tones have a higher prevalence of severe pressure injuries before detection occurs, which correlates with the lack of early identification (Baker, 2016). The language used in nurse education guidelines, campaigns and assessment tools (NHS England, 2019ngland, 2019; NHS Improvements, 2018; Waterlow, 2005) often refers to redness, discoloration and nonblanching skin as indicators of early-stage pressure injury. The use of these terms as sole indicators of early-stage pressure injury creates a level of disparity in risk assessment for people with darker skin tones as these indicators may not be apparent in this group, even in the presence of pressure damage. Despite limited literature and guidance being available surrounding the topic of pressure injuries and skin tone diversity, it remains the responsibility of nurse educators to inform students of this lack of insight; by addressing contemporary issues and health disparity within the nursing curriculum, nurse educators enable students to consider

care for all and identify people who are more at risk of developing more severe pressure injuries (Oozageer, Hutchinson, Brooke, & Jackson, 2017). Therefore, further exploration of nurse education content is required to help identify if and understand how the topic of pressure injuries and skin tone diversity is incorporated into student teaching and learning.

2.1 | Aim

This paper is drawn from a larger mixed-methods doctoral study that examined the teaching of undergraduate student nurses in Higher Education Institutions in England, in relation to skin tone variation and pressure injury identification and assessment. The aim of this current paper was to explore health disparity in on-campus undergraduate nurse education through the use of multiple methods. The analysis of documentary and observational teaching and learning material exploring pressure injuries.

2.2 | Design

A multiple method collective case study design was used to address the research aim across the multisite cases. Case study research is a recognised method within a variety of subject areas, including educational, nursing and health research. Collective case research, despite often establishing tension through competing demands often referred to as "case-quaintain dilemma" (Stake, 2005, p. 39), is considered more robust as it contains more than one single case (Herriott & Firestone, 1983). Various investigators (Cowley, Bergen, Young, & Kavanagh, 2000; McDonell et al., 2012) have used cases to acknowledge potential differences amongst groups. Mixed methods and multiple methods designs compliment the case study approach and the exploration of nurse education as there is no inclination to lean towards a particular type of data collection, classification or analysis as they are both seen as opportunistic and evolving towards a research problem (Grbich, 2012; Jones & Lyons, 2004).

3 | METHODS

In this study, five different Higher Education Institutions each representing a "case" were used. Initially, quantitative documentary analysis was undertaken and analysed, followed by a structured teaching observation at each of the five Higher Education Institutions. Integration of these multiple sources of data enabled various elements within each case to be scrutinised and new insights uncovered providing depth and breadth in the examination of the educational content delivered (Stake, 2005). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: guidelines for reporting observational studies checklist was followed in reporting this study (See File S1; Institute of Social & Preventive Medicine, 2009).

3.1 | Sample

A purposive sampling strategy was applied. The Head of School and Programme Lead for undergraduate 3-year nursing programmes (Bachelor in Nursing) at ten Higher Education Institutions were initially approached via email between August 2017–March 2018. Three Higher Education Institutions did not respond, and the following reasons for not participating were provided by the other two Higher Education Institutions, including undergoing a curriculum review, the use of guest speakers to deliver the teaching or unavailability of staff and staff shortages. The remaining five Higher Education Institutions were included as "cases" and consisted of modern universities, established post-1992 (Further Education Act, 1992) delivering approved education programmes (NMC, 2019). The Higher Education Institutions were of a similar size and positioned in demographically different regions across England where the diversity of both service users and students varied (Office of National Statistics, 2011).

3.2 | Data collection

3.2.1 | Instrumentation

A Diversity Observation Teaching Tool, drawing on Stolley and Hill's (1996) original content analysis framework, was applied to record teaching material content and delivery mode, using a tick box system. The sections of the Diversity Observation Teaching Tool have a range of questions which address duration devoted to the subject, context, when the subject is presented and visual representation of the subject. Two forms of data were gathered (a) written teaching material and (b) observation of classroom teaching. *Written teaching material*: Nurse educators enrolled in the study provided the relevant teaching materials, including PowerPoint presentations, workbooks, lesson plans, and lecturer notes from each Higher Education Institutions. *Observation of classroom teaching*: Observation occurred after the documentary analysis using the same tool. The location and timings of the teaching sessions observed during the academic year 2017/18 were arranged with the nurse educators delivering the sessions. The observed sessions were the operationalisation of the teaching material. Six structured observation sessions were completed with the use of the Diversity Observation Teaching Tool equating to a total 700 min. In one case, two teaching sessions were observed at one Higher Education Institution, and this was amalgamated to represent one overall teaching session delivered to undergraduate student nurses at that Higher Education Institution.

3.2.2 | Ethical considerations

This study was approved by the relevant University Research Ethics Committee (171077). Informed consent was obtained from the Head of school or programme lead from each Higher Education Institutions

as well as each nurse educator being observed. After provision of the participant information sheet of the study, nurse educators provided informed consent to participate and identified the relevant teaching sessions that focused on pressure injuries in year one of the undergraduate nursing programme. Participation of the nurse educators was voluntary, and their personal data were encrypted to maintain confidentiality. The teaching sessions observed did not involve collecting data from students or educators but focused on the teaching content and material.

3.3 | Data analysis

The analysis commenced with understanding the four domains of duration, context subject, timing and visual representation of the subject recorded in each section of the tool (Dressel & Avant, 1978). The four domains remained the key focus with frequency being the dominant analysis. Frequency calculations took place through the use of a tally system with tick boxes in the adapted tool. Similarly, to Mckintosh-Franklin's (2017) work, exploring the inclusion of pressure injuries and skin tones within teaching was important. However, due to the lack of language and terminological variances relating to people with darker skin tones, content analysis was used to analyse the field notes. Following the accuracy checks to ensure all components were complete, the data were entered manually into Excel software. Tabulation and descriptive statistics were completed to explore the teaching delivery modes and content of the teaching sessions used by each Higher Education Institutions focusing on pressure injuries in relation to skin tone diversity.

3.3.1 | Validity and rigour

The Diversity Observation Teaching Tool was reviewed by two tissue viability nurses and two nurse educators providing usability feedback and face validity (Redshell, Lennon, Hastings, & Fraser, 2004). Then, the tool was piloted in a Higher Education Institution delivering undergraduate nurse education approved by the Nursing and Midwifery Council [NMC] (2018). After completion of the content analysis from both the teaching documents and observational data, the information was cross-checked for accuracy by the research team. Furthermore, the mixed-methods data gained from the larger doctoral study reaffirmed the results presented in this paper as students and nurse educators confirmed that there was a lack of inclusion of people with darker skin tones in teaching and learning material.

4 | RESULTS

4.1 | Demographical characteristics

The Higher Education Institutions all had a range of student numbers attending the timetabled sessions, varying from small groups of 20 students to large groups of over 100 students. All sessions observed were in year one of the undergraduate nursing programme, and three were prior to student nurses first clinical practice placement. Three teaching sessions had more than one nurse educator leading the session all of which were in a skills laboratory designed for nursing programmes. Four teaching sessions were delivered by nurse educators employed by the Higher Education Institution and one was delivered by a tissue viability specialist nurse based in a local hospital.

4.2 | Professional knowledge on pressure injury

A total of five different terms to explain pressure injuries was identified from both the observation and documentary analysis: pressure injury, pressure sore, pressure ulcer, bedsore, pressure damage. All documents analysed across the five cases used the term "pressure ulcer." During the teaching observation, the nurse educator across four cases used the term "pressure sore" with only two mentioning the term "pressure injury." The Braden scale risk factors, which focus on overall risk, were addressed in 100% of observed classroom teaching. In all five cases, classroom teaching referred to the Waterlow Score, one of which highlighted erythema as "redness" or as a "dusky presentation" and another as "red in colour" which is was historically linked to the Waterlow assessment tool and visual inspection of risk areas (Waterlow, 1985).

4.3 | Skin tone variance and diversity

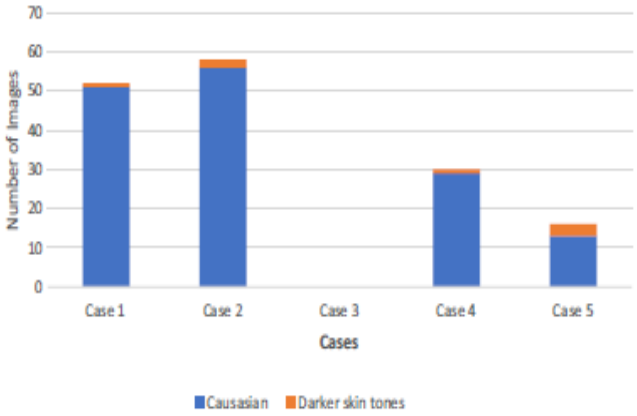
In all five cases, both in the observation and in the documentary analysis, identification of skin tone diversity in relation to pressure injuries was made. However, the terminology varied, and no specific categorisation of skin tone was made.

All nurse educators presented information regarding people with darker skin tones during the observed classroom teaching either as a question or as the content of a slide in a PowerPoint presentation. In one case, in relation to early skin damage, the phrase "whatever the colour of the skin" was used. In another case, cultural variance was loosely associated with diversity after a student asked a question surrounding language barriers and self-reporting. In this instance, the nurse educator referred the student to a television programme regarding culture; however, the details provided were not clear. Four out of the five Higher Education Institutions included information on people with darker skin tones within the teaching material and used the terms "darkly pigmented skin" and "dark pigmented skin."

4.4 | Content

The titles of all the sessions were broad and included various aspects of nursing knowledge such as (a) anatomy and physiology across the lifespan and (b) care, compassion and communication. Only three

FIGURE 1 Range of Images



Higher Education Institutions used terms associated with pressure injuries within the title of the teaching session. Documentary analysis of the sessions highlighted that lessons that focused upon skin integrity and wound care did not always include learning outcomes on pressure injuries.

Upon completion of the documentary analysis, the teaching material surrounding skin tone diversity was very superficial and not explored in depth as the terms "darkly pigmented skin" and "dark pigmented skin" only appeared on one PowerPoint slide, comment or question in each session. Pictures and photographs of patients with pressure injuries were included in four cases; Figure 1 presents frequency of content types in these images. In total, 158 images were reviewed in the gathered teaching materials. The vast majority of these materials (percentage $n = 96$) depicted people from a Caucasian background. The visual pictorial content of the teaching material shows a high proportion of images relating to people with a light skin tone. The category "other" represented 4% ($n = 7$) of images and included a range of pictures of patients and pressure injuries that depicted people from an Afro Caribbean and Mediterranean background.

4.5 | Learning resources

Analysis of the teaching material revealed four of the cases included a PowerPoint presentation. Other forms of teaching included videos, completion of an assessment tool, group work, a quiz, a workbook as well as practical examples of students lying in one position and reporting on the pain they felt when lying still. Mannequins were used as teaching props in two cases. In one of the case studies, one mannequin was as per the manufacturer description defined as "white;" in the same session, a plastic model displaying presentation of pressure injuries on both light skin tone and darker skin tone was presented; however, the presentation on darker skin tones was not discussed. In the other case, all four mannequins were used to help students learn to grade and practise grading pressure injuries and all four were described in the manufacturer descriptions as "white" ($n = 100\%$).

4.6 | Instructional delivery

Three out of the five Higher Education Institutions delivered a 1- to 2-hr session which included content on pressure injury; however, as illustrated in Table 1, the length of time spent on topics surrounding people with darker skin tones within the sessions was minimal. Overall, only very limited time was allocated to talking about diversity across all the cases.

5 | DISCUSSION

The study explored the content of on-campus undergraduate nurse education relating to skin tone diversity and pressure injuries. From the data gathered across five Higher Education Institutions in

TABLE 1 Length of time spent on pressure injury and diversity

Case number	Minutes spent teaching pressure injury specifically	Teaching minutes spent on cultural issues, ethnicity, skin variations
Case 1a	1–10	1–5
Case 1b	26–50	0
Case 2	51–100	1–5
Case 3	11–25	1–5
Case 4	51–100	1–5
Case 5	101+	1–5

England, limited inclusion of information around skin tone diversity relating to pressure injury was evident. There was no specific introduction of the risk factors for people with darker skin tones, or the fact damage may be more severe before detection occurs (Matas et al., 2001; Oozageer et al., 2017).

The National Pressure Ulcer Advisory Panel (2016a, 2016b, p1) refers to the term "darkly pigmented skin" which was the most commonly used phrase amongst the five cases; however, this can limit the exposure of student nurses to diverse skin tones. Exploring visual presentation of pressure injury amongst a limited range of skin tones risks continued perpetuation of disparities in health care as competence is not developed across an entire population group (National Institutes of Health, 2014). It is important to recognise that skin tone is a continuum, which varies for each individual rather than specifically associated with a particular race or ethnicity (Everett, Budescu, & Sommers, 2012). Therefore, race, culture or ethnicity should not be used as a proxy for skin colour. Instead, skin tone variances need to be explored as an entity in itself to enable clinically competent and timely care to be delivered (Henderson, Horne, Hills, & Kendall, 2018; Notarnicola et al., 2016). It is important to highlight that separating skin tone from race, culture and ethnicity may be difficult. Historically skin tone has been associated with racial segregation as well as political and economic discrimination (Van Ausdale & Feagin, 2001). Addressing diversity in nurse education requires an awareness that racism is adaptive; the definition of race has evolved over time and now focuses on social categorisation, based on nationality, ethnicity, phenotypic or other markers of social difference (Williams, Lawrence, & Davis, 2019).

Across the cases, learning outcomes were not specific and did not include information on the complexities of early-stage pressure injury visibility. It could be suggested that students were not fully informed of the teaching content (Tinto, 2017). In keeping with Rowan et al.'s (2013) study, uncertainties of knowledge acquisition from nurse education sessions may lead to students becoming disengaged and therefore not optimally prepared for the clinical environment. The lack of diversity in teaching could be associated with nurse educator apprehension or their lack of knowledge of how to address different population groups relating to skin tone diversity (Lyder et al., 1998; Ranzijin et al., 2008; National League of Nurses, 2016). According to Coates (2008), this pattern of ignorance by educators can be system-wide as well as generational. The absence of diversity in teaching can be interpreted through the lens of covert racism in particular systemic racism. Covert racism is often seen as hidden, ritualistic, unintentional and unconscious due to dominant socialisation processes and can take many forms (Coates, 2008).

