

Entrepreneurship and nurse entrepreneurs lead the way to the development of nurses' role and professional identity in clinical practice

A qualitative study

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Title page

Title

Entrepreneurship and nurse entrepreneurs lead the way to development of nurses' role and professional identity in clinical practice: Qualitative study

Running title

Entrepreneurship in the nursing profession

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Main text file

10 Title

11 Entrepreneurship and nurse entrepreneurs lead the way to development of nurses' role and
12 professional identity in clinical practice

13

14 Abstract

15 **Aims and objectives:** To explore experiences and perspectives of nurses' transition into
16 entrepreneurship in a clinical and cultural nursing setting and the impact of entrepreneurship on
17 nurses' role and professional identity.

18 **Background:** Entrepreneurship is a relatively unknown phenomenon in international nursing
19 research, and the prevalence of entrepreneurial nurses is only 0.5–1% of all working nurses
20 globally. Unfortunately, several barriers occur within the healthcare system and existing nursing
21 culture, which may affect the potential of bringing entrepreneurship into the nursing profession.

22 **Design:** The qualitative study used a phenomenological–hermeneutical approach based on an
23 interpretative phenomenological analysis and COREQ-guided reporting.

1 **Methods:** Nine individual, semi-structured interviews were conducted face to face (n=6) and by
2 telephone (n=3) with Danish nurse entrepreneurs between February and March 2019.

3 **Results:** The analysis revealed four themes: 1) *prejudice towards entrepreneurship*; 2) *to become*
4 *an entrepreneur in a nursing culture*; 3) *rebellion against the traditional role as employee*; and 4)
5 *challenged professional identity and new professional roles*.

6 **Conclusion:** Nurse entrepreneurs are caught between traditional and new ways of viewing nursing
7 identity, norms, values, and roles, and they face a conflict of professional values and a stereotyped
8 view of 'real' nursing. Our findings show that entrepreneurship entails a huge learning process
9 that develops nurses' ability to think outside the box in a broader health perspective and challenge
10 the existing nursing culture and role. However, nurse entrepreneurs' ability to engage in
11 entrepreneurship is compromised by professional values, the duty to behave as a good nurse, and
12 their own prejudices towards entrepreneurs.

13 **Impact:** Entrepreneurship and nurse entrepreneurs pose a huge potential development of the
14 nursing role and identity, as they challenge the current view on the nursing profession. This
15 development is important for patients and health professionals, as future health challenges call for
16 new ways of thinking and acting.

17

18

19 **Keywords**

20 1. Nurse entrepreneurs

21 2. Nurses

22 3. Nursing

23 4. Entrepreneurs

24 5. Entrepreneurship

25 6. Innovation

26 7. Nursing culture

27 8. Nursing identity

28 9. Nursing roles

10. Nursing profession

Introduction

This study explores the experiences and perspectives of nurses transitioning into entrepreneurship within the Danish healthcare system. Unfortunately, several barriers and challenges occur within the healthcare system and existing nursing culture, which may complicate nurses' ability to participate in entrepreneurship. Therefore, in order to investigate the possible impact of entrepreneurship on nurses' role and professional identity, we find it relevant to contribute with knowledge on nurses' transition into entrepreneurship in a clinical and cultural nursing setting.

Background

Entrepreneurship in nursing is a relatively unknown phenomenon in international nursing research. The term *entrepreneurship* was introduced in literature in 1755 (Nielsen et al., 2014), and within nursing, Florence Nightingale (1820–1910) was identified as the first successful entrepreneur (Boore & Porter, 2011). The definition of entrepreneurship is, *'When you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social'* (Danish Foundation for Entrepreneurship, 2014, p. 1).

