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Why you should read this article:

- To understand the main characteristics of master's degree programmes and the expectations of master's students
- To learn about the benefits of a master's degree for patient outcomes
- To consider the relationship between critical thinking and critical reflection

Exploring the benefits of master's level education for patient care, nursing practice and career development

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Abstract

Undertaking a master's degree has become an integral part of nurses' continuing professional development. However, there can be uncertainty among nurses about the requirements and expectations of this level of education, and about the benefits for patients, nursing practice and career development. This article describes the main characteristics of master's degree programmes and the expectations of master's students. It also explores the literature on the benefits of a master's degree in relation to patient outcomes, nurses' clinical competence and professional autonomy, and nurses' career development. The author considers the concepts of, and relationship between, critical thinking and critical reflection, and how nurses' ability to apply these concepts in practice can be enhanced through undertaking master's level education.

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Keywords

academic qualifications, advanced practice, assessment, continuing professional development, education, practice development, professional development, post-registration education, professional, role development

Key points

- *As healthcare provision becomes more complex, nurses require access to an appropriate level of education, such as master's level, to ensure they have the knowledge and skills to meet the needs of patients*
- *Master's degree programmes involve in-depth, self-directed study of a specific area of practice, and equip the student with the knowledge and skills required to undertake extended nursing roles*

- *Engaging in master's level education can enhance nursing practice by fostering nurses' professional growth and improving the quality of patient care they deliver*
- *A master's degree can also support nurses to engage in critical reflection, which can enhance their clinical competence and professional autonomy, and improve patient outcomes*

The nursing profession has undergone significant transformation over the past few decades, notably through developments such as degree-level preregistration education and advanced nursing practice. The changing landscape of healthcare delivery and the increasingly complex needs of patients have been pivotal in initiating and progressing these developments in the nursing profession (Crisp and Iro 2018). In addition, workforce challenges in health and social care, such as staff shortages and heavy workloads, combined with the need for increased specialisation to respond to complex patient needs, have been important drivers for extending nursing roles (NHS 2019).

As healthcare provision becomes more complex, nurses require access to an appropriate level of education, such as master's level, to ensure they have the knowledge and skills to meet the needs of patients now and in the future (Tuckwood et al 2022). Furthermore, access to continuing education is essential for enhancing job satisfaction, improving well-being and, ultimately, improving retention among the NHS workforce (Anderson et al 2021).

Master's level education has been integral to progressing the nursing profession through supporting the development of specialist nursing and advanced practice roles (Gerard et al 2014), and equipping nurses with the expertise and skills they require to effectively lead, manage and deliver healthcare services (Wilkinson et al 2018). It has also prepared nurses to undertake diverse roles in, for example, research, teaching, policymaking, management and leadership (Cooper et al 2019).

Despite the increasing participation in master's level education, some authors have reported an element of uncertainty among some nurses about the distinction between degree-level and master's level study in terms of academic expectations and requirements, and about the benefits of a master's degree for clinical practice and career advancement (Fowler 2007, Löfmark and Mamhidir 2010). This is borne out by the author's extensive experience in higher education. To address these uncertainties, the author details some of the main characteristics of a master's degree programme (post-graduate study) compared with a degree (undergraduate study) programme, and explores some of the benefits for patients and nurses. The author also considers the concepts of critical thinking and critical reflection, which are core aspects of master's level studies.

Characteristics of master's degree programmes

Master's degree programmes have distinct characteristics compared with undergraduate programmes, while the expectations of master's students differ from those of undergraduates. For example, undergraduate preregistration programmes are intended to provide nursing students with a broad foundation of the knowledge, skills and competencies required to meet the Nursing and Midwifery Council (NMC) Standards of Proficiency for Registered Nurses, and apply for entry to the NMC register (NMC 2023). Such programmes prepare nursing students for professional practice by teaching a wide range of subjects – from anatomy and physiology to palliative and end of life care, for example – that encompass the principles of nursing practice, evidence-based practice and personcentred care. In contrast, master's degree programmes involve in-depth, self-directed study of a specific subject or area of practice, and equip the student with the knowledge and skills required to undertake extended nursing roles, such as advanced nurse practitioner, nurse specialist, nurse educator or nurse leader (Abu-Qamar et al 2020).

Master's level study requires a high level of proficiency in understanding, exploring and critically analysing complex concepts. One of the main characteristics of this level education is the use of enhanced critical thinking, which is discussed in more detail later in the article. While critical thinking at undergraduate level may have entailed recalling factual or foundational information and using it to explain ideas and concepts, at master's level a greater emphasis is placed on the student's ability to identify, critically analyse, appraise and synthesise the literature related to their subject of study and to use this to inform – and effectively communicate – their arguments in academic study and/or decision-making in practice (Clark et al 2015, The Quality Assurance Agency for Higher Education (QAA) 2020, Wallace and Wray 2021).