Colour blindness and colourism particularly resonate with the lack of diverse skin tones in education. Colour blindness is associated with the idea of treating everyone the same regardless of ethnicity and was initially seen as positive; however, further exploration particularly in relation to health care indicates a link with white hegemony (Neville, 2000). In the case of colourism, discrimination takes place based on a person's perceived race and because of their darker skin tone (Neville, 2000). Coates (2008), Cunningham and Scarlato (2018) and Hilario et al. (2018) highlight the power and harm associated with colour blindness are far more difficult to deal with than more overt forms of racism. Colour blindness is often described as a subtle form of racism which is incorrect (Plaut, Thomas, Hurd, & Romano, 2018); it initiates significant health inequities, can lead to direct physical harm to patients due to clinicians being less attuned to individual service user requirements and creates an assumption that equality is of a higher value that equity.

Inequities in health care have led to the variation of health care outcomes of people from minority groups. Within health care, systemic racism can be seen as occurring when care algorithms disavow differential treatment of patients (Cunningham & Scarlato, 2018). The exploration of pressure injuries has often been associated with clinical judgement and pressure injury risk assessment tools such as the Braden Scale for Predicting Pressure Sore Risk (Bergstrom, Braden, Laguzza, & Holman, 1987) and the Waterlow Pressure Ulcer Risk Assessment (Waterlow, 2005). The term "discolouration" within the Waterlow assessment does reflect inclusivity; however, it can be suggested that the tool is only as effective as the clinician carrying out the assessment likewise discoloration may not always be visible. In all five cases we explored, nurse educators presented the pressure injury risk assessment tools (Moore & Patton, 2019) to student nurses. All nurse educators highlighted the Waterlow assessment (Waterlow, 2005), and in two cases, students had the opportunity to link the risk assessment to a case study (Popil, 2011). The individual case studies used in each case was based on a Caucasian person with a light skin tone. As a result, when the nurse educators were discussing scores under the title of "visual risk areas," discoloration was associated with descriptive terms relating to light skin tones. This view is reinforced when considering campaigns such as react to red skin (React to red skin, 2019) as people with darker skin tones may not have red skin, despite the presence of pressure damage.

It is important to recognise that with limited research and educators being overly cautious of political correctness and topic sensitivity; diversity, as within this study, may often be brushed over in the classroom. The narratives within the classroom set a precedent for student nurses as at the start of their course they absorb the information presented (Benner, 2001). By superficially or briefly dealing with diversity, a message is being sent that this is irrelevant and messages of colour blindness and white privilege are reinforced. With experience and exposure to care delivery, student nurse confidence develops, enabling critical analysis to take place; however, if students are not initially exposed to diverse population groups their focus will remain limited. In the current study, the documents analysed and the sessions observed focused on the teaching of pressure injury to first-year student nurses. According to Usher, Woods, Brown, et al. (2018), the level of education and range of practice experiences lead to the better understanding of pressure injury prevention knowledge. Therefore, it could be assumed that students would learn visual assessment skills in clinical practice throughout their nursing programme leading to competent practitioners. This

approach to nurse education remains undeniably risky as students are exposed to different learning opportunities while in practice and as highlighted by Lyder et al. (1998) clinicians overall are not accustomed to the long-standing central theme of assessing pressure injury amongst people with darker skin tones.

Our study has shown that in the absence of a diversity discourse, nurse educators, regardless of their own cultural background, constantly reconstitute the conditions that ensure perpetuation of racial inequities. This means that even if organisations recruit people from an often excluded group, this would not necessarily lead to real change at the point of teaching and learning. Furthermore, this reconstitution mainly transmits rather than creates knowledge (Davies, 2000; Link & Phelan, 1995). The language evident in the lexicon of nurse educators in this study focused on words such as pinkness, redness, blanching, discoloration and mottling. These terms are very Caucasian-centric and there was no language evident that communicated an understanding of skin tone diversity. Despite access to the Internet, imagery surrounding people with darker skin tones was limited within the classroom.

Roth (2009) suggests that history of photography is, in itself, Caucasian-centric, and therefore, it has historically been difficult to photograph clear images of people with darker skin tones (Roth, 2009). With equipment improving, the availability of imagery should be more accessible; however, this remains limited within the academic field due to the dominant discourse remaining firmly Caucasian focused (Puzan, 2003). This suggests that nurse educators need to work collaboratively with clinicians to gain access to the required images to help bridge the gap between theory and practice.

The documentary analysis we undertook highlighted that all but one of the nurse educators acknowledged information on skin tone diversity. On further exploration during the observation, the case which did not include information on skin tone diversity within the written documents was being delivered by a guest clinician employed as an honorary lecturer. As discussed by Steven, Magnusson, Smith, and Pearson (2013), this could be associated with the view that sessions are designed to meet programme validation requirements and when curricular content is developed by guest clinicians, they may not be aware or understand the expected educational drivers such as inclusion of diversity. However, Leonard, McCutcheon, and Rogers (2016) explain that student nurses value the input of clinicians as they are perceived as having current "hands-on" clinical competence and are seen as highly credible. Therefore, as recommended by Bvumbwe (2016), nurse educators and clinicians need to complement each other by working closely together to ensure students receive the best possible education combining the best research and theoretical knowledge along with contemporary clinical expertise.

Higher Education Institutions are committed to delivering education that will help bridge the gap between theory and practice (Wall, Andrus, & Morrison, 2014). In this study, three sessions were delivered in the clinical skills laboratory. Winters and Echeverri (2012) highlights that the use of a range of teaching strategies is more likely to help students engage in the teaching session, retain information and as a result have a direct impact on clinical practice. According to Herrmann-Werner et al. (2013), there are no clear guidelines suggesting which clinical skills sessions need to be based in a skills laboratory environment. Though there is the suggestion in line with the kinaesthetic learning strategy (Fleming, 1995), that skills learnt through touch and experiences improve student engagement and clinical application. In four out of the five cases (despite three being in a clinical skills laboratory), traditional didactic teaching occurred at some point in the observed session where prewritten presentations were delivered. In two of the sessions which were based in the clinical skills, laboratory students were provided with some theoretical knowledge and then had the opportunity to look at mannequins and visually explore pressure injury presentation. With all teaching props being described as white by the manufacturer, students were not exposed to diverse skin tones within the classroom or clinical skills laboratory setting. This is strong reinforcement of white being the norm, so nurse educators need to be inclusive when selecting teaching resources to ensure representation of population diversity. Interestingly, all sessions despite some being in the traditional lecture form used different teaching strategies to engage students; however, these did not relate or include people with darker skin tones.

While people may have a stated commitment to diversity and many curricula even state this in real terms, our findings have shown that in the actual teaching and the transmission of knowledge, authentic commitment to diversity may not be evident. Nurse education needs to be adapted to ensure that people with all skin tones are seen as equally important. In the UK, nurse educators are not representative of the diverse national population, which can be a challenge as they may lack insight into diversity (Solanke, 2017). As recommended by Ramsden (2002) in accordance with cultural safety, nurse educators need to embrace post-modernism, critical social theory and transcultural nursing theory in their teaching. These theories enable nurse educators to self-critique and offer a roadmap for embedding diversity into all activities, not only clinical activities, but also teaching and learning activities. Inclusion and diversity have to be more than just words—more than simply a statement appearing at the beginning of curricula documentation (Nursing & Midwifery Council, 2018). Based on our findings, we believe that all nurse educators need to critically reflect on every teaching activity and need to ensure that diversity comes to life not just as meaningless words in documents, but at every teaching and learning encounter with students.

5.1 | Limitations

A limitation of this study is that the observation was not covert, the participant information sheet disclosed the nature of the information being gathered; therefore, nurse educators being observed despite not being aware of the specific questions in the observational tool were aware of the focus towards skin tone diversity and pressure injuries. This insight allowed nurse educators to include

material not usually included, which could explain the brevity and superficiality. Also, due to the participants having prior knowledge of the study aims the exploration of individual nurse educator demographics including teaching experience, age, race, ethnicity were not included. The teaching sessions observed took place in year one of the nursing undergraduate programme and the whole curriculum was not explored as skincare teaching and learning, a fundamental of care occurs at the beginning of undergraduate nursing programmes.

The sample size was too small in this study to perform psychometric analysis. Similarly, only one observer undertook the data collection, and so inter-rater reliability not established in this study. However, this as a further step that could be undertaken in subsequent research.

6 | CONCLUSIONS

The study findings highlight the need for undergraduate nurse education to adequately include comprehensive information to safeguard all service users. Nursing holds onto values and it fully embraces values such as equity and if nurse educators are going to be true to that they have to engage in processes of rigorous self and peer critique. Teaching sessions need to be observed and mapped out not only for variation of teaching strategies but also for the most recent evidence-based guidelines and contemporary issues. With limited research and educators being overly cautious of political correctness and topic sensitivity, diversity may be brushed over in the classroom.

7 | RELEVANCE TO CLINICAL PRACTICE

There are currently no specific regulations on how to include diversity within the nursing curricula. Teaching content remains heavily dependent on the views and experiences of the actual nurse educators who are working directly with students. With white privilege being powerful, embedded, and enculturated, but also subtle, nurse educators can unwittingly transmit colour blindness to students. This contributes to creating another generation of nurses who practice in a colour-blind way. An improved understanding of pressure injury assessment across the skin tone spectrum through the use of reflective practice will enable colour blindness to be taken out of the margins and placed in the limelight. Creating spaces for conversations to occur in the open and allowing the formation of self-knowledge. This power of knowledge, and ability to look back at one's actions through the use of reflective practice, offers the permission for nurse educators, clinicians, senior staff and students to have a voice, a language for conversation and structural change within clinical practice.

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CONFLICT OF INTEREST

The editor-in-chief is a co-author.

AUTHOR CONTRIBUTIONS

All authors: conception and design of the study, analysis of the study, and critical revision and manuscript writing; NOG: collection of the data.

ETHICAL APPROVAL

This study was approved by the relevant University Research Ethics Committee (171077).

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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Appendix D: The full text of the published qualitative paper

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ORIGINAL RESEARCH:
EMPIRICAL RESEARCH – QUALITATIVE

JAN WILEY

Pressure injuries and skin tone diversity in undergraduate nurse education: Qualitative perspectives from a mixed methods study

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Abstract

Aims: To, firstly, explore student and academic nurse perceptions of classroom content about the assessment and identification of pressure injuries across skin tone diversity and, secondly, to describe the impact of classroom content on student nurse understanding of pressure injury in people with dark skin tones.

Design: Qualitative case study employing focus groups and semi-structured interviews.

Methods: Five higher education institutions in the United Kingdom were purposively chosen. At each of the five-case sites, one focus group with student nurses and one semi-structured interview with a nurse academic were conducted between May 2018 and April 2019. The participants' narratives were transcribed verbatim and analysed via thematic analysis.

Results: Classroom learning was predominately framed through a white lens with white normativity being strongly reinforced through teaching and learning activities. This reinforcement of white normativity was evidenced through two main themes: (i) dominance of whiteness in the teaching and learning of pressure injuries in undergraduate nurse education and (ii) the impact and implications for student nurses of whiteness as the norm in pressure injury teaching.

Conclusion: Nurses responsible for the design and delivery of teaching and learning experiences for nursing students need to ensure meaningful teaching and learning experiences. This learning should assist future nurses to interrogate their complicity in a system of white dominance.

Impact: Nurse education delivered today influences and shapes nurses of the future. Nurses are the cornerstone of healthcare and play a significant role in the delivery of equitable healthcare. Nurse academics have a duty of care to inform and highlight health inequities in nursing and ultimately to enhance equity in care.

KEYWORDS
healthcare inequalities, nurses, nursing, nursing education, pressure injury qualitative research, pressure ulcer, racism, skin tone

1 | INTRODUCTION

Pressure injuries are a global concern and are indicative of care quality and experiences of patient care (Li et al., 2020). Pressure injuries bear a cost, not only a financial cost to organizations but also costs associated with pain, debilitation and psychological trauma for patients and their families (Jackson et al., 2018). With most pressure injuries being preventable and a common worldwide problem in long-term care, change needs to occur (Anthony et al., 2019). Despite numerous preventative measures being in place such as risk assessments and screening tools, early-stage pressure injuries continue to go unrecognized particularly in people with dark skin tones (Black & Simenden, 2020). While there is limited evidence, the international evidence that does exist suggests that people with dark skin tones are more likely to develop later-stage, more severe pressure injuries than people with lighter skin tones (Oozageer Gunowa et al., 2018).

What problem did the study address?

We address a knowledge gap about the assessment and identification of pressure injuries across skin tone diversity in nurse education by examining the understanding of pressure injury in people with dark skin tones.

What were the main findings?

- Overall, nurse academics acknowledge that the inclusion of people with dark skin tones in classroom teaching is superficial and tokenistic.
- Student nurses lack exposure to meaningful and challenging conversations about health inequities and skin tone diversity.
- Colour blindness and white normativity in nurse education hinder in-depth exploration of the impact of one's own racial background and those of other people.

Where and on whom will the research have impact?

Nurse academics and nurse educators in practice can use these findings to educate nurses of the future about skin tone diversity.

2 | BACKGROUND

The resurgence of the Black Lives Matter movement (Black Lives Matter, 2020) serves as a stark reminder that there exists a system of privilege based on race across the globe. This concept does not evade healthcare as it is well known that people of colour are devastatingly affected by early onset of disease and disproportionately affected by leading causes of death compared with their white counterparts (Baptiste et al., 2020). The consequences of early-stage pressure injuries not being detected and pressure injuries worsening without the usual preventative measures in people with dark skin tones expose deeply entrenched racial inequity (Coates, 2008). Failure to address this inequity risks perpetuating inadequate pressure injury care for people with dark skin tones. Nursing is a profession that should interrogate such health inequities but in the United Kingdom there has been an over reliance on ethnicity as a proxy to skin colour and race, which has prevented the investigation of topics relating specifically to skin tone diversity. Furthermore, in practice, there is evidence of shying away from potential confrontation in relation to seeing and addressing differences based on skin colour (Moorley et al., 2020).

Nurse academics have a significant role in educating nurses of the future about health inequity and the need to eliminate racist practices that may lead to patient harm (Thornton & Persaud, 2018). However, as recognized by Bell (2020), for this to truly occur, nurse academics need to comprehend the persistence and pervasiveness of white normativity and dominance in nursing and their own enactments of white privilege. We already know that teaching and learning of the assessment and identification of pressure injuries in higher education institutions in the United Kingdom is overwhelming directed to people with lighter skin tones (Oozageer Gunowa et al., 2020). What is less clear is why this is happening and what is the impact on student learning. Therefore, to expand on previous research, further exploration of classroom content through the lens of nurse academics and student nurses in relation to PIs was undertaken.