Entrepreneurship uses innovation as a method to be creative, get good ideas and to bring innovation to reality (Nielsen et al., 2014). In contrast to innovation, entrepreneurship cf. the entrepreneurial model consists of the three phases 1) creation of opportunity, 2) opportunity evaluation, 3) opportunity organization and thereby creates value for others than the inventor itself (Nielsen et al., 2014). Inspired by the two entrepreneurial nursing roles presented in a literature review by Neergård 2020, the term entrepreneurship in this article covers both nurse entrepreneurs and nurse intrapreneurs (Neergård, 2020), e.g. the term entrepreneurship both entails the creation of a new product and/or company inside and outside an already existing organisation (Nielsen et al., 2014).

The prevalence of entrepreneurial nurses is only 0.5–1% of all working nurses globally, whereby there is a huge potential of bringing entrepreneurship into the nursing profession (Statistics Denmark, 2018). This is needed to challenge the view of the nursing profession and meet a future

1 with a growing elderly population, increased complexity, and higher demands on quality within
2 healthcare, limited financial resources, and labour shortages (Neergård, 2020; Højgaard &
3 Kellberg, 2017). According to international research, many of the challenges within healthcare can
4 be met through innovation and entrepreneurship, where nurses in particular are expected to play
5 an important role (Wilson et al., 2012). This involves openness to new initiatives such as new
6 technology, new ways of working, and other ways of thinking (Brogaard & Petersen, 2014;
7 Waldorff & Dreyer-Kramshøj, 2012).

8
9 Nurses get motivated by different factors when they enter entrepreneurship (Neergård, 2020);
10 however, it is common that many nurses do not see themselves fit in the new role as an
11 entrepreneur (Arnaert et al., 2018). The literature suggests that one of the reasons is that
12 entrepreneurs differentiate in personality traits and characteristics compared to the general
13 population (Sankelo & Akerblad, 2008). Entrepreneurs are more risk-averse and innovative in their
14 thinking, are more action- and goal-oriented, and have a higher need to perform compared to the
15 rest of the population. In addition, entrepreneurs have great internal control and incur a great
16 deal of individual responsibility (Nielsen et al., 2014; Sankelo & Akerblad, 2009; Wilson et al.,
17 2012). Nursing entrepreneurs therefore struggle to reconcile these characteristics with their own
18 professional identity and basic values as a nurse (Arnaert et al., 2018). In nursing, the transition
19 from nurse to entrepreneur can create feelings of being trapped between two different roles
20 because the two roles contain opposing cultural values, habits, behaviours, and norms (Sharp &
21 Monsivais, 2014; Wilson et al., 2012). Furthermore, the literature suggests that nurses lack
22 education, knowledge, and skills within business, as the business field is not an integrated part of
23 the nurse's professional identity (Neergård, 2020; Arnaert et al., 2018; Sharp & Monsivais, 2014).
24 These educational knowledge gaps therefore become a significant challenge for the nurse in the
25 transition to entrepreneur.

26
27 According to the International Council of Nurses (ICN), the healthcare sector is slow to adapt to
28 the expanded nursing role that arises when nurses become entrepreneurs (Sanders & Kingma,
29 2012). One of the reasons may be that entrepreneurship in the nursing profession creates a
30 dilemma for the nurses in order to generate profit and at the same time pursue care. For nurses,

1 this can be perceived as unethical and result in guilt and internal conflict when their nursing
2 services are equated with financial compensation (Arnaert et al., 2018). As a result,
3 entrepreneurship within nursing is described as a societal taboo (Arnaert et al., 2018). Therefore,
4 at a global level, one of the challenges is a lack of recognition and support for nurses who emerge
5 as independent entrepreneurs both among colleagues and in public (Neergård, 2020; Wall, 2013;
6 Wilson et al., 2012).

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11 **Aim**

12 The aim of this study was to explore experiences and perspectives of nurses' transition into
13 entrepreneurship in a clinical and cultural nursing setting and the impact of entrepreneurship on
14 nurses' role and professional identity.