Another distinct characteristic of master's level programmes is the emphasis on personal responsibility and initiative (QAA 2020). Unlike undergraduate programmes, which mainly comprise scheduled taught content and customised resources, master's students are required to initiate and undertake their own exploration of a wide range of resources beyond core programme materials to demonstrate advanced scholarship (QAA 2014, 2020). This involves taking responsibility for their own learning and time management, which requires motivation, self-discipline and the ability to work independently (QAA 2014).

Research is a central component of a master's degree programme and requires extended research skills beyond those acquired in undergraduate programmes. Master's students are encouraged to undertake independent research and/or contribute to existing knowledge in their field of study (QAA 2020). Additionally, master's students are expected to engage in intellectual debates, share perspectives and critically analyse complex issues in greater depth than in undergraduate programmes (Katz 2018). Master's degree programmes usually comprise a small student cohort, in contrast to the large numbers of students on an undergraduate programme (Casey et al 2017). This can promote robust relationships with fellow students and between students and the programme delivery team, as well as encouraging greater engagement in scholarly discussion and activities.

A summary of the main characteristics of master's degrees discussed above is shown in Box 1. Box 2 summarises the expectations of master's graduates as set by the QAA (2014), the body responsible for setting and maintaining academic standards in the UK.

Box 1. Summary of the characteristics of master's degrees

- » Study of a specific subject or area of practice
- » Exploration of subject and materials beyond the core programme resources » Enhanced critical thinking skills
- » Self-directed learning, effective time management and independent study
- » In-depth analysis of complex concepts
- » Independent research
- » Small student cohort

Box 2. Summary of the expectations of master's graduates

The Quality Assurance Agency for Higher Education require master's graduates to demonstrate the following:

- » A systematic understanding and critical awareness of current challenges and/or new insights in their academic discipline, field of study or area of professional practice
- » A comprehensive understanding of techniques applicable to their own research or advanced scholarship
- » Originality in the application of their knowledge, and practical understanding of how research and enquiry techniques are used to create and interpret knowledge in the discipline
- » Critical evaluation of current research and advanced scholarship in the discipline; evaluation and critique of research methodologies including, where appropriate, proposition of new hypotheses
- » The ability to deal with complex issues systematically and creatively, make sound judgements and communicate conclusions clearly
- » Self-direction and originality in problem solving and autonomous planning, and implementation of tasks
- » Continuing advancement of their knowledge and understanding of their topic or practice area, and development of new skills
- » Transferable skills required for employment, including initiative and personal responsibility, decision-making in complex and unpredictable situations and the independent learning skills required to engage in continuing professional development

(Adapted from The Quality Assurance Agency for Higher Education 2014)

Benefits of master's level education

Engaging in master's level education can enhance nursing practice through fostering nurses' professional growth and improving the quality of patient care they deliver. An exploration of the literature identifies numerous benefits of master's level education, which the author has categorised as improved patient outcomes, enhanced clinical competence and professional autonomy and career development.

Improved patient outcomes

Nursing in the UK became an all-graduate profession in 2009, at which point an undergraduate degree became the minimum educational requirement to become a registered nurse. Since then, there has been debate about the effect on patient outcomes of nurses undertaking higher education – which encompasses both undergraduate and post-graduate study. According to Clark et al (2015), this debate has centred on the notion that higher education has prompted nurses to disengage from the act of caring which, the researchers suggested, rejects the value of intellectualism in nursing. However, the benefits of degree-level nurse education are well supported by research. For example, Aiken et al's (2014, 2017) influential studies of nursing skill mix found an association between care delivered by bachelor's degree educated nurses and lower patient mortality rates, higher patient satisfaction ratings and fewer adverse care outcomes, such as urinary tract infections, falls with injuries and pressure sores.

Gaining a degree gives nurses to access to post-graduate education, which has been shown to assist nurses in their development of attributes such as confidence, assertiveness and self-efficacy that are important in positively influencing the delivery of patient care and improving treatment outcomes (Skedsmo et al 2023).

The literature also indicates a positive relationship between care provided by master's level educated nurses and improved quality of healthcare delivery and patient outcomes across a range of settings, including primary care (Hallinan and Hegarty 2016), critical care (Oldland et al 2023), cardiology, paediatrics (Clark et al 2015) palliative care, mental health care, cardiothoracic care and renal care (Ge et al 2015). In addition, nurses' participation in continuing professional development at post-graduate level has been shown to be associated with shorter waiting lists (Wong and Chung 2006), reduced length of hospital stay (Cotterill-Walker 2012), increased patient satisfaction (Bergman et al 2013), improved access to enhanced care pathways, improved chronic illness prevention and management, and increased patient safety (Hallinan and Hegarty 2016). Furthermore, a systematic review and meta-analysis of the association between nurses' educational preparation and patient outcomes reported a significant association between nurses educated at degree level or above and reduced patient mortality rates, lower failure to rescue rates in critical situations and increased use of evidence-based practice (Liao et al 2016).