2.1 | THE STUDY

2.2 | Aims

In this study, we aimed to (i) explore student and academic nurse perceptions of classroom content about the assessment and identification of pressure injuries across skin tone diversity and (ii) describe the impact of classroom content on student nurse understanding of people with dark skin tones.

2.3 | Design

Drawn from a larger doctoral study this qualitative study formed part of an explanatory sequential mixed-method collective case study (Oozageer Gunowa et al., 2020) employing focus groups and semi-structured interviews. Stake (1995, p xi) defines case study research as 'the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances'. In this study, a collective case study was used where several cases were involved. This helped to gain concrete, contextual, in-depth knowledge about skin tone diversity and pressure ulcers in pre-registration nurse education across five case sites.

3 | SAMPLE/PARTICIPANTS

Five higher education institutions were included as 'cases' and consisted of modern universities, established post 1992 (Further Education Act, 1992). All of which ran an approved Nursing and Midwifery Council 3-year Bachelor level Adult Nursing course (Nursing & Midwifery Council, 2010). These institutions were selected based on their similarity in size as well as demographic differences to ensure representation of nursing students and academics across England. Three of the five cases were members of the Advance Higher Education's Race Equality Charter (Advance HE, 2020).

Contact was made with the Head of School or Head of programmes at each higher education institution who then disseminated the participant information sheets. The nurse academics and student nurses then contacted the first author via email to arrange a suitable time for an interview. For further student recruitment, recruitment posters were used. No relationship had been established with participants before the study commencement.

3.1 | Students

Sampling decisions were made purposively to target those who knew the most about PIs. Consequently, final year adult student nurses were selected as they were more likely to have been exposed to pressure injury teaching and learning throughout their course. Table 1 presents the number of students in each focus group and the demographic data of the study participants.

3.2 | Nurse academics

The recruited academics delivered teaching on pressure injury assessment and identification, were registered nurses and had previously provided nursing care to people with dark skin tones. Four of five of the academics have completed a Post Graduate Certificate in teaching and were NMC registered teachers. One academic was completing a Post Graduate Certificate in teaching. All nurse academic participants were female and white.

4 | DATA COLLECTION

At each of the five-case sites, one focus group with student nurses and one semi-structured interview with an academic were conducted by the first author. Providing a total of five focus groups and five interviews. The interviews protocol development was grounded in the previously gathered quantitative results (Oozageer Gunowa et al., 2020). Table 2 provides an overview of the semi-structured interview guide and Table 3 provides an overview of the focus group interview guide. The interview questions were piloted at another higher education institution which was not included in the five cases.

All focus groups took place between May 2018 and April 2019 in a convenient location (e.g. meeting room) and time at each higher education institution. Three interviews with academics were done at their respective higher education institution, one interview took place at a hospital and another over the telephone. Semi structured interviews with nurse academics on average lasted 45 min and focus groups approximately 60 min. The audio-recorded interviews and focus groups were transcribed verbatim by the first author and made available to all researchers on a secure network drive. Following each data collection, episode supplementary field notes were written. Two researchers Professor Debra Jackson and Professor Marie Hutchinson read through the transcripts multiple times, checking for

TABLE 1 Student numbers and demographic data

Case	1 (N=7)	2 (N=7)	3 (N=5)	4 (N=6)	5 (N=2)	Total N (%)
Gender N (%)						
Female	5 (71)	5 (71)	4 (80)	6 (100)	2 (100)	26 (81)
Male	2 (29)	2 (29)	1 (20)	0	0	5 (19)
Ethnicity N (%)						
White	5 (71)	5 (71)	2 (40)	1 (17)	2 (100)	15 (56)
Asian	0	1 (14.5)	0	0	0	1 (3)
Black/African/ Caribbean/Black British	2 (29)	1 (14.5)	3 (60)	5 (83)	0	11 (41)

TABLE 2 Semi-structured interview guide

Questions	Prompts
Professional Knowledge	
1. Do you feel pressure damage fits into this category? Why?	*Affects patient mentally and physically*
2. Over the years numerous different terms have been used to describe wounds caused by pressure. What ones have you heard of?	*Pressure injury, Pressure Sore, Pressure ulcer and Bedsores*
3. What sort of factors do you think nurses take into account when making initial skin assessments?	*Sensory perception, moisture, activity, mobility, nutrition, friction & shear*
4. How well informed to you feel about redness presenting across the skin tone spectrum? Can you tell me more about this?	*Purple or not visible*
Student Knowledge	
1. To your knowledge are student nurses taught about skin tone variance and presentation of conditions? Where?	*University/Practice*
Learning Resources	
1. To your knowledge do you explore skin tone variances when teaching?	*Examples*
2. Can you tell me if you think skin tone variance should be recognised in nursing curricula? Why?	*Equal Opportunity* *Health equalities*
3. How do you explore skin tone variation in class? Or do you feel this is covered in practice?	*Practical element*
4. Would the input of a Tissue Viability Nurse make a difference to nurse education in relation to exploring skin tone variances? Why?	*Specialist Knowledge*
Instructional delivery	
1. What do you feel are the main challenges to the inclusion of skin variation with the nursing curricula?	*Time*
2. What knowledge and skills do you feel are important for the nurse educators to best deliver teaching around skin tone variances?	*Course* *Specialist nurse involvement*

TABLE 3 Focus Group interview guide

Questions
Education
1. Can you tell me about your nursing programme
2. Do you recall when you learnt about pressure area care at the university? If you do what did it involve?
3. How do you feel you have learnt about pressure area care?What do you hear people say about pressure area care? In practice/at university?
Skin tone diversity
1. Who cares about skin tone diversity, and how do you know they care?
2. Have you ever considered how pressure ulcers/injuries show on various skin tones? In what way?
3. Do you ever remember talking about skin tones diversity at the university or in practice?
4. What about involvement of the patient, family or friends in pressure injury avoidance?
5. As a student, what makes it tough to provide and maintain care for a diverse population group?
Individual
1. How comfortable are you with the amount you know about presentation of pressure ulcers/injuries amongst people with dark skin tones?
2. Where would you go for advice?
Improvements
1. What could the university or practice do to help make you feel more prepared?
Closing question
1. If you had one minutes to give advice to the Head of School, about how to include diversity in the curriculum, what would you say?
2. Have we missed anything you would like to discuss?

errors, familiarizing and immersing themselves in the data, including associated demographic information.

5 | ETHICAL CONSIDERATIONS

The University Research Ethics Committee at [insert University & number] approved the overall study. The approval was then cascaded with either the Head of school or Head of programmes at each higher education institution involved in the study. After providing study information and the participant information sheets, both verbal and written consent was obtained from participants ahead of data collection. Confidentiality of the higher education institution and participants has been maintained throughout, and all results presented anonymously.

6 | DATA ANALYSIS

Using the phases described by Braun and Clarke (2006), a thematic analysis was conducted. This method consists of six steps: (i) familiarization with the data, (ii) coding, (iii) generating initial themes, (iv) reviewing themes, (v) defining and naming themes and (vi) writing up. To maintain authenticity of each data set, the data analysis of the focus groups and interviews were carried out separately. The data were then entered manually into Excel software. Reflecting the emergent similarities across the two data sets, both were merged for the thematic analysis. By familiarizing, reviewing and identifying common ideas, the first author was able to extract data and generate initial codes from the data. After further immersion into the data, which included returning to and re-reading, emerging ideas and initial themes were identified. Written detailed analysis then took place, identifying the story of each theme.

7 | RIGOUR

No relationship had been established with recruits before the study commencement. Analysis was informed by the researchers experience in the field of nursing practice and research interests about health inequities, patient safety and nurse education. The five researchers are female registered nurses and teachers with many years of experience in both nursing practice and academia. The first author is a doctoral researcher. Weekly meetings with the whole research team were held until consensus of definitions and the name of each theme was reached. This approach enhanced credibility and established a data-driven analysis (Nowell et al., 2017). To ensure transparency, we used the consolidated criteria for reporting qualitative research (COREQ) reporting guidelines (Tong et al., 2007).

8 | FINDINGS

Thematic analysis revealed an overtone of blindness to skin tone diversity in the nurse education, which left skin tone variances unconsidered and underexamined by student nurses. The results from the study illustrate the dynamics described by student nurses and academics about teaching and learning experiences. Two major themes were extrapolated: i) dominance of whiteness in the teaching and learning of pressure injuries in undergraduate nurse education and ii) the impact and implications for student nurses of whiteness as the norm in pressure injury teaching. Each theme and sub-theme are presented in Table 4 and described in this paper using illustrative exemplars from the focus group and semi-structured interview narratives.

8.1 | Dominance of whiteness in the teaching and learning of pressure injuries in undergraduate nurse education

This theme and constituent sub-themes illustrate the classroom dynamics described by students who sustained whiteness as the norm in relation to the teaching and learning of pressure injury assessment and identification. The failure of academics to meaningfully acknowledge differences in skin tone cascaded down to students, who largely failed to see or acknowledge the importance of these differences. This white-normed learning was further reinforced through experiences in clinical practice. By failing to acknowledge that skin tone differences should be considered, or even noticed, these pervasive practices endorsed whiteness as the norm.

8.1.1 | Claims of inclusion and commitment

University policy and nursing theoretical frameworks were employed by students and academics to evidence a commitment to skin tone diversity. Reference to University mission statements was used by some students to emphasize that diversity was included, instilled and seen as important *'they* [university as a whole] *talk about it* [diversity] *a lot...yeh, I think in fact they've encourage you to* [talk] *about it'* (FG3, P2: 30). Among this group of students, there was a strong belief in the university delivering the correct information: '*they* [university as a whole] *teach us* [diversity] *mostly good way...generally, the information, the education* [university teaching] *we receive here definitely helps us to urr provide proper care for any type of skin'* (FG3, P5:30).

For nurse academics, these frameworks were referenced in a manner that diffused personal responsibility or denied the need for any further action. Nurse academics argued that inclusive teaching would be included in a holistic approach to care. Highlighting how higher education system processes enforced the inclusion of people with dark skin tones in teaching *'if we are teaching holistic patient centred care then yes it should be urr as part of you know the culture and diversity that we umm teach'* (I3: 29). Whereas another made a generalizing statement *'everybody's responsible for recognising risk and doing something or reporting it* [pressure injuries]' (I3: 30).

Nurse academics reported that the inclusion of pressure injury teaching was important and considered *'basic nursing care'* (I1: 96).

TABLE 4 Major themes/sub-themes

Theme	Sub-theme	Definition
Dominance of whiteness in the teaching and learning of pressure ulcers in undergraduate nurse education	*Claims of inclusion and commitment*	Representation of how University policy and theoretical frameworks was implemented in on-campus undergraduate nurse education
	Claims of inclusion not borne out in teaching	Skin tone diversity was largely visible in on-campus undergraduate nurse education of pressure ulcers
	Marginalised, vague and incorrect inclusion	Teaching and learning of skin tone diversity in relation to pressure ulcers was superficial
	Motivation for inclusive teaching	For the inclusion of skin tone diversity in on-campus undergraduate nurse education of pressure ulcers, there needed to be a reason
	Displaced responsibility and notions of unintentionality	Other topics were seen to be of more importance for a range of reasons
The impact and implications of whiteness as the norm on student nurses	*Diversity (un)awareness: dissimilarity, the other or outsider*	Skin tone diversity was seen as everything 'other' than white
	Dominance of white-normed language	There was a lack of language to describe the range of skin tones and presentation of pressure ulcers among people with darker skin tones
	A state of uncomfortableness	Students displayed and reported a level of discomfort and lack of empathy towards the discussion of skin tone diversity, in particular, people with darker skin tones
	Dilemmas in the clinical setting	Students were made to expect a lack of skin tone diversity in practice causing decision dilemmas to occur
The role of external inputs on the teaching and learning of pressure ulcers in student nurses	*The role of external resources on the inclusion of people with darker skin tones*	Nurse educators reported that there was a lack of external resources focusing on people with darker skin tones and a change to these could result in a change in teaching content
	The role of external speakers and the inclusion of people with darker skin tones	Nurse educators were unsure if external speakers would deliver teaching across skin tones
	Practice learning: entrenched colour blindness	Students relied on practice learning to inform their overall learning and reported that skin tone diversity in practice and practice-related campaigns was limited

Although these claims of importance were made, the information presented to students appeared to be inconsistent, disposable and brief when exploring pressure injuries and people with dark skin tones *'I do try and incorporate it* [people with dark skin tones] *in when I'm talking, looking for skin changes and it's* [people with dark skin tones] *on our slides when we are talking about grade 1 we talk about darkly pigmented skin'* (I1: 32). Later on, in the same interview, the nurse academic said, *'it might be purple or mauvy colour so we do try and incorporate it* [people with dark skin tones] *but we don't go into it in great detail'* (I1: 33). Uncertain of what was taught, another nurse academic dismissed the need for personal commitment to skin tone diversity through claims it had already been addressed *'some of it* [teaching about people with dark skin tones and pressure injuries] *has been going on for years it's not ignored or anything like that…it's almost routine to be honest, well I think'* (I4: 11). Despite these statements, participants were unable to elucidate further or give examples of how it was addressed.

8.1.2 | Claims of inclusion not borne out in teaching

On further exploration, the topic of pressure injuries and people with dark skin tones was revealed to be superficial, tokenistic and even non-existent. Highlighting the superficial nature of pressure injury education, two nurse academics reported *'the way things stand, what's in the student nurse curriculum, it barely covers skin inspection at all…it's not really looked at'* [people with dark skin tones and pressure

injuries] (I1: 43) and *'to my knowledge at* [names institution] *skin tone isn't discussed'* (I3: 28).

Another nurse academic acknowledged a level of superficiality in her teaching, expecting people with dark skin tones and pressure injuries to be included elsewhere in the curriculum *'I think it's umm brushed over I think it's probably something that ticks a box as opposed to really considering it...we probably do briefly touch on it ummm...one slide I think it, it's probably taught more in clinical skills than in the ummm a&p* [anatomy and physiology] *sessions'* (I2: 14). There appeared to be a sense of dismissal with non-specific information on the assessment of people with dark skin tones and pressure injuries with another nurse academic voicing *'as far as different skin tones is concerned I've only ever really seen it as a general discussion* [focus on whiteness] *of this is how you assess skin'*.