15

16 **Methods**

17 **Design**

18 This qualitative study used a phenomenological–hermeneutical approach to investigate nurses'
19 experiences of becoming entrepreneurs, by using semi-structured interviews based on an
20 interpretative phenomenological analysis (IPA). IPA is based on a phenomenological–hermeneutic
21 approach and was chosen as the analytic framework because it provides a detailed description of
22 the individual's experiences in relation to a given phenomenon (Smith & Osborn, 2008; Smith et
23 al., 2009). The approach enables a new recognition of how nurses make sense of their personal
24 and social world, nursing role, and professional identity related to their experiences with
25 entrepreneurship (Birkler, 2003; Martinsen & Norlyk, 2011; Smith & Osborn, 2008). The
26 consolidated criteria for reporting qualitative studies (COREQ) guided the reporting of the study
27 (Tong et al., 2007).

28

29 **Participants**

1 Participants were recruited using purpose sampling, convenience sampling, and snowball
2 sampling. To identify eligible participants, we searched the Internet and contacted relevant
3 participants by email and LinkedIn. Participants were also identified through contact with
4 innovation departments, and professionals with knowledge of nurse entrepreneurs. In order to
5 sample nurses eligible for interview, we used inclusion- and exclusion criteria as shown in Figure 1.
6

7 **Table 1: Inclusion- and exclusion criteria**

8
9 A total of nine out of 13 nurses participated. The selection process is shown in Figure 1.
10

11 **Figure 1: Participant selection process**

12 13 **Data collection**

14 In total, nine semi-structured interviews were conducted with Danish nursing entrepreneurs
15 between February and March 2019. The interviews lasted between 1 and 1.5 hours and were
16 carried out by the first and second authors, female graduates of Master of Health Science (MHS)
17 and Master of Science (MSc) in Nursing, respectively. Only one interviewer would be present at
18 each interview (Kvale & Brinkmann, 2015), and a senior researcher continuously supervised the
19 interviewers in the process.

20 The participants had no knowledge of the interviewers prior to the interview besides knowledge of
21 the interviewers' professional background and interest in the subject sent by email before the
22 interview. To create a good and familiar setting, the participants decided where the interviews
23 should take place (Kvale & Brinkmann, 2015; Smith & Osborn, 2008). Hence, interviews were
24 conducted face to face at the participant's workplace (n = 5), in the participant's own home (n =
25 1), and by telephone (n = 3). The interviews were guided by an interview guide informed by
26 knowledge gained from the literature and guidelines from IPA (Smith & Osborn, 2008; Smith et al.,
27 2009). It included topics on motivational factors, opportunities, and barriers in the transition to
28 entrepreneurship going from idea to product in order to gain knowledge about the impact of
29 entrepreneurship on nurses' role and professional identity (Appendix 1). As the interview guide is
30 part of a Master thesis the interview guide addresses more topics than this article focuses on.

1 To ensure author reflexivity and a less asymmetrical relation between researcher and participant,
2 researchers prepared thoroughly before each interview (Kvale & Brinkmann, 2015); by getting to
3 know the interview guide, practice how to ask open-ended interview questions and gain
4 knowledge of participants' idea, product or company. All interviews were audio recorded,
5 transcribed verbatim and supplemented by field notes on body language conducted after each
6 interview. It was not possible for the participants to comment on or correct the transcripts or
7 findings.

8

9 **Ethical consideration**

10 In advance, all participants received oral and written information about the study, including
11 information that participation was voluntary and that they could withdraw from the study at any
12 stage. In accordance with the *General guidelines for nursing research in the Nordic countries*
13 (International Council of Nurses, 2004), informed consent was obtained before the interview
14 (Northern Nurses' Federation, 2003). Ethical guidelines on confidentiality and data retention were
15 followed to maintain anonymity (Brinkmann & Tanggaard, 2015; Northern Nurses' Federation,
16 2003; Norwegian National Research Ethics Committees, 2016). All data were anonymised and
17 stored in a secured manner and destroyed after use. Only the researchers had access to interview
18 recordings and transcripts. According to Danish law, interview studies do not require approval
19 from a scientific ethics committee. In addition, according to Danish guidelines, approval from
20 Danish Data Protection Agency was not obtained as the study was part of a Master thesis. There
21 was no obligation to notify the Scientific Ethics Committee, as the study did not deal with
22 biological material.