The literature referred to above indicates that nurses educated at master's level are equipped with the level of knowledge and skills required to act as effective agents of change in healthcare services, and to contribute to improved patient outcomes and experiences.

Enhanced clinical competence and professional autonomy

Undertaking a master's degree has been shown to enhance nurses' clinical competence and professional autonomy. Clinical competence has been defined as 'a mix of skills, knowledge, attitudes and abilities that each nurse must possess to perform acceptably those duties directly related to patient care, in a specific clinical context and in given circumstances in order to promote, maintain and restore the health of patients' (Nabizadeh-Gharghozar et al 2021). Professional autonomy in nursing is challenging to define, however based on the findings of a meta-synthesis, Rouhi-Balasi et al (2020) described the concept as a 'developing trait' that can be achieved 'based on patient-based competence and self-reliance to develop the best care plan for improving patients' health through the professional decision making and professional interactions with other professional team members'.

In a study that explored the significance of a master's degree on nurses' self-perceived competencies, participants reported that this level of education had enhanced their clinical competence and empowered them to deliver evidence-based nursing care (Relster et al 2023). The participants considered the most valuable competencies they gained were critical thinking, acquiring and organising knowledge, gaining a broader perspective on clinical issues, the ability to express opinions, challenge and question practice effectively, and writing and appraising research that they could integrate into their clinical practice (Relster et al 2023). All of these competences are essential for the development of professional autonomy.

A pre-post survey that examined the effects of completing a post-graduate clinical assessment programme on the capabilities of new graduate nurses in New Zealand reported that engagement in this level of education was linked to improved diagnostic reasoning abilities, including the capacity for dynamic thought, sound judgement and problem solving (Doughty et al 2021). Similarly, in a qualitative Norwegian study that examined the application of master's degree competence in practice, the nurse participants believed their education supported them to deliver evidence-based nursing care (Kjellaas et al 2020). However, Kjellaas et al (2020) identified what they referred to as an 'expectation gap', where the participants' expectations of the ways in which they could use their new competencies to improve nursing practice did not always match those of management or other staff. Additionally, the participants thought that the value of a master's degree was not always recognised by management. Despite this, the researchers concluded that nurses' critical thinking abilities gained through undertaking a master's degree were beneficial for patient treatment outcomes and that master's degree-level competence was valuable in the delivery of high-quality patient care (Kjellaas et al 2020).

Carson et al (2023) undertook a scoping review to examine the effect of a master's education on leadership development in adult general nurses who were not employed in advanced practice or leadership roles and the effects of this on practice. The authors found that the skills and attributes required for clinical leadership and the delivery of a quality, safe service, including decision-making, problem solving and troubleshooting, were generated by engaging in this level of education. Furthermore, nurses who undertook a master's degree demonstrated greater self-efficacy, enhanced communication skills and the ability to foster effective and collaborative professional relationships (Carson et al 2023). These findings support those of other researchers, who have reported that a master's degree can increase nurses' self-esteem, increase their confidence to question care decisions, improve their communication skills and prepare them to engage in interdisciplinary collaboration (Cotterill-Walker 2012, Wangensteen et al 2018, Cleary et al 2023).

The literature discussed above emphasises the value of a master's degree in supporting the extension of nursing responsibilities, equipping nurses with the knowledge and skills required for enhanced clinical competence and professional autonomy.

Career development

Some authors have suggested that nurses pursue post-graduate education, not only to maintain high standards of nursing practice and to become more skilled in providing high-quality patient care (Kinsella et al 2018), but also to uphold professional credibility and fulfil their career aspirations (Ng et al 2016).

Gaining a master's degree can support nurses' career development in relation to increased employability (Holloway 2017) and job opportunities (Trusson et al 2019). One exploration of the usefulness of a master's degree for nurses' current employment and professional advancement identified that nurses with this qualification thought that it had, not only enhanced their educational, management and research skills, but also supported their professional advancement through promotion (Massimi et al 2017). Other reported career-related benefits for master's degree educated nurses include improved job satisfaction (Wong et al 2017), elevated professional status (Relster et al 2023) and higher rates of retention (Hallinan and Hegarty 2016).

A summary of the benefits of master's level education, based on the literature discussed in this section, is shown in Table 1.