About the nursing course content and visual representation of people with dark skin tones, students also reported an overall absence of images capturing pressure injuries in people with dark skin tones admitting *'yeh like on the slides it all like, all same coloured skin* [white]' (FG3, P4: 67). Among other students, there was a sense of nurse academics teaching to a normative white script resulting in the dismissal of skin tone diversity. Reflecting this experience, one student recounted *'you get taught* [by nurse academics] *the standard* [white skin tone] *don't you, between your different grades and what your treatments are'* (FG5, P1: 28).

One nurse academic recalled how an incident triggered her to recognize a personal knowledge gap; even so, she appeared to remain oblivious to white dominance as a wider issue saying *'we had ummm to internationalise or something, I can't remember what they called our work. I think I got the wrong end of the stick I had not long been here...I had included some slides of pressure area care for people with dark skin and in doing that, in putting that together I discovered actually it's not just about the skin looking different. But actually you know, black skin is not going to look red'* (I2: 10).

Among the claims of inclusion there was evidence instead, that when included, pressure injuries and people with dark skin tones were scarce, with a near-total reliance on visual presentation of pressure injuries among people with lighter skin tones. The dominance of whiteness in teaching and learning appeared to have no meaning to this group of academics, they were unaware that they held a white worldview.

8.1.3 | Vague and incorrect inclusion

Early-stage pressure injuries and people with dark skin tones were not addressed in the classroom. A student reported *'I think I've only seen one picture where it is dark skin, it was a severe I think it was a four* [grade] *or something like that where you see more past the skin basically'* (FG1, P1: 36). Nurse academics explained that, while images were included in teaching *'you have to show pictures of wounds so there would be slides of wounds etc we have loads and loads of them'* (I4: 14), on further reflection the information was vague as it was noted *'the ones I can remember, they would be of different skin tone that would just be randomly* [in the teaching], *but it wouldn't necessarily be about pressure* [injuries]' (I4: 14).

A nurse academic expressed the current content at one higher education institution in relation to people with dark skin tones, which did not state that early signs of pressure injury damage can often be invisible *'I show pictures and I mention about the research behind it, it's only one slide but I teach them* [students] *what to look for in terms of the skin colour and the changes to grade 1, 2, 3 and 4 and about any discolouration, any blanching of the skin urr or erythema rather of the skin'* (I5: 25). Students from another higher education institution reported nurse academics addressed the assessment of pressure injuries and people with dark skin tones in different ways, which did not rely solely on a visual skin assessment.

> *'they* [nurse academics] *talk about hotness and then because they talk about black skin you can't see it blanche or anything, but feeling it with the back of your hand you can feel that, that place is hot and then talking to the person as well'* (FG3, P1: 41).

8.1.4 | Motivation for inclusive teaching

For nurse academics, student expectation was seen to be a significant reason for the inclusion of pressure injuries and people with dark skin tones in classroom teaching *'the students ask how does that look different?'* (I5: 23). Whereas another nurse academic reported that questions relating to people with dark skin tones have never been posed *'Do you know it is interesting I don't think I have ever had a student ask me about* [people with dark skin tones]' (I1: 32). For others, the inclusion of skin tone diversity was seen to be out of the sphere of common knowledge and burdensome *'you can relate it back to them* [students with dark skin tones] *but you have to do that, you have to make the effort consciously to do that otherwise your teaching what you know, it's not going to be as effective and well related to them'* (I5: 23). In some cases, the academics appeared to have been pressurized into delivering the topic due to student demographics *'you couldn't not address it in class because people sit in front of you would say what about black skin?'* (I4: 10).

Justifying limited inclusion, students suggested that the demographics of the local and student population might render nurse academics oblivious and disconnected to diversity in the classroom: *'yeh I'm just thinking, I'm just thinking as we are talking whether it would be the same ... where they have a lot of diversity whether they will also have the same issues, or it would be a bit different'* (FG3, P1: 72). This was supported by the perspective of nurse academics who noted that the demographic location of a higher education institution influenced their belief that skin tone diversity should be included in the curriculum: *'yes it* [skin tone variances] *should, I think it's important for all nurse education but particularly you know for our local community here definitely'* (I4: 15). Other academics recognized a need for change due to increasingly diverse population demographics *'[this current research project] made me realise you have to relate it [to*

everything] you're teaching a diverse audience…and you need to relate that to them' (I5: 24).

Tokenistic in nature, the consideration of pressure injuries and people with dark skin tones was overshadowed by whiteness with the motivation for inclusion only being included due to visibility of diversity in students and active student inquiry. Our participant nurse academics lacked the ability to consciously acknowledge the need to address skin tone diversity in all situations; hence, reinforcing white dominance in the delivery of the curriculum.

8.1.5 | Displaced responsibility and notions of unintentionality

In discussion about their limited learning, students spoke of how the literature and intellectual underpinning was limited or absent in relation to people with dark skin tones. This absence seemed to further displace the ownership of classroom exclusion relating to skin tone diversity:

> *'most books are written by the white, so they* [nurse academics] *would give you what they have I don't think it is intentional… you can't write about you can't give what you don't have, you can only give what you have and that is what I think is happening'* (FG3, P3: 73).

The minimization of skin tone variances in the classroom was illustrated in comments that the curriculum did not allow space to include this topic and was seen as *'you have to put such a lot of information into such a short amount of time I guess maybe sometimes* [people with dark skin tones and pressure injuries are not included]' (FG1, P4: 37); hence, reinforcing the white dominance in the classroom. Another student highlighted that if nurse academics did not consider it important, why would students:

> *'it* [people with dark skin tones] *doesn't cross some people's mind…I am sure that maybe lecturers have not even thought about it themselves'* (FG3, P1: 74).

As exemplified in the following quote one nurse academic minimized and instantly erased the importance of pressure injuries and people with dark skin tones by illustrating that the inclusion of diversity was complex, justifying that due to time restraints there was only time to teach white dominance:

> *a generalistic point* [focus on whiteness] *of view* [is taught in the classroom], *then when we are face to face with the patients, we would then be more specific in terms of what we are discussing, what we're assessing* (I3: 30).

Student nurses sought to justify the lack of consideration and exploration of pressure injuries and people with dark skin tones by nurse academics, reflecting an acculturation into a white dominant view of nursing. The lack of awareness and in some cases dismissal of people with dark skin tones appeared to be undetected by some students and seen to be a superficial concern by others. Nurse academics lack critical awareness of white dominance in nursing curricula and often blame their lack of inclusion on differing factors such as time restraints, which reinforces that it is acceptable to exclude the needs of people with dark skin tones in teaching.

8.2 | The impact and implications of whiteness as the norm on student nurse perceptions

This theme illustrates the effect 'whiteness as the norm' has on student perceptions of the assessment and identification of pressure injuries in people with dark skin tones.

8.2.1 | Diversity (un)awareness: dissimilarity, the other or outsider

The pervasiveness and influence of white-normed teaching and clinical experience were evidenced in the meaning and understanding of diversity described by students. Among students, people with dark skin tones were viewed as distinct or marginalized from the mainstream culture of whiteness. This perspective reflected a taken for granted dominant norm among the students.

For many students, people with dark skin tones were largely framed through a lens of dissimilarity or appearing to be different. This was described as *'families of like overseas'* (FG1, P4: 38), or *'it usually comes back to a race thing and think* [people being seen as] *different I think'* (FG1, P6: 23). In focusing on people with dark skin tones as 'different' or the 'other' most students defining themselves as white reported that they had not previously thought of the presentation of pressure injuries on people with dark skin tones. One student voiced: *'it's not something that would cross* [my mind]' (FG1, P3: 36). Another student highlighted the invisibility of skin tone, commenting that they *'never thought about why it would be any different…I've never have thought of any difference between their* [people with dark skin tones] *skin tone though'* (FG5, P1: 27).

Despite face value recognition of diversity some students held views that were strongly white dominant and were used to justify blindness to skin tone variance: *'I don't think it's particularly important* [the issue of diversity and pressure injuries], *but it doesn't really affect me all that much'* (FG1, P1: 27) and *'I wouldn't even expect it* [pressure injury] *to look yeh, it's not different than saying a young person of 19 with like smooth soft skin and a 90-year-old wrinkled shrivelled up lady, you know I wouldn't think about that either, yeh I true though, the skin is completely different just like black and white'* (FG1, P3: 36). Another admitted dismissing people of dark skin tones based on geographic locale and white dominance suggesting because of where they lived, they would only be nursing people seen as 'white': *'I don't think it's a big deal* [diversity or skin tone and pressure injuries]*…it's just a white area'* (FG1, P2: 27). Furthermore, for some, there was an element of

unconcern that led them to ignore the possibility of considering skin tone variance:

> *'it hasn't even occurred to me to ask* [about skin tone variances] *coz I think my assumption is it* [pressure injury] *will just be really obvious, it will just be obvious that they're in pain and their skin will be of some sort of discolouration compared to the rest of their skin'* (FG4, P3: 24).

Other students denied the use of a white dominant curriculum but associated whiteness with normativity:

> *'I mean yes, ok, there is probably photos* [of light skin tones], *but I don't think it's like intentional [being white centric]...and I don't think that they* [academics] *never actually speak of like one skin tone, just talking in general* [whiteness]' (FG3, P2:70).

Students repeatedly displayed discomfort and a range of defensive moves when asked to explore the concept of diversity. Some students highlighted perceptions of difference, others employed exclusionary or marginalizing descriptors of people with dark skin tones. This included focusing on perceived differences in healthcare practices, with comments such as *'they* [people with dark skin tones] *don't use normal creams, they use coco butter'* (FG1, P4: 35) or using visual descriptors that made sharp distinctions of difference:

> *'*[a patient with dark skin tone had] *completely different type of skin tone* [to a white person] *to the point where her feet were actually scaly, they were cracked and dried, so we had to heavily moisturise her skin, was completely different say from my skin* [White Female]' (FG5, P1: 27).

Similarly, another student commented on perceived biological differences: *'because also I think their* [people with dark skin tones] *skin is a bit stronger'* (FG1, P7: 39) and *'they* [people of colour] *do have thicker skin though'* (FG1, P1: 39). For other students, blindness to skin tone variance and health inequities was justified by attempting to deny any physiological differences: *'the depth of skin is is the same, I presume is the same I may just be being ignorant, but I presume the the actual physiology of skin is the same on everybody. So, to me I wouldn't see* [the increased risk of people with dark skin tones developing a pressure injury]' (FG5 P2: 29). However, this participant failed to recognized the differences that occurred in recognition and assessment of skin that was damaged by pressure.

The apparent ease with which diversity was discounted generally among students was further echoed among students who defined themselves as black, African, Caribbean or black British. These students spoke of being the minority and accepted the exclusion or marginalization of skin tone variances in the classroom: *'because you wouldn't really think about it* [that the university would consider people with dark skin tones]' (FG3, P4: 70). In a learning environment where the topic of diversity was marginalized and excluded, these students remained silent in the classroom on issues of race:

> *'I think as a black person, some of the things you might not voice it out, but it just comes to your head you just think'* (FG3, P3: 83). Another participant stated, *'to be honest I thought of it [pressure injuries in people with dark skin tones] but I just didn't want to bring it up'* (FG4, P1: 20).

In the absence of coherent and meaningful teaching and learning opportunities, students who defined themselves as black, African, Caribbean or black British, and who recognized the need to include teaching on people with dark skin tones, largely silenced themselves in the classroom. Other students reproduced the deficit thinking of nurse academics and employed a range of defensive moves in not recognizing the need to be taught about pressure injuries and people with dark skin tones.

8.2.2 | *Dominance of white-normed language*

The impact of the white-normed learning on students included a white-normed language. A lack of language focusing on the presentation of early-stage pressure injuries across skin tones, specifically concerning the presentation of pressure injuries in people with dark skin tones, was either not thought about, or consistently identified as challenging by students.

Some students reported the lack of language as comforting, as it limited their need for personal engagement in the process of labelling a person according to their skin tone; thus, alleviating any doubt or responsibility they grappled with when assessing pressure injuries in people with dark skin tones: *'no, but that* [identifying skin tone] *would be a very pc* [politically correct] *thing though, wouldn't it, I wouldn't want to say, but if someone else* [patient] *made the decision'* (FG2, P2: 36). For this student, the dominance of a white clinical language and script displaced their feelings of responsibility in decision-making, with the student happy to leave the responsibility of identifying dark skin tone with the patient or not at all.

Even though students who described themselves as black, African Caribbean or black British showed that they were being silenced, they had unanswered questions which did raise concerns of missing early detection of pressure injuries in people with dark skin tones. More specifically it was voiced that there was a lack of language relating to pressure injuries and people with darker skin tones:

> *'saying if you were Black like me, like checking pressure ulcer, like the blanching thing stuff, it doesn't work on us, so how do you check pressure ulcers redness, you can't see like the redness on our skin most of the*

time so how do you actually assess if like someone like that comes into hospital, there is actually no way of checking it…you can't actually see when it's like getting worse you can't actually see it' (FG3, P4: 23)

However, students describing themselves as white highlighted that redness was visible on a person with dark skin tones *'you can still see redness'* (FG3, P5: 22). Even so, there was an overall consensus of student nurses participating in the focus groups reporting that the identification, visualization and assessment of pressure injuries in people with dark skin tones would be more difficult:

'probably the more red, urr red the more better I would be able to detect it if the skin was more darker it would have been ummm more harder for me' (FG3, P5: 45)

8.2.3 | A state of uncomfortableness

All students initially evaded the nuanced topic of skin tone diversity. On numerous occasions, they referred to their personal experiences of diversity, which were unrelated to skin tone diversity. In one focus group, most students appeared reluctant to use specific terms such as black, white or brown (FG3: 49). At times, a sense of nervousness was displayed around the topic of skin tone diversity, with laughter used by students to lessen the impact of their answer.

The need for political correctness was used as a silencing mechanism, introducing barriers and preventing the exploration of topics relating to people with dark skin tones. In this vein, one participant voiced:

'I think people are very shy talking about [skin colour], *I think everybody wants to be correct, politically correct and so not many people talk about this thing* [people with dark skin tones], *they just they, they do what they want to do'* (FG3, P3: 31).

For students describing themselves as black, African, Caribbean or black British, they confirmed that there was a lack of insight into skin tone diversity due to political correctness. This view is exemplified in the following quote from a student:

'it's like the politically correct thing is like Afro Caribbean skin then you kind of assume that everyone from Africa like that's why I always say to people if they say Afro Caribbean I'm like do you know there are white people in Africa …that's how most people like define I've never seen in placement where they'll say black or white or stuff like that' (FG3, P4: 47).