23

24 **Data analysis**

25 Interviews were transcribed verbatim by the first and second authors using IPA as the analytical
26 framework (Smith et al., 2009). IPA's method of analysis consists of a step-by-step model including
27 six steps, as shown in Figure 2 (Smith & Osborn, 2008; Smith et al., 2009):

28

29 **Figure 2: The IPA step-by-step model**

30

1 The analysis of the first interview was done by the two authors, and the remaining interviews
2 were distributed between the two authors. Subsequently, the authors read each other's analyses
3 and added comments. All findings were discussed with the co-authors. The participants were not
4 offered to provide feedback on the findings but were sent the completed study. The IPA step-by-
5 step model is exemplified in Table 2.

6 7 **Table 2: Example of the IPA steps**

8 9 **Validity and reliability/rigour**

10 The research process is considered valid, because it appears rigorous and transparent through the
11 study (Kvale & Brinkmann, 2015). To warrant validity, quotations were used to link to the
12 participants' original statements. The study findings are considered reliable due to the study's
13 rigor and transparency (Polit & Beck, 2010). The findings cannot claim statistical generalisability;
14 however, this is not the purpose of qualitative research (Kvale & Brinkmann, 2015; Smith &
15 Osborn, 2008). The findings can claim analytical generalisation, as we address the extent to which
16 our findings can be applied in clinical practice or other clinical settings (Kvale & Brinkmann, 2015).

17 18 **Findings**

19 **Characterisation of sample**

20 In total, nine individual interviews were carried out with nurses. The participant characterisations
21 are shown in Table 2.

22 23 **Table 3: Characteristics of participants**

24
25 Participant quotations will be identified with a participant number (P1–P9) and will be presented
26 to illustrate the findings of the study.

27
28 The analysis revealed four closely related and mutually interdependent themes: *1) prejudice*
29 *towards entrepreneurship; 2) to become an entrepreneur in a nursing culture; 3) rebellion against*

1 *the traditional role as employee; and 4) challenged professional identity and new professional*
2 *roles.*

3 In order to explore the complexity of the experiences and perspectives of nurses transitioning into
4 entrepreneurship and thereby what impact entrepreneurship can have on the nursing identity and
5 role, the interdependency of themes is illustrated in Figure 2. For the sake of clarity, the derivative
6 themes are presented separately in the following sections.

8 **Figure 3: Emergent themes and their context for nurse entrepreneurs**

9 **The inner circle represents the basics of the nursing profession (tradition, norms, values, and**
10 **role). The middle circle represents the interdependence among the four themes, including the**
11 **nurse entrepreneurs' experience of emergent contradictory subjects and their interfaces. The**
12 **outer circle shows the overall context where the themes takes place. The arrows show how the**
13 **four themes and the nurse entrepreneur are mutually independent.**

15 **1. Prejudice towards entrepreneurship**

16 In the transition into a nurse entrepreneur, the nurse entrepreneurs often encountered the
17 prejudices that entrepreneurship removes nurses from the nursing profession and that the nursing
18 profession cannot be combined with entrepreneurship and still be nursing:

19 *'Some may think "Where is her focus? She is 100% nurse when she is a nurse here". And I am, but I*
20 *was afraid someone might think my thoughts could be elsewhere. I do a lot to make sure it does*
21 *not occupy me when I care for patients. So, I keep it very separate' (P7).*

22 *'If I had listened to many of the nurses I knew at that time, I would not have been where I am*
23 *today, because they simply did not understand it. Well, the typical attitude I met was "Oh no, what*
24 *do you want to do though? You can **never** return to nursing again." They didn't understand that I*
25 *see what I'm doing today as nursing' (P5).*

26 This points to a widespread concern for views of others and stereotyped expectations from
27 colleagues about what *real* nursing is. For the nurse entrepreneurs, it resulted in an inner struggle
28 and a *'fear of appearing as a bad nurse'*, demonstrating the necessity to take on different roles in
29 order to appear as a 'good' nurse. It created a sense of guilt and self-reproach as the nurse

1 entrepreneurs felt it was illegal to enter entrepreneurship, a feeling compounded by nursing
2 colleagues who felt left behind in clinical practice. This points to a 'traditional' way people view
3 the nursing profession, but also how nurse entrepreneurs challenge this view, as they see nursing
4 as something that goes beyond care and treatment for patients.