Table 1. Summary of the benefits of master's level education

Improved patient outcomes	Enhanced clinical competence and professional autonomy	Career development
<ul style="list-style-type: none"> » Increased patient safety » Increased access to enhanced care pathways » Improved chronic illness prevention and management » Reduced length of hospital stay » Reduced length of waiting lists » Increased satisfaction » Reduced mortality » Lower failure to rescue rates 	<ul style="list-style-type: none"> » Enhanced diagnostic reasoning skills » Enhanced communication skills » Enhanced research skills » Enhanced critical thinking skills » Enhanced leadership, including decision-making, problem solving and troubleshooting skills » Increased self-efficacy » Increased confidence » Effective collaborative relationships and interdisciplinary collaboration » Enhanced verbal and written communication skills » Increased confidence and ability to express opinions, and challenge and question practice 	<ul style="list-style-type: none"> » Increased employability » Increased job opportunities » Career advancement through promotion » Increased job satisfaction » Enhanced professional status

Critical thinking and critical reflection

A core expectation of master's graduates is the ability to apply critical thinking skills to academic work and/or research, and in clinical practice (QAA 2014). Critical thinking has been defined as 'a process where different information is gathered, sifted, synthesised and evaluated to understand a subject or issue' (Price 2015). It is an essential skill in enhancing nurses' clinical competence and professional autonomy (Cottrell 2017). The critical thinker recognises that there may be alternative valid possibilities and ideas in relation to a situation or concept and is willing to challenge accepted knowledge, practice and values to arrive at a cogent, coherent and clearly articulated proposition or conclusion (Aveyard et al 2015, Gambrill 2018).

Critical thinking requires the use of a range of skills, including reasoning, interpretation, explanation, judgement and evaluation (Price 2015). Nurses educated to master's level have been shown to exhibit significantly higher critical thinking scores compared with nurses who have studied at undergraduate level only (Drennan 2012). Additionally, Abu-Qamar et al (2020) suggested that master's educated nurses learn to acknowledge biases and recognise gaps in their knowledge which enable them to provide more effective holistic and person-centred care. Examples of the practical application of critical thinking in clinical practice include responding effectively to changes in a patient's health state, providing evidence-based care and integrating research findings into practice (Frohman and Lupton 2020).

Studying at master's degree level can enhance nurses' ability to integrate reflection in their critical thinking (Casey et al 2017), which can be referred to as critical reflection. Critical reflection is a complex concept and there are various definitions in the literature. Ellis (2007), for example, defined critical reflection as a 'higher order thinking process' that encompasses a complex, deep and analytical examination of experiences combined with theoretical or research-based knowledge'. Weiner (2012) described critical reflection as 'perspective changing' and suggested that it enables the person to openly confront their values in respect to, attitudes towards, and beliefs about a given situation. According to Falcó-Pegueroles et al (2021), critical thinking acts as a catalyst for reflecting on reasoning itself with the aim of promoting deep learning, maximising performance and facilitating nurses' professional development.

Critical reflection has an essential role in nurses' critical thinking, equipping them with the tools required to evaluate the effectiveness of their interventions and modify their practice accordingly to improve patient outcomes and optimise healthcare delivery (Jasper and Rosser 2013). Shin et al (2023) suggested that understanding the contextual meaning of a situation and restructuring their experiences to apply what they have learned in practice through critical reflection enables the nurse to 'identify the meaning of nursing' – in other words, critical reflection supports the translation of nurses' experiences into practical knowledge. The process of critical reflection can support nurses to explore their values and suppositions, become more self-aware, and critique different and competing perspectives (Quinn 2023), thus enhancing their clinical competence and professional autonomy. Additionally, examining and interpreting knowledge in a critically reflective way may support nurses to challenge existing practices (Cleary et al 2023), which could support improvements in patient outcomes. Finally, it has been suggested that critical reflection can reduce the gap between theory and practice, support nurses' continuing professional development, and enhance their practice as they use it to continually evaluate and adapt it (Shin et al 2022).

Conclusion

Engaging in master's education has become an integral part of nurses' continuing professional development. It is essential in developing the level of knowledge and skills required to undertake extended, specialist and advanced nursing roles, and to effectively lead, manage and deliver healthcare services. The characteristics of master's degree programmes, and the expectations of master's students, differ from those of undergraduate programmes, requiring greater levels of self-directed study, greater depth of understanding of the subject, and enhanced critical thinking. A master's degree is associated with numerous benefits for patients, nursing practice and nurses' career development. A master's degree can also support nurses to engage in critical reflection, which can enhance their clinical competence and professional autonomy, and improve patient outcomes through continual critical evaluation and adaptation of nursing practice.

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