Other students highlighted that, with a deficit in nurse education and the literature in relation to pressure injuries and people with dark skin tones, they would lack the confidence to challenge bad or poor clinical practice, even though they had a dark skin tone stating *'to challenge a mentor you must know more than the mentor, especially where wound management is concerned, where you want to learn from them because you in uni you're just taught about skin* [white skin]' (FG3, P3: 14).

Feeling uncomfortable and lacking confidence was a major contributory factor influencing student questions and possible care delivery in practice, with one student avoiding the topic *'even if I want to ask in placement* [about dark skin tones], *I wouldn't ask. I would try it like go through like all the corners I wouldn't just go and ask'* (FG3, P4: 54). Another student stated *'see I think I would feel uncomfortable, I think I would feel* uncomfortable [to ask if a person with a dark skin tone used a different cream]' (FG1, P3: 42).

When asking the students about their confidence asking patients about skin tone, they described a level of discomfort and lack of empathy. The identification and exploration of people with dark skin tones was compared by more than one student with the uncomfortableness of discussing resuscitation. One student said *'it just feels, like so blunt and so forced like, but that's not a question that you would manage to probably get out of them otherwise and I just feel like sometimes that's really difficult, I don't know personally how to approach that situation in a nice way'* (FG3, P2: 54). It was voiced by some that a prescriptive tool or tick box would limit their discomfort. In a similar vein, another student positioned diversity as a difficult question, with the need to prepare the individual being assessed with an apology before asking the persons ethnic background in case of offence. Describing their discomfort, this student recalled *'I find that if you're going to ask a difficult question, I always start by apologising first before* [laugh]' (FG3, P4: 56). This is noteworthy that the student felt uncomfortable about initiating the conversations around diversity that are required to provide fundamental care.

A student spoke of the fear of litigation as a factor which rendered him inarticulate about managing pressure injury care and triggering a reliance on whiteness: *'and there is more* [legal issues] *nowadays if you do say something* [in relation to diversity issues] and *that could get you into trouble'* (FG2, P1: 37). For others, the feeling of discomfort was so prevalent and entrenched that people with dark skin tones and pressure injuries were made to be invisible in documentation such as patient notes and records:

'yeh I feel easier discussing it with someone [patient] *saying oh because you have darker skin or whatever, but I would be quite cautious about what I actually wrote down'* (FG2, P2: 37) and *'you're nervous so you don't write anything'* (FG2, P7: 37).

A passive self-preservation response from students highlights the impact of white dominance in nurse education. Students felt the need to avoid the topic of pressure injuries and people with dark skin tones to evade feeling uncomfortable, fear of getting it wrong and experiencing unease.

8.2.4 | Dilemmas in the clinical setting

The dominance of a white normed language and deep-rooted institutional systems created the dilemma of feeling obliged to inaccurately record information or use an inaccurate predetermined language when assessing people with dark skin tones. In the following quote, this student is struggling to accurately record skin assessment for a person with a dark skin tone on a prescriptive and set wound chart that only incorporated options for white skin:

> *'you know when you fill out the wound care [chart] and it asks you 'is it red?' I'm always like, how am I supposed to tell? It's red on someone that's darker than me... isn't really inclusive to that* [people with dark skin tones], *so it's like I'm always like, ohh ok and then I cross it out and put a different colour '* (FG4, P4: 21).

For this student, the white-normed clinical environment created a moral challenge. Resisting the dominant colour-blind approach to skin assessment scripted by the institutional chart, this student instead attempted to acknowledge the personhood of the person with a dark skin tone. Moreover, another student described the limitations of recording systems and lack of language to identify early-stage pressure injuries can be seen in the following quote:

> *'you could just go into more detail when you're writing it* [about people with dark skin tones] *rather than having different paperwork* [relating to wound assessment]' (FG2, P2: 35).

It appeared that students had effectively been trained to filter out clinical situations that did not fit the 'white as norm', hence, narrowing their imaginative and moral sensitivities, creating justification for further lack of understanding.

9 | DISCUSSION

In contrast to claims that teaching with an emphasis on person-centred care nursing will lead to a culture that is free from racial injustice (Ghane & Esmaeili, 2020), our findings reaffirm that racial discrimination continues to be deeply embedded in nurse education. By nurse academics failing to truly acknowledge that skin tone variations should be considered and recognized, whiteness is endorsed as the norm (Bell, 2020). While one explanation for this might be that more than 76% of students in the United Kingdom are white (Universities UK, 2019) and academics in higher education institutions cater for the majority of the population they teach (Boatright-Horowitz & Soeung, 2009), then this attitude further inflicts white normativity and a hierarchical paradigm of who is seen to be the most important. This status quo is clearly unacceptable.

There is clear evidence in this study about the lack of skin tone diversity in teaching and learning about pressure injuries. There is also a lack of expectation that it should occur. It could be perceived that this is a simple omission on behalf of the nurse academics who unwittingly neglect to teach in an anti-racist manner, exacerbated perhaps by the use of teaching materials which are not reviewed but reused year on year, intercepted by the tokenistic representation of people with dark skin tones. This supports Liyanage's (2020) work where participants voiced that in predominantly white spaces cosmetic changes were used to give the visual effect of diversity without actually being committed to inclusion.

However, the data from this study indicate that the lack of skin tone diversity in the teaching of pressure injuries and the lack of expectation that it should be taught is more than a simple omission. Instead, there is evidence that nursing academics are unaware of the prevalence of white dominance (Bell, 2020). With inadequate understanding of white dominance in nursing, nurse academics appear to lack confidence and have retreated into safe spaces resulting in a politically soft curricula with stagnant and rigid classroom sessions where questions relating to skin tone (and presumably other issues related to race and diversity) remain unexplored. Clearly this is incompatible with the professional values of the registered nurse; however, this study reflects that nurse academics often lack the ability or commitment to challenge and intervene.

As a consequence of white normativity and nurse academics being – albeit unwittingly – complicit in upholding racial ignorance, no student described learning that was purposeful or comprehensive on pressure injuries and people with dark skin tones. Furthermore, our study also indicates that students have an overreliance on nursing knowledge being disseminated directly from nurse academics resulting in a lack of critical imagination, applicability to other situations and/or to oneself. Some students in this study recognized that there was an issue of exclusion and a dominance of white-based literature, but they excused this lack of inclusion with explanations that they were in a predominantly white geographic location (Thorne, 2018). This seemed to help displace the ownership of exclusion, reinforce complicity and mask the need for research in this area. Furthermore, this view demonstrates the lack of understanding of the importance of racial inequity with the perception of an already established equitable society, where ignoring skin tone is inconsequential to patients (Hilario et al., 2018).

No matter of the student's personal demographic background or skin colour, they appeared to be blinded to inequities and a system of racial privilege in teaching, accepting the exclusion of skin tone diversity as the norm. With white normed teaching being so engrained and subtle in the fabric of the nursing curriculum, students who defined themselves as black, African, Caribbean or black British fell silent and justified the exclusion of skin tone diversity. They were made to feel that due to their minority it would be acceptable for others to hold a colour blind perceptive, instead of admitting to a lack of awareness, ignorance and white normativity in nurse education (Cunningham & Scarlato, 2018).

There is evidence in this study that an uneasy and unpalatable status quo exists in nurse education. Academic nurses teach from a perspective of white dominance and this is, in the main, accepted by their students. To dismantle obstacles, blocks and ideologies that sustain racism nurse academics need to comprehend and combat the underlying cause and adopt an antiracist stance. By antiracist we mean that nurse academics must move away from being passive bystanders, where their teaching reinforces white normativity, they must instead make conscious efforts and take actions such as self-reflection to acknowledge differences and work against racism, however,uncomfortable they may feel (Kendi, 2019). Nurse academics hold a moral and ethical responsibility to advocate for their students' right to fair nursing education which is representative of all population groups. Failing to listen and look after people with dark skin tones is dehumanizing and a form of racist practice, resulting in essentially discriminatory nursing practice (McCoy, 2020).

While we condone the attempts made to ensure that inclusive teaching material is embedded in the curriculum (Mukwende et al., 2020; Tagg, 2020), we also argue that the short-term skill acquisition initiatives such as being made aware of skin tone diversity does not fix racism or create anti-racist practices (Bell, 2020). One reason for failing to tackle this racial injustice of early-stage pressure injuries going unrecognized in people with dark skin tones in practice is that student nurses lack exposure to meaningful and challenging conversations about health inequities and skin tone diversity; if we stop talking about racism, it does not go away but minimizes and negatively erases race (Saad, 2020).

Mayes (2020) argues that this lack of inclusion is not necessarily an individual failing but should be looked at from an institutional perspective, we need to consider the pervasiveness of whiteness by exploring the wider concept of oppression in the historical formation of institutions. This view rings true in this study as it was clear that white was the default; in all cases, there was a lack of inclusion of people with dark skin tones in the curricula despite each higher education institution having mission statements and policies addressing inclusion and diversity in the curriculum.

Nurse academics hold the power through transformative learning to educate nurses of the future, ultimately limiting the damage of racism in healthcare by changing nursing practice (Blanchet Garneau et al., 2018). This change in nursing practice and education would in turn raise awareness of health inequities experienced by people with dark skin tones such as in the assessment and identification of pressure injuries. Ways in which this can be achieved is through diversification of the teaching workforce and frequent examination of the curriculum, the institution and individual classroom teaching sessions to ensure that they stand against racism and challenge the status quo. However, it is important to highlight that it is not only taking time to diversify the workforce but there needs to be a commitment to inclusion in curriculum design and that this does not mean that an anti-racist curriculum will result.

9.1 | Limitations

The study was conducted across five study sites in England and may not represent experiences and views internationally. The study involved a small homogenous sample of academics who may not have represented all views in the included institutions. Social desirability bias may have influenced the results, participants were aware of the study context as they had been provided with a participant information sheet before data collection. The impact of the researcher on the interviews and focus groups was visible as quotes from the participants referred to the awareness of the researcher's interests.

10 | CONCLUSION

With race being a deeply held social construct, nurse academics are duty bound to ensure future nurses interrogate their complicity in a system of white dominance. This approach leads to students questioning their practice and, in turn, dismantling racism in healthcare, offering a safe and welcoming space for all future nurses and patients who have dark skin tones. Anti-racist teaching practices are not policy, they are a set of values and principles against which to measure all work. When it comes to pressure injury assessment, nurses need to focus on prevention rather than a manifestation threshold; therefore, academics need to move away from a visual reliance. To truly dismantle racism in nursing, nurse education needs to change. Nurses need to continuously commit to the recognition of the real-life impact of apathy, remaining silent, race neutrality and being racially colour blind to ensure equity in healthcare for people with dark skin tones.

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DATA AVAILABILITY

The data are not publicly available due to privacy and ethical restrictions.

CONFLICT OF INTEREST

The editor-in-chief is a co-author.

CONFLICT OF INTEREST

No conflict of interest was declared by the authors in relation to the study itself. Note that Debra JACKSON is a JAN EIC but, in line with usual practice, this study was subjected to double-blind peer review and was edited by another editor.

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Appendix E: Invitation letter to Head of Schools/ Programme leads to participate in the study

OXFORD BROOKES UNIVERSITY

Invitation letter to Head of Schools/ Programme Leads to participate in study

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Address and Date:
Dear

My name is Neesha Oozageer Gunowa and I am currently beginning a research project for my Clinical PhD at Oxford Brookes University.

Subject to approval by Oxford Brookes University Ethics Committee this study, **an examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds**, will be using a collective case study approach to analyse pressure injury teaching material, observe a pressure injury teaching session, carry out semi structured interviews with nurse educators and a small group discussion with final year nursing students.

I am writing to ask your permission to be allowed access to your faculty and to relevant teaching material. This should not take a large amount of time and can be conducted at a convenient time and date to be arranged. All I will need is to arrange a suitable time with you to come and provide the participant information sheet to yourself and nurse educators as well as provide a poster for the recruitment of final year student nurses.

All answers and results from the case study are kept strictly confidential and the results will be reported in a research paper available to all participants on completion.

If this is possible please could you E-mail me at 15129387@brookes.ac.uk to confirm that you are willing to allow access to the participants providing they agree to take part.

Yours sincerely,

Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07870501512
Email: 15129387@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

Appendix F: Consent Form: Higher Education institution

OXFORD BROOKES UNIVERSITY

CONSENT FORM

Head of School / Nursing Programme Lead Participants

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Contact for Further Information
If you require information please contact:
Lead researcher
Neesha Oozageer Gunowa,
QxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

Please initial box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and only unprocessed data will be withdrawn from the study.	☐
3. I agree to take part in the above study.	☐

	Please initial box	
	Yes	*No*
4. I agree to the use of anonymised quotes in publications	☐	☐
5. I agree that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.	☐	☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Researcher	Date	Signature

Appendix G: Diversity Observation Teaching Tool (DOTT)

Identification Number:	
Date:	
Time:	

Teaching Session

1. Start Time: .....

2. Year of nursing programme
   First ☐ 1
   Second ☐ 2
   Third ☐ 3

2. Location
   Classroom ☐ 1
   Skills Room ☐ 2

3. Pre reading provided
   Y ☐ 1 N ☐ 2

5. Have students been out in practice before?
   Y ☐ 1 N ☐ 2

6. Number of educators
   1 ☐ 1
   2 ☐ 2
   3+ ☐ 3

7. Number of students
   1-10 ☐ 1
   11-25 ☐ 2
   26-50 ☐ 3
   51-100 ☐ 4
   101+ ☐ 5

Duration Analysis

8. Teaching Modalities
   Vignette ☐ 1
   Case Study ☐ 2
   Lecture ☐ 3
   Patient led presentation ☐ 4
   Patient voice strategy ☐ 5
   Other ☐ 6_____
   _____
   _____
   _____
   _____

9. Overall session title
   Y ☐ 1 N ☐ 2 (Go to Q.11)
   _____

10. Session title focusing on skin tone diversity
    Y ☐ 1 N ☐ 2

11. Learning outcomes set
    Y ☐ 1 N ☐ 2 (Go to Q.13)

12. Inclusion of skin tone diversity in learning outcomes?
    Y ☐ 1 N ☐ 2

13. How much time (in minutes) specifically spent on PI in the session?
    1-10 ☐ 1
    11-25 ☐ 2
    26-50 ☐ 3
    51-100 ☐ 4
    101+ ☐ 5