5 According to the nurse entrepreneurs, prejudices of others were created by the media, which may
6 have an impact on people's perception of the entrepreneurial role and values:

7 *'Some of the people I worked closely together with while I was an employee in the hospital*
8 *encountered me with "Oh, now you are also a business owner and now you just want to rip us off*
9 *and make money on this"' (P5).*

10 The quote shows that nurse entrepreneurs face prejudice about being money driven rather than
11 helping patients and the healthcare system. This conflict of values made it difficult for the nurse
12 entrepreneurs to identify themselves with the entrepreneurial role. However, the nurse
13 entrepreneurs themselves had prejudice about the entrepreneurial role, expressed through
14 descriptions of businesspeople and entrepreneurs as cynical, money driven, greedy, and
15 unconcerned '*young, smart salesmen in suits*' or even '*psychopaths in suits*'. Quotes like '*nurses*
16 *give without taking*' and '*nurses have other basic values than other start-ups*' show how the nurse
17 entrepreneurs perceived and attributed entrepreneurs' professional values far from their own
18 values as nurses.

19 **2. To become an entrepreneur in a nursing culture**

20 The nurse entrepreneurs described the nursing culture as a zero-error culture as well as a 'we
21 usually do' culture where nurses in general were afraid to do things differently or make mistakes
22 and always kept a line of retreat open:

23 *'It's just a shield, because you are **rightly** afraid of making mistakes in the healthcare system,*
24 *because you always want to do the best possible job for patients. But you also forget that this is*
25 *the way we have developed our **profession**: it is actually trying something out' (P5).*

26 *'I thought we have to do things differently. The thing we keep doing, it no longer fits into the*
27 *society we have. It worked 50 years ago maybe. It was effective then, but it does not fit in now'*
28 *(P8).*

1 The quotes support how nurse entrepreneurs view the need for a cultural change to adapt to
2 present healthcare, but they also highlight the importance of throwing oneself into
3 entrepreneurship and failing, as it creates learning. However, nurse entrepreneurs perceived how
4 other nurses to a lesser extent were willing to take risks and have the courage to challenge
5 existing professional cultures, due to fear of making mistakes. Nurse entrepreneurs met fear and
6 resistance to cultural change and change in general from their nursing colleagues, other health
7 professionals, management, or the outside world. This made it challenging for the nurse
8 entrepreneurs to change habits and routines in the nursing culture.

9 According to the nurse entrepreneurs, the nursing culture differed from cultures such as the
10 medical culture:

11 *'Within the nursing profession, we have not been so good at selling and highlighting ourselves. Like*
12 *"look at me, look at how good I am. I am a nurse and do research and all that stuff". Here we lag a*
13 *little bit behind afterwards' (P3).*

14 This view on nursing culture as a less experimental culture than others highlights a development
15 potential. The nurse entrepreneurs also perceived that nurses usually only assessed problems
16 from the patient's or their own perspective:

17 *'We as nurses are also very good at being self-absorbed, where we would very much like to say*
18 *"What we contribute with is simply the most important". Instead, we should look inward and see*
19 *the bigger picture' (P1).*

20 This supports how nurse entrepreneurs perceive nurses in general as narrow box-thinking and
21 solution-oriented. However, during the entrepreneurial process, the nurse entrepreneurs learned
22 to be less silo-thinking and more process-oriented.