14. How much time (in minutes) in the session was spent on **PIs & cultural issues, ethnicity, people with darker skin tones?**
    0 ☐ 1
    1-10 ☐ 2
    11-25 ☐ 3
    26-50 ☐ 4
    51-100 ☐ 5
    101+ ☐ 6

15. How much time (in minutes) in the session was spent on **PIs & people with darker skin tones?**
    0 ☐ 1
    1-10 ☐ 2
    11-25 ☐ 3
    26-50 ☐ 4
    51-100 ☐ 5
    101+ ☐ 6

Context Representation

16. Visual descriptors of PI presentation
    None Used ☐ 1
    Pinkness ☐ 2
    Erythema ☐ 3
    Dusky ☐ 4
    Mottled ☐ 5
    Other ☐ 6
    (field note)
    _____
    _____
    _____
    _____
    _____
    _____

17. Where are people with skin tone variances discussed?
    Not addressed ☐ 1 (Go to Q.19)
    Session orientated approach ☐ 2
    Addressed throughout ☐ 3
    Addressed in part of session ☐ 4

18. Which part of session?
    Beginning ☐ 1
    Middle ☐ 2
    End ☐ 3

Portrayal in content

19. Term(s) used as a proxy to darker skin tone
    None used ☐ 1
    Ethnicity ☐ 2
    Skin Colour ☐ 3
    Other ☐ 4 _____
    _____
    _____
    _____
    _____
    _____

20. Inclusion of skin tone diversity
Incidental ☐ 1 (Go to Q22)
Deliberate ☐ 2

21. Incidental in what way?
Educator asks students previous experience ☐ 1
Student asks questions ☐ 2
Other ☐ 3 _____

Visual representation of skin tone diversity

22. Pictures/ Photographs
Y ☐ 1 N ☐ 2 (Go to Q.26)

29. How many images
1-10 ☐ 1
11-25 ☐ 2
26-50 ☐ 3
50+ ☐ 4

30. Number of images
Pale white skin _____
White skin _____
Light brown skin _____
Moderate brown skin____
Dark brown skin _____
Deeply pigmented dark brown to black skin _____

31. Skin colour of images presented described as:
White ☐ 1
Black ☐ 2
Asian ☐ 3
Mixed ☐ 4
Not described ☐ 5
Other ☐ 6
(field note)

---

26. Teaching props used
Y ☐ 1 N ☐ 2 (Go to Q28)
Colour as per manufacturer description

---

27. Teaching Props used to focus on darker skin tone
Y ☐ 1 N ☐ 2

28. Finish Time.....

Appendix H: Participant information sheet: Documentary analysis

OXFORD BROOKES UNIVERSITY

PARTICIPANT INFORMATION SHEET – FOR DOCUMENTARY ANALYSIS

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Please feel free to ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

The definition of a pressure injury (PI) is 'localised damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device' and they are staged according to severity of tissue damage. PIs are one of the most common wounds affecting older adults and have often been associated with serious illness and people who are bedbound. PIs which are estimated to occur in 4-10% of people admitted to UK hospitals are constructed as avoidable harm, and are considered to be both preventable and predictable. In addition to human costs which includes the impact on a patients' physical and mental wellbeing, PIs represent a significant cost burden to the health sector.

PI identification has been widely researched and documented mainly in the United States of America following the introduction of third-party payers involvement; however, much of this work does not address ethnicity, and assumes Caucasian-ness. As early stage PIs are associated with the presentation of redness, which is difficult to visualise on darkly pigmented skin, people from diverse cultural and ethnic backgrounds are reported to be at a predisposed risk of developing more severe PIs. It is only since 1998 that PI guidelines have been amended to reflect an awareness of an increased risk of harm for people with darkly pigmented skin. Furthermore, little comprehensive attention has been given to improving nursing practice in this area as skin assessment tools have not been amended.

With the workforce needing to have the skills to provide safe, high quality care wherever the patient is, at all times and in all settings nurses need to have evidence based research to shape care delivery. In the absence of a clear evidence base or educational guidance, nurses have little to rely on but their own clinical expertise and exposure to patient experiences to inform practice in relation to the assessment of darkly pigmented skin which can be seen as unreliable and potentially place a patient at increased harm. With such knowledge being imparted to student nurses it is crucial that evidence is improved and implemented in practice to ensure patients receive appropriate and evidence-based health care.

To ensure consistent quality care is provided by student nurses it is important to acknowledge that students often receive different learning experiences within practice and as a result students require wide-ranging educational strategies which offer an opportunity to be involved with both familiar and unfamiliar teaching techniques within HEIs.

The core purpose of the study is to examine the educational preparation that student nurses complete in Higher Education Institutions (HEIs) in relation to pressure injury identification and assessment particularly focusing on social and cultural diversity. Specific objections are to:

1. report content and teaching styles universities use when delivering information on identification and assessment of pressure injuries in relation to social and cultural diversity.
2. explore educator and student nurse experience of pressure injury identification and assessment amongst people from non-Caucasian backgrounds using semi structured interviews.
3. develop effective and inclusive educational strategies to support patient safety in the prevention and assessment of pressure injuries for people from diverse social and cultural backgrounds.

OXFORD BROOKES UNIVERSITY

Why have I been invited to participate?

You will have seen a letter from your Head of School or Nursing programme lead inviting nurse educators who deliver pressure injury teaching sessions to student nurses to become involved in this research. The focus of the research is exploration of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Do I have to take part?

No, it is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

As a nurse educator, by choosing to either take part or not take part in the study or to withdraw at any time will have no impact on your employment.

After you decide to take part in the study, you will be contacted via email by the researcher to confirm the details of the teaching material being collated.

What will happen to me if I take part?

It would involve provision of the teaching material you use. The documentary analysis will not be an assessment however a collection tool will be used to identify the overall content of the session and delivery methods. You would not be compensated for your time, but we would be very grateful for your participation.

You do not need to take part in this study, and you can leave it at any time without affecting your relationship with the Faculty or University in any way.

What are the possible benefits of taking part?

In regards to benefits, this study will provide the first information recorded on education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds. This will contribute to the wider topic of pressure injury identification, assessment and management, which is currently under researched. We hope that the study will enable nurse educators to feel personal satisfaction at being able to contribute to the research body.

Will what I say in this study be kept confidential?

All information collected about you will be strictly confidential. Your personal data (digital recordings and transcriptions) will be securely stored at Oxford Brookes University in line with its Data Protection policy, for 10 years, with access only to the research team and transcription team. Confidentiality will be maintained in the handling of the research data and no one will be identified when the findings are presented and published. In the unlikely event of any safeguarding issues, the researcher does have a duty of care to report to the local safeguarding teams.

What should I do if I want to take part?

If you are willing to take part in the study, please email or phone the lead researcher on the details provided below. After making contact you will be provided with a consent form. You will be asked to sign a consent form agreeing to take part in the study at least 48 hours after being given the information sheet. If you would like to participate, you will be contacted to arrange a convenient time for it to take place.

What will happen to the results of the research study?

The information obtained in the study will be used in the researcher's PhD dissertation, which will be published; some aspects of the study may be published in journals and presented at conferences. A report will be written up for you and other research participants which will be circulated widely to HEIs, communities, public health departments, charities and policy makers. Also, the report will be posted to a website and the link will be distributed broadly through social media and other health care and research forums (e.g., Twitter and Research Gate).

OXFORD BROOKES UNIVERSITY

Who is organising and funding the research?

The research is being conducted by a PhD student who has been awarded the Professor Nigel Groome PhD Research Studentship Oxford Institute of Nursing, Midwifery and Allied Health Research (OxiNMAHR) which is part of Oxford Brookes University.

Who has reviewed the study?

The research has been approved by the University Research Ethics Committee, Oxford Brookes University. Should you have any questions or concerns regarding the conduct of the study please contact the Chair of the university research committee on ethics@brookes.ac.uk

Contact for Further Information

If you require information please contact:

Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

Thank you for taking time to read the information sheet

July 2017

Appendix I: Consent form: Documentary analysis

OXFORD BROOKES UNIVERSITY

CONSENT FORM – DOCUMENTARY ANALYSIS

Nurse Educator Participants

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Contact for Further Information
If you require information please contact:
Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

Please initial box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	☐
1. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and only unprocessed data will be withdrawn from the study.	☐
2. I agree to take part in the above study.	☐

	Please initial box	
	Yes	*No*
3. I agree to the use of anonymised quotes in publications	☐	☐
4. I agree that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.	☐	☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

Appendix J: Participant information sheet: Observation

OXFORD BROOKES UNIVERSITY

PARTICIPANT INFORMATION SHEET – FOR OBSERVATION OF NURSE EDUCATORS

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Please feel free to ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

The definition of a pressure injury (PI) is 'localised damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device' and they are staged according to severity of tissue damage. PIs are one of the most common wounds affecting older adults and have often been associated with serious illness and people who are bedbound. PIs which are estimated to occur in 4-10% of people admitted to UK hospitals are constructed as avoidable harm, and are considered to be both preventable and predictable. In addition to human costs which includes the impact on a patients' physical and mental wellbeing, PIs represent a significant cost burden to the health sector.

PI identification has been widely researched and documented mainly in the United States of America following the introduction of third party payers involvement; however, much of this work does not address ethnicity, and assumes Caucasian-ness. As early stage PIs are associated with the presentation of redness, which is difficult to visualise on darkly pigmented skin, people from diverse cultural and ethnic backgrounds are reported to be at a predisposed risk of developing more severe PIs. It is only since 1998 that PI guidelines have been amended to reflect an awareness of an increased risk of harm for people with darkly pigmented skin. Furthermore, little comprehensive attention has been given to improving nursing practice in this area as skin assessment tools have not been amended.

With the workforce needing to have the skills to provide safe, high quality care wherever the patient is, at all times and in all settings nurses need to have evidence based research to shape care delivery. In the absence of a clear evidence base or educational guidance, nurses have little to rely on but their own clinical expertise and exposure to patient experiences to inform practice in relation to the assessment of darkly pigmented skin which can be seen as unreliable and potentially place a patient at increased harm. With such knowledge being imparted to student nurses it is crucial that evidence is improved and implemented in practice to ensure patients receive appropriate and evidence-based health care.

To ensure consistent quality care is provided by student nurses it is important to acknowledge that students often receive different learning experiences within practice and as a result students require wide-ranging educational strategies which offer an opportunity to be involved with both familiar and unfamiliar teaching techniques within HEIs.

The core purpose of the study is to examine the educational preparation that student nurses complete in Higher Education Institutions (HEIs) in relation to pressure injury identification and assessment particularly focusing on social and cultural diversity. Specific objections are to:

1. report content and teaching styles universities use when delivering information on identification and assessment of pressure injuries in relation to social and cultural diversity.
2. explore educator and student nurse experience of pressure injury identification and assessment amongst people from non-Caucasian backgrounds using semi structured interviews.
3. develop effective and inclusive educational strategies to support patient safety in the prevention and assessment of pressure injuries for people from diverse social and cultural backgrounds.

OXFORD BROOKES UNIVERSITY

Why have I been invited to participate?

You will have seen a letter from your Head of School or Nursing programme lead inviting nurse educators who deliver pressure injury teaching sessions teaching to student nurses to become involved in this research. The focus of the research is exploration of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Do I have to take part?

No, it is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

As a nurse educator, by choosing to either take part or not take part in the study or to withdraw at any time will have no impact on your employment.

After you decide to take part in the study, you will be contacted via email by the researcher to confirm a date, time and teaching session focusing on pressure injuries that may be observed.

What will happen to me if I take part?

It would involve observation of a teaching session that you deliver. The observation will not be an assessment however a collection tool will be used to identify the overall content of the session and delivery methods. The observation will involve no more than one facilitator from the research team. You would not be compensated for your time, but we would be very grateful for your participation.

You do not need to take part in this study, and you can leave it at any time without affecting your relationship with the Faculty or University in any way.

What are the possible benefits of taking part?

In regards to benefits, this study will provide the first information recorded on education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds. This will contribute to the wider topic of pressure injury identification, assessment and management, which is currently under researched. We hope that the study will enable nurse educators to feel personal satisfaction at being able to contribute to the research body.

Will what I say in this study be kept confidential?

All information collected about you will be strictly confidential. Your personal data (digital recordings and transcriptions) will be securely stored at Oxford Brookes University in line with its Data Protection policy, for 10 years, with access only to the research team and transcription team. Confidentiality will be maintained in the handling of the research data and no one will be identified when the findings are presented and published. In the unlikely event of any safeguarding issues, the researcher does have a duty of care to report to the local safeguarding teams.

What should I do if I want to take part?

If you are willing to take part in the study, please email or phone the lead researcher on the details provided below. After making contact you will be provided with a consent form. You will be asked to sign a consent form agreeing to take part in the study at least 48 hours after being given the information sheet. If you would like to participate, you will be contacted to arrange a convenient time for it to take place.

What will happen to the results of the research study?

The information obtained in the study will be used in the researcher's PhD dissertation, which will be published; some aspects of the study may be published in journals and presented at conferences. A report will be written up for you and other research participants which will be circulated widely to HEIs, communities, public health departments, charities and policy makers. Also, the report will be posted to a website and the link will be distributed broadly through social media and other health care and research forums (e.g., Twitter and Research Gate).

Who is organising and funding the research?
The research is being conducted by a PhD student who has been awarded the Professor Nigel Groome PhD Research Studentship Oxford Institute of Nursing, Midwifery and Allied Health Research (OxiNMAHR) which is part of Oxford Brookes University.

Who has reviewed the study?
The research has been approved by the University Research Ethics Committee, Oxford Brookes University. Should you have any questions or concerns regarding the conduct of the study please contact the Chair of the university research committee on ethics@brookes.ac.uk

Contact for Further Information
If you require information please contact:
Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

Thank you for taking time to read the information sheet

July 2017

Appendix K: Consent form: Observation

OXFORD BROOKES UNIVERSITY

CONSENT FORM – OBSERVATION

Nurse Educator Participants

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Contact for Further Information
If you require information please contact:
Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

	Please initial box
1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	☐
1. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and only unprocessed data will be withdrawn from the study.	☐
2. I agree to take part in the above study.	☐

	Please initial box	
	Yes	*No*
3. I agree to the use of anonymised quotes in publications	☐	☐
4. I agree that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.	☐	☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

Appendix L: Flyers on notice boards: Student nurses

OXFORD BROOKES UNIVERSITY

FINAL YEAR STUDENT NURSES NEEDED TO TAKE PART IN A DOCTORAL RESEARCH STUDY

As a final year student nurse do you feel prepared to assess pressure injuries amongst a diverse population group?

Would you like to take part in a small group discussion to examine the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds?

If you think you may be interested in taking part and would like to hear a little more about the project through an informal chat then please contact me, **Neesha Oozageer Gunowa.**

Details Below:

Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Tel: 07

Appendix M: Participant information sheet: Students

OXFORD BROOKES UNIVERSITY

PARTICIPANT INFORMATION SHEET – FOR STUDENTS

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Please feel free to ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

The definition of a pressure injury (PI) is 'localised damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device' and they are staged according to severity of tissue damage. PIs are one of the most common wounds affecting older adults and have often been associated with serious illness and people who are bedbound. PIs which are estimated to occur in 4-10% of people admitted to UK hospitals are constructed as avoidable harm, and are considered to be both preventable and predictable. In addition to human costs which includes the impact on a patients' physical and mental wellbeing, PIs represent a significant cost burden to the health sector.

PI identification has been widely researched and documented mainly in the United States of America following the introduction of third party payers involvement; however, much of this work does not address ethnicity, and assumes Caucasian-ness. As early stage PIs are associated with the presentation of redness, which is difficult to visualise on darkly pigmented skin, people from diverse cultural and ethnic backgrounds are reported to be at a predisposed risk of developing more severe PIs. It is only since 1998 that PI guidelines have been amended to reflect an awareness of an increased risk of harm for people with darkly pigmented skin. Furthermore, little comprehensive attention has been given to improving nursing practice in this area as skin assessment tools have not been amended.

With the workforce needing to have the skills to provide safe, high quality care wherever the patient is, at all times and in all settings nurses need to have evidence based research to shape care delivery. In the absence of a clear evidence base or educational guidance, nurses have little to rely on but their own clinical expertise and exposure to patient experiences to inform practice in relation to the assessment of darkly pigmented skin which can be seen as unreliable and potentially place a patient at increased harm. With such knowledge being imparted to student nurses it is crucial that evidence is improved and implemented in practice to ensure patients receive appropriate and evidence-based health care.

To ensure consistent quality care is provided by student nurses it is important to acknowledge that students often receive different learning experiences within practice and as a result students require wide-ranging educational strategies which offer an opportunity to be involved with both familiar and unfamiliar teaching techniques within HEIs.

The core purpose of the study is to examine the educational preparation that student nurses complete in Higher Education Institutions (HEIs) in relation to pressure injury identification and assessment particularly focusing on social and cultural diversity. Specific objections are to:

1. report content and teaching styles universities use when delivering information on identification and assessment of pressure injuries in relation to social and cultural diversity.
2. explore educator and student nurse experience of pressure injury identification and assessment amongst people from non-Caucasian backgrounds using semi structured interviews.

3. develop effective and inclusive educational strategies to support patient safety in the prevention and assessment of pressure injuries for people from diverse social and cultural backgrounds.

Why have I been invited to participate?

You will have seen our advertisements inviting final year student nurses to have a group discussion on the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Do I have to take part?

No, it is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

If you are a final year student nurse, by choosing to either take part or not take part in the study or to withdraw at any time will have no impact on your marks, assessments or future studies.

After you decide to take part in the study, you will be contacted via email by the researcher to confirm the focus group date, time and venue.

What will happen to me if I take part?

It would involve your attendance at a focus group. This focus group would last up to 60 minutes and will involve no more than seven final year student nurses and a facilitator from the research team. This focus group would be audio recorded and the recording transcribed for analysis. The focus group would be scheduled around your timetable, to ensure that you do not need to make an additional journey, and would be scheduled directly before or after a teaching session which you are required to attend. You would not be compensated for your time, but we would be very grateful for your participation.

We are aware that some students may find sharing experiences and their views upsetting and difficult during a focus group and appropriate support for this will be provided. You do not need to take part in this study, and you can leave it at any time without affecting your education/relationship with the Faculty or University in any way.

What are the possible benefits of taking part?

In regards to benefits, this study will provide the first information recorded on education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds. This will contribute to the wider topic of pressure injury identification, assessment and management, which is currently under researched. We hope that the study will enable students to feel personal satisfaction at being able to contribute to the research body.

Will what I say in this study be kept confidential?

All information collected about you will be strictly confidential. Your personal data (digital recordings and transcriptions) will be securely stored at Oxford Brookes University in line with its Data Protection policy, for 10 years, with access only to the research team and transcription team. Confidentiality will be maintained in the handling of the research data and no one will be identified when the findings are presented and published. In the unlikely event of any safeguarding issues, the researcher does have a duty of care to report to the local safeguarding teams.

What should I do if I want to take part?

If you are willing to take part in the study, please email or phone the lead researcher on the details provided below. You will then be invited to attend a small focus group with a maximum of seven students. You will be provided with a consent form and asked to sign a consent form agreeing to take

part in the study at least 48 hours after being given the information sheet. If you would like to participate in a focus group, you will be contacted to arrange a convenient time scheduled around your timetable for it to take place.

What will happen to the results of the research study?

The information obtained in the study will be used in the researcher's PhD dissertation, which will be published, some aspects of the study may be published in journals and presented at conferences. A report will be written up for you and other research participants which will be circulated widely to HEIs, communities, public health departments, charities and policy makers. Also, the report will be posted to a website and the link will be distributed broadly through social media and other health care and research forums (e.g., Twitter and Research Gate).

Who is organising and funding the research?

The research is being conducted by a PhD student who has been awarded the Professor Nigel Groome PhD Research Studentship Oxford Institute of Nursing, Midwifery and Allied Health Research (OxiNMAHR) which is part of Oxford Brookes University.

Who has reviewed the study?

The research has been approved by the University Research Ethics Committee, Oxford Brookes University. Should you have any questions or concerns regarding the conduct of the study please contact the Chair of the university research committee on ethics@brookes.ac.uk

Contact for Further Information

If you require information please contact:

Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

Thank you for taking time to read the information sheet

Date
December 2016

Appendix N: Consent Form: Students

OXFORD BROOKES UNIVERSITY

CONSENT FORM

Student Nurse Participants

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Contact for Further Information
If you require information please contact:
Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

	Please initial box
1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and only unprocessed data will be withdrawn from the study.	☐
3. I agree to take part in the above study.	☐
4. I understand that the focus group will be audio recorded	☐

	Please initial box *Yes*	*No*
5. I agree to the use of anonymised quotes in publications	☐	☐
6. I agree that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.	☐	☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

Appendix O: Demographic information sheet: Students

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Case Number: ……

Please would you complete the following basic demographic data.

Age

17-25 ☐ 26-30 ☐ 31-35 ☐ 36-40 ☐ 41-45 ☐ 46-50 ☐ 51-60 ☐

Ethnic Background

White ☐ Mixed/ Multiple Ethnic Groups ☐ Asian/Asian British ☐

Black/ African/Caribbean/ Black British ☐ Other Ethnic Group ☐

Educational status

Previous academic Qualification - tick all that apply

Diploma ☐ Degree ☐ Masters ☐

Other……

Current Year of study

1st ☐ 2nd ☐ 3rd ☐

Appendix P: Breakdown of focus group participants

HEIs	HEI 1	HEI 2	HEI 3	HEI 4	HEI 5
			Focus Group		
Numbers	7	7	5	6	2
Gender	P1 - Male P2 - Female P3 - Female P4 - Female P5 - Female P6 - Female P7 – Male	P1 - Male P2 - Male P3 - Female P4 - Female P5 - Female P6 - Female P7 – Female	P1 - Female P2 - Female P3 - Female P4 - Female P5 - Male	P1 - Female P2 - Female P3 - Female P4 - Female P5 - Female P6 - Female	P1 - Female P2 - Female
Ethnicity	P1 - White P2 - White P3 - Asian/ Asian British P4 - White P5 - Black/ African/Caribbean/Black British P6 - White P7 - White	P1 - White P2 - White P3 - White P4 - White P5 - White P6 - Black/ African/Caribbean/Black British P7 - Black/ African/Caribbean/Black British	P1 - White P2 - Black/ African/Caribbean/Black British P3 - Black/ African/Caribbean/Black British P4 - Black/ African/Caribbean/Black British P5 - White	P1 - Black/ African/Caribbean/Black British P2 - Black/ African/Caribbean/Black British P3 - White P4 - Black/ African/Caribbean/Black British P5 - Black/ African/Caribbean/Black British P6 - Black/ African/Caribbean/Black British	P1 - White P2 - White

Appendix Q: Participant information sheet - face to face interviews:

Nurse educators

OXFORD BROOKES UNIVERSITY

PARTICIPANT INFORMATION SHEET – FOR SEMI – STRUCTURED INTERVIEWS OF NURSE EDUCATORS

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Please feel free to ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

The definition of a pressure injury (PI) is 'localised damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device' and they are staged according to severity of tissue damage. PIs are one of the most common wounds affecting older adults and have often been associated with serious illness and people who are bedbound. PIs which are estimated to occur in 4-10% of people admitted to UK hospitals are constructed as avoidable harm, and are considered to be both preventable and predictable. In addition to human costs which includes the impact on a patients' physical and mental wellbeing, PIs represent a significant cost burden to the health sector.

PI identification has been widely researched and documented mainly in the United States of America following the introduction of third party payers involvement; however, much of this work does not address ethnicity, and assumes Caucasian-ness. As early stage PIs are associated with the presentation of redness, which is difficult to visualise on darkly pigmented skin, people from diverse cultural and ethnic backgrounds are reported to be at a predisposed risk of developing more severe PIs. It is only since 1998 that PI guidelines have been amended to reflect an awareness of an increased risk of harm for people with darkly pigmented skin. Furthermore, little comprehensive attention has been given to improving nursing practice in this area as skin assessment tools have not been amended.

With the workforce needing to have the skills to provide safe, high quality care wherever the patient is, at all times and in all settings nurses need to have evidence based research to shape care delivery. In the absence of a clear evidence base or educational guidance, nurses have little to rely on but their own clinical expertise and exposure to patient experiences to inform practice in relation to the assessment of darkly pigmented skin which can be seen as unreliable and potentially place a patient at increased harm. With such knowledge being imparted to student nurses it is crucial that evidence is improved and implemented in practice to ensure patients receive appropriate and evidence-based health care.

To ensure consistent quality care is provided by student nurses it is important to acknowledge that students often receive different learning experiences within practice and as a result students require wide-ranging educational strategies which offer an opportunity to be involved with both familiar and unfamiliar teaching techniques within HEIs.

The core purpose of the study is to examine the educational preparation that student nurses complete in Higher Education Institutions (HEIs) in relation to pressure injury identification and assessment particularly focusing on social and cultural diversity. Specific objections are to:

1. report content and teaching styles universities use when delivering information on identification and assessment of pressure injuries in relation to social and cultural diversity.
2. explore educator and student nurse experience of pressure injury identification and assessment amongst people from non-Caucasian backgrounds using semi structured interviews.
3. develop effective and inclusive educational strategies to support patient safety in the prevention and assessment of pressure injuries for people from diverse social and cultural backgrounds.

OXFORD BROOKES UNIVERSITY

Why have I been invited to participate?
You will have seen a letter from your Head of School or Nursing programme lead inviting nurse educators who deliver pressure injury teaching sessions to student nurses who have cared for someone with a PI to become involved in a study. The focus of the semi structured interview is exploration of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Do I have to take part?
No, it is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

As a nurse educator, by choosing to either take part or not take part in the study or to withdraw at any time will have no impact on your employment.

After you decide to take part in the study, you will be contacted via email by the researcher to confirm a date, time and venue that suits you to carry out the semi-structured interview.

What will happen to me if I take part?
It would involve your attendance at a semi-structured interview. This semi-structured interview will last approximately 30 minutes and will involve no more than one facilitator from the research team. This interview would be audio recorded and the recording transcribed for analysis. The interview would be scheduled around your availability, to ensure that you do not need to make an additional journey to the University. You would not be compensated for your time, but we would be very grateful for your participation.

We are aware that some nurse educators may find sharing experiences and their views upsetting and difficult during a semi structured interview and appropriate support for this will be provided. You do not need to take part in this study, and you can leave it at any time without affecting your relationship with the Faculty or University in any way.

What are the possible benefits of taking part?
In regards to benefits, this study will provide the first information recorded on education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds. This will contribute to the wider topic of pressure injury identification, assessment and management, which is currently under researched. We hope that the study will enable nurse educators to feel personal satisfaction at being able to contribute to the research body.

Will what I say in this study be kept confidential?
All information collected about you will be strictly confidential. Your personal data (digital recordings and transcriptions) will be securely stored at Oxford Brookes University in line with its Data Protection policy, for 10 years, with access only to the research team and transcription team. Confidentiality will be maintained in the handling of the research data and no one will be identified when the findings are presented and published. In the unlikely event of any safeguarding issues, the researcher does have a duty of care to report to the local safeguarding teams.

What should I do if I want to take part?
If you are willing to take part in the study, please email or phone the lead researcher on the details provided below. If you are willing to take part in the study, a semi structured interview will be arranged at time and place convenient for you. You will be asked to sign a consent form agreeing to take part in the study at least 48 hours after being given the information sheet.

What will happen to the results of the research study?
The information obtained in the study will be used in the researcher's PhD dissertation, which will be published; some aspects of the study may be published in journals and presented at conferences. A report will

be written up for you and other research participants which will be circulated widely to HEIs, communities, public health departments, charities and policy makers. Also, the report will be posted to a website and the link will be distributed broadly through social media and other health care and research forums (e.g., Twitter and Research Gate).

Who is organising and funding the research?

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Who has reviewed the study?

The research has been approved by the University Research Ethics Committee, Oxford Brookes University. Should you have any questions or concerns regarding the conduct of the study please contact the Chair of the university research committee on ethics@brookes.ac.uk

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Lead researcher
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Oxford Brookes University
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Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

Thank you for taking time to read the information sheet

July 2017

Appendix R: Participant information sheet - telephone interview: Nurse Educators

OXFORD BROOKES UNIVERSITY

PARTICIPANT INFORMATION SHEET – FOR SEMI – STRUCTURED TELEPHONE INTERVIEWS OF NURSE EDUCATORS

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Please feel free to ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

The definition of a pressure injury (PI) is 'localised damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device' and they are staged according to severity of tissue damage. PIs are one of the most common wounds affecting older adults and have often been associated with serious illness and people who are bedbound. PIs which are estimated to occur in 4-10% of people admitted to UK hospitals are constructed as avoidable harm, and are considered to be both preventable and predictable. In addition to human costs which includes the impact on a patients' physical and mental wellbeing, PIs represent a significant cost burden to the health sector.