23 Overall, it illustrates a nursing culture where nurses are good at thinking innovatively within their
24 own profession, but with entrepreneurship they also learn to think innovatively 'outside the box'
25 in a broader health perspective.

27 **3. Rebellion against the traditional role as employee**

1 The nurse entrepreneurs experienced a normative attitude towards the traditional role as nurse
2 employee, where it was unusual for nurses and women in particular to create their own job as
3 nurse entrepreneur:

4 *'We (red.: nurse entrepreneurs) are a niche, after all. Of course, over 90%, 95% maybe 98%, will be*
5 *an employee. That is just a basic culture you cannot change' (P6).*

6 The quote supports how nurse entrepreneurs perceive their transition as untraditional compared
7 to their traditional nursing employment. However, there seemed to be an inconsistency in the fact
8 that some nurse entrepreneurs considered themselves risk-averse, but at the same time needed a
9 financial safety net, as many of the nurse entrepreneurs continued to have affiliation to the labour
10 market. In contrast, other nurse entrepreneurs did not consider lack of fixed salary income to be a
11 challenge, as it led to a recognition that it was possible to manage life without wage for a period,
12 without living conditions changing significantly.

13 However, the nurse entrepreneurs described the rebellion against the traditional role as employee
14 as difficult and overwhelming, because it affected the nurse entrepreneurs' amount of leisure
15 time, financial income, or family and friendship conditions:

16 *'Well, it became a life, right. It also became a struggle. To survive. Because suddenly, even if you*
17 *did not want to, you suddenly had to put everything into it' (P2).*

18 It was common for the nurse entrepreneur to be hardworking and willing to put in the extra effort,
19 and it was an advantage that they as nurses were used to overtime work, changing working hours,
20 and spending many hours outside working hours. Thus, the nurse entrepreneurs described the
21 entrepreneurship process as a lifestyle where work and leisure became one, which is in direct
22 contrast to the usual employee role as a nurse with more division between work and private life:

23 *'I would say it requires energy. I think you have to be a special mould' (19).*

24 The quotes emphasises the role as nurse entrepreneur: not everyone can cope with the role due
25 to the difficult entrepreneurial process, nor can everyone step out of the employee role and into
26 an entrepreneurial role.

27

1 4. Challenged professional identity and new professional roles

2 For the nurse entrepreneurs, entering the entrepreneurial world led to a changed perception of
3 their professional identity:

4 *'I have a strong identity as a nurse [clutching both hands to her chest]'* (P1).

5 *'Well, I describe myself as a nurse, yes. But on my business card I actually wrote social*
6 *entrepreneur, because I thought it contained it very well. (...) Now it's a bit more just an*
7 *"entrepreneur". (...) But yes. Nurse, manager, social entrepreneur, yes'* (P8).

8 There was an inconsistency regarding whether the nurse entrepreneurs perceived themselves as
9 an entrepreneur. Thus, the conceptual understanding of the definition of 'entrepreneur' differed
10 for the nurse entrepreneurs, which may have influenced to which degree they identified
11 themselves with the entrepreneurial role. For many of the nurse entrepreneurs, it was a challenge
12 to find their proper professional niche, both before entering entrepreneurship and during the
13 process. It led to identity confusion and created a feeling of not fitting into the traditional
14 definition of a nurse, which made it *'difficult to find a place where you belong'*.

15 The nurse entrepreneurs described a need to challenge and change the existing view on nursing
16 identity:

17 *'There is a classic understanding of what nursing and the nursing profession is, and how to develop*
18 *this, that might need to be dusted off'* (P5).

19 The quote demonstrates how the entrepreneurial process has taught the nurse entrepreneurs to
20 view nursing in other ways than 'traditional' nursing and changed the nurse entrepreneurs'
21 perceptions of their own professional identity. Conversely, there was an inconsistency in how
22 much nurse entrepreneurs challenged the nursing role and understanding of the nursing identity:

23 *'It is also important that we educate nurses to be nurses. Well, we do not have to educate nurses to*
24 *be start-ups. They have to care for some patients, which is the most important thing we are trained*
25 *for'* (P1).