PI identification has been widely researched and documented mainly in the United States of America following the introduction of third party payers involvement; however, much of this work does not address ethnicity, and assumes Caucasian-ness. As early stage PIs are associated with the presentation of redness, which is difficult to visualise on darkly pigmented skin, people from diverse cultural and ethnic backgrounds are reported to be at a predisposed risk of developing more severe PIs. It is only since 1998 that PI guidelines have been amended to reflect an awareness of an increased risk of harm for people with darkly pigmented skin. Furthermore, little comprehensive attention has been given to improving nursing practice in this area as skin assessment tools have not been amended.

With the workforce needing to have the skills to provide safe, high quality care wherever the patient is, at all times and in all settings nurses need to have evidence based research to shape care delivery. In the absence of a clear evidence base or educational guidance, nurses have little to rely on but their own clinical expertise and exposure to patient experiences to inform practice in relation to the assessment of darkly pigmented skin which can be seen as unreliable and potentially place a patient at increased harm. With such knowledge being imparted to student nurses it is crucial that evidence is improved and implemented in practice to ensure patients receive appropriate and evidence-based health care.

To ensure consistent quality care is provided by student nurses it is important to acknowledge that students often receive different learning experiences within practice and as a result students require wide-ranging educational strategies which offer an opportunity to be involved with both familiar and unfamiliar teaching techniques within HEIs.

The core purpose of the study is to examine the educational preparation that student nurses complete in Higher Education Institutions (HEIs) in relation to pressure injury identification and assessment particularly focusing on social and cultural diversity. Specific objections are to:

1. report content and teaching styles universities use when delivering information on identification and assessment of pressure injuries in relation to social and cultural diversity.
2. explore educator and student nurse experience of pressure injury identification and assessment amongst people from non-Caucasian backgrounds using semi structured interviews.
3. develop effective and inclusive educational strategies to support patient safety in the prevention and assessment of pressure injuries for people from diverse social and cultural backgrounds.

OXFORD BROOKES UNIVERSITY

Why have I been invited to participate?

You will have seen a letter from your Head of School or Nursing programme lead inviting nurse educators who deliver pressure injury teaching sessions to student nurses who have cared for someone with a PI to become involved in a study. The focus of the semi structured interview is exploration of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Do I have to take part?

No, it is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

As a nurse educator, by choosing to either take part or not take part in the study or to withdraw at any time will have no impact on your employment.

After you decide to take part in the study, you will be contacted via email by the researcher to confirm a date, time and venue that suits you to carry out the semi-structured interview.

What will happen to me if I take part?

It would involve your participation in a semi-structured telephone interview. This semi-structured telephone interview will last approximately 30 minutes and will involve no more than one facilitator from the research team. This telephone interview would be audio recorded and the recording transcribed for analysis. The interview would be scheduled around your availability, to ensure that you do not need to make an additional journey to the University. You would not be compensated for your time, but we would be very grateful for your participation.

We are aware that some nurse educators may find sharing experiences and their views upsetting and difficult during a semi structured telephone interview and appropriate support for this will be provided. You do not need to take part in this study, and you can leave it at any time without affecting your relationship with the Faculty or University in any way.

What are the possible benefits of taking part?

In regards to benefits, this study will provide the first information recorded on education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds. This will contribute to the wider topic of pressure injury identification, assessment and management, which is currently under researched. We hope that the study will enable nurse educators to feel personal satisfaction at being able to contribute to the research body.

Will what I say in this study be kept confidential?

All information collected about you will be strictly confidential. Your personal data (digital recordings and transcriptions) will be securely stored at Oxford Brookes University in line with its Data Protection policy, for 10 years, with access only to the research team and transcription team. Confidentiality will be maintained in the handling of the research data and no one will be identified when the findings are presented and published. In the unlikely event of any safeguarding issues, the researcher does have a duty of care to report to the local safeguarding teams.

What should I do if I want to take part?

If you are willing to take part in the study, please email or phone the lead researcher on the details provided below. If you are willing to take part in the study, a semi structured telephone interview will be arranged at time and place convenient for you. You will be asked to sign a consent form agreeing to take part in the study at least 48 hours after being given the information sheet.

What will happen to the results of the research study?

The information obtained in the study will be used in the researcher's PhD dissertation, which will be published; some aspects of the study may be published in journals and presented at conferences. A report will be written up for you and other research participants which will be circulated widely to HEIs, communities, public health departments, charities and policy makers. Also, the report will be posted to a website and the link will be distributed broadly through social media and other health care and research forums (e.g., Twitter and Research Gate).

Who is organising and funding the research?

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Who has reviewed the study?

The research has been approved by the University Research Ethics Committee, Oxford Brookes University. Should you have any questions or concerns regarding the conduct of the study please contact the Chair of the university research committee on ethics@brookes.ac.uk

Contact for Further Information

If you require information please contact:

Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Dr. Helen Walthall email: h.walthall@brookes.ac.uk
Dr. Dan Butcher email: d.butcher@brookes.ac.uk
Professor Debra Jackson email: djackson@brookes.ac.uk

Thank you for taking time to read the information sheet

April 2019

Appendix S: Consent form - telephone interview: Nurse educators

OXFORD BROOKES UNIVERSITY

CONSENT FORM – SEMI STRUCTURED INTERVIEWS

Nurse Educator Participants

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Contact for Further Information
If you require information please contact:

Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Dr. Helen Walthall email: h.walthall@brookes.ac.uk
Dr. Dan Butcher email: d.butcher@brookes.ac.uk
Professor Debra Jackson email: djackson@brookes.ac.uk

	Please initial box
1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	☐
1. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and only unprocessed data will be withdrawn from the study.	☐
2. I agree to take part in the above study.	☐
3. I understand that the semi – structured telephone interview will be audio recorded	☐

	Please initial box	
	Yes	*No*
4. I agree to the use of anonymised quotes in publications	☐	☐
5. I agree that an anonymised data set, gathered for this study may be stored in a specialist data centre/repository relevant to this subject area for future research	☐	☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

Appendix T: Consent form: Nurse educators

OXFORD BROOKES UNIVERSITY

CONSENT FORM – SEMI STRUCTURED INTERVIEWS

Nurse Educator Participants

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Contact for Further Information
If you require information please contact:
Lead researcher
Neesha Oozageer Gunowa,
OxiNMAHR, Colonnade,
Oxford Brookes University
Telephone: 07874622299
Email: neesha.oozageer.gunowa-2016@brookes.ac.uk

Research supervisory team
Professor Debra Jackson email: djackson@brookes.ac.uk
Associate Professor Marie Hutchinson email: marie.hutchinson@scu.edu.au
Dr Joanne Brooke email: jbrooke@brookes.ac.uk

	Please initial box	
1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	☐	
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and only unprocessed data will be withdrawn from the study.	☐	
3. I agree to take part in the above study.	☐	
4. I understand that the semi – structured interview will be audio recorded	☐	
	Please initial box	
	Yes	*No*
5. I agree to the use of anonymised quotes in publications	☐	☐
6. I agree that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.	☐	☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

Appendix U: Focus group interview guide

Focus Group Interview Guide

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Case Number: .....

Before Hand

- ☐ Bring recorder
- ☐ Extra batteries
- ☐ Forms: Consent, Participant Information sheet and demographic sheet
- ☐ Food: Disposable cups and plates/biscuits and drinks/ Lunch

Logistics

- ☐ Arrive Early
- ☐ Make sure room is satisfactory
- ☐ Check background noise
- ☐ Have name labels/tents for participants
- ☐ Place the digital recorder on the table

☐ Place drinks and biscuits

Notes

Date of Focus Group .....

Time of Focus Group .....

Location .....

Type of participant – Complete demographic sheets ☐

Number of participants .....

Name of moderator .....

Name of assistant moderator .....

Diagram of seating arrangements

Beginning

- Welcome
- Overview of topic
- Ground Rules:
  - No wrong answers, it is expected that you have differing views, please do share them.
  - The session is being recorded so as not to miss your points, no names will be included in reports.
  - You have name badges to help me remember your name and so you can refer to each other if you would like to in your discussion.
  - If you have a mobile phone, please put it on silent and if you need to understand it, please step out.
  - Please do get up to get further refreshments.

Questions

1. Let's go round the table – tell us your name and why you got into nursing.

Education

2. Can you tell me about your nursing programme
3. Do you recall when you learnt about pressure area care at the university? If you do, what did it involve?
4. How do you feel you have learnt about pressure area care?
5. What do you hear people say about pressure area care? In practice/at university?

Diversity

6. Who cares about diversity, and how do you know they care?
7. Have you ever considered how pressure ulcers/injuries show on various skin tones? In what way?
8. Do you ever remember talking about skin tones variance at the university or in practice?
9. What about involvement of the patient, family or friends in PI avoidance?
10. As a student, what makes it tough to provide and maintain care for a diverse population group?

Individual

11. How comfortable are you with the amount you know about presentation of pressure ulcers/injuries amongst people with dark skin tones?
12. Where would you go for advice?

Improvements

13. What could the university or practice do to help make you feel more prepared?

Closing Question

14. If you had one minutes to give advice to the Head of School, about how to include diversity in the curriculum, what would you say?
15. Have we missed anything you would like to discuss?

Afterwards

- [ ] Check recorder captured
- [ ] Download digital audio files
- [ ] Lay out food

Appendix V: Interview guide: Nurse educators

OXFORD BROOKES UNIVERSITY

An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds.

Interview Guide for semi-structured interviews with Nurse Educators

Interview Reminders:

- Welcome and Introduction to the research study
- Check information sheet received prior to interview
- Present consent form
- Remind participant of confidentiality in accordance with the NMC Code: Professional standards of practice and behaviour for nurses and midwives (2015)
- Allow time for reading questions

Outline Introduction:

Pressure injury (PI) identification has been widely researched and documented mainly in the United States of America following the introduction of third party payers involvement. As early stage PIs are associated with the presentation of redness, which is difficult to visualise in dark skin tones, people from diverse cultural and ethnic backgrounds are reported to be at a predisposed risk of developing more severe PIs. With the workforce needing to have the skills to provide safe, high quality care wherever the patient is, at all times and in all settings nurses need to have evidence based research to shape care delivery. In the absence of a clear evidence base or educational guidance, nurses have little to rely on but their own clinical expertise and exposure to patient experiences to inform practice in relation to the assessment of people with dark skin tones; this can be seen as unreliable and potentially place a patient at increased risk of harm. To ensure consistent quality care is provided by student nurses it is important to acknowledge that students often receive different learning experiences within practice and as a result students require wide-ranging educational strategies which offer an opportunity to be involved with both familiar and unfamiliar teaching techniques within HEIs.

Questions	Prompts
Professional Knowledge	
1. Do you feel pressure damage fits into this category? Why?	*Affects patient mentally and physically*
2. Over the years numerous different terms have been used to describe wounds caused by pressure. What ones have you heard of?	*Pressure injury, Pressure Sore, Pressure ulcer, Bedsores* *Sensory perception, moisture,*

3. What sort of factors do you think nurses take into account when making initial skin assessments?	*activity, mobility, nutrition, friction & shear.*
4. How well informed to you feel about redness presenting across the skin tone spectrum? Can you tell me more about this?	*Purple or not visible.*
Student Knowledge	
5. To your knowledge are student nurses taught about skin tone variance and presentation of conditions? Where?	*University/ Practice*
Learning Resources	
6. To your knowledge do you explore skin tone variances when teaching?	*Examples*
7. Can you tell me if you think skin tone variance should be recognised in nursing curricula? Why?	*Equal Opportunity* *Health equalities*
8. How do you explore skin tone variation in class? Or do you feel this is covered in practice?	*Practical element*
9. Would the input of a Tissue Viability Nurse make a difference to nurse education in relation to exploring skin tone variances? Why?	*Specialist Knowledge*
Instructional Delivery	
10. What do you feel are the main challenges to the inclusion of skin variation with the nursing curricula?	*Time*
11. What knowledge and skills do you feel are important for the nurse educators to best deliver teaching around skin tone variances?	*Course* *Specialist nurse involvement*

Appendix W: University Research Ethics Committee (UREC)

OXFORD BROOKES UNIVERSITY

Professor Debra Jackson
Director of Studies
OxINMAHR
Faculty of Health and Life Sciences
Headington Campus

7 March 2017

Dear Professor Jackson

UREC Registration No: 171077
An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds

Thank you for the email of 2 March 2017 outlining the response to the points raised in my previous letter about the PhD study of your research student Neesha Oozageer Gunowa and attaching the revised documents. I am pleased to inform you that, on this basis, I have given Chair's Approval for the study to begin.

The UREC approval period for this study is two years from the date of this letter, so 7 March 2019. If you need the approval to be extended please do contact me nearer the time of expiry.

Should the recruitment, methodology or data storage change from your original plans, or should any study participants experience adverse physical, psychological, social, legal or economic effects from the research, please inform me with full details as soon as possible.

Yours sincerely

Dr Sarah Quinton
Chair of the University Research Ethics Committee

cc Joanne Brooke, Second Supervisor
Neesha Oozageer Gunowa, Research Student
Hazel Abbott, Research Ethics Officer
Jill Organ, Research Degrees Team
Louise Wood, UREC Administrator

Appendix X: University Research Ethics Committee (UREC) amendment and extension

OXFORD BROOKES UNIVERSITY

Dr Helen Walthall
Director of Studies
Faculty of Health and Life Sciences
Oxford Brookes University
Marston Road Site

11 April 2019

Dear Dr Walthall

UREC Registration No: 171077
An examination of the education delivered to student nurses within Higher Education Institutions in England surrounding identification of pressure injuries amongst people from diverse backgrounds

Thank you for your email of 8 April 2019 requesting an amendment to the original study for your PhD student Neesha Oozageer Gunowa approved by UREC on 7 March 2017.

Neesha would like to undertake telephone interviews rather than face to face interviews and has provided the amended participant information sheet and consent form. You have confirmed that there are no other changes to the study. On this basis I give Chair's approval for this amendment and extend the UREC approval for a further year, so until 11 April 2020.

Should the recruitment, methodology or data storage change from your original plans, or should any study participants experience adverse physical, psychological, social, legal or economic effects from the research, please inform me with full details as soon as possible.

Yours sincerely

Dr Sarah Quinton
Chair of the University Research Ethics Committee

cc Neesha Oozageer Gunowa, PhD student
Kellie Tune, Research Ethics Officer
Jill Organ, Research Degrees Team
Louise Wood, UREC Administrator

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