26 Overall, the quote shows how the traditional nursing thinking and understanding of the nursing
27 identity are still deeply rooted in the nurse entrepreneurs.

1

2 **Discussion**

3 Overall, this study has revealed nurse entrepreneurs' experiences of the transition into
4 entrepreneurship and how these experiences are under the influence of prejudices, the existing
5 nursing culture and identity, as well as the traditional employee role. Generally, there is a lack of
6 research in the area of nurse entrepreneurs, and furthermore, little is known about the impact of
7 entrepreneurship on nurses' role and professional identity.

8

9 A significant finding in our study was that nurse entrepreneurs encounter a lot of prejudices from
10 others towards their entrepreneurial role, but they also have many prejudices towards
11 entrepreneurs themselves. Thus, the findings present a duality in prejudices. To a lesser extent,
12 previous research has focused on the nurse entrepreneurs' own prejudices towards the
13 entrepreneurial role. However, research indirectly describes some of the prejudices nurse
14 entrepreneurs face, as the transition from nurse to entrepreneur contains opposing cultural
15 values, habits, behaviours, and norms (Sharp & Monsivais, 2014; Wilson et al., 2012). It is clear it
16 can be a struggle to have one's new professional identity recognised as a nurse entrepreneur from
17 the outside world (Neergård, 2020; Arnaert et al., 2018; Sanders & Kingma, 2012; Sharp &
18 Monsivais, 2014; Wall, 2013, 2014). In line with our findings, this might be due to the fact that
19 entry into entrepreneurship is equated with disloyalty to nursing colleagues and other health
20 professionals (Copelli et al., 2019; Wall, 2014). The findings demonstrate that basic nursing values
21 are based on care and empathy, which is in contrast to prejudices towards entrepreneurs.
22 However, whether the findings suggest a lack of recognition and support, it might be reinforced by
23 these prejudices about entrepreneurs or a lack of identity definition as a nurse entrepreneur
24 (Wall, 2013; Wilson et al., 2012).

25 In accordance with international research, our findings also demonstrate an identity confusion and
26 how nurse entrepreneurs struggle to reconcile entrepreneurial characteristics with their own
27 professional identity and basic values as nurses (Neergård, 2020; Arnaert et al., 2018; Sharp &
28 Monsivais, 2014; Wilson et al., 2012). Our findings revealed that nurse entrepreneurs search for
29 their true professional identity during their transition. This illustrates how difficult it can be to
30 describe or take on a 'new' professional identity as a nurse entrepreneur, and it points to a

1 worldwide challenge for nurses to pinpoint an identity as a nurse entrepreneur. Nevertheless, our
2 findings illustrate how the entrepreneurial process has taught nurse entrepreneurs to view nursing
3 in another way than 'traditional' nursing and challenged their views on their own professional
4 identity. The study underlines how entrepreneurship has challenged nurse entrepreneurs'
5 prejudices about entrepreneurs, creating opportunity to develop the nursing profession's
6 traditions, prejudices, and subject areas.

7
8 Another significant finding from this study was that the existing nursing culture compromises the
9 possibility of engaging in entrepreneurship, as a traditional understanding of the nursing identity is
10 deeply rooted in the nurse entrepreneurs. In order to be able to practice entrepreneurship, this
11 may indicate a need for development of the nursing profession and culture. Therefore, it can be
12 discussed whether it is possible to change this embedded nursing culture. On the one hand, the
13 findings reinforce that nurses in general lack courage to challenge the existing professional culture
14 and to dare to fail. These findings may indicate that the zero-error culture and we 'usually do'
15 culture inhibit the ability to think innovatively, making it difficult to develop new ideas. A Canadian
16 meta-analysis highlights how excluding or discouraging entrepreneurial practice in a profession
17 stifles its growth, makes it less adaptable to change, and limits the development of new services
18 that fill crucial needs (Arnaert et al., 2018). Thus, it can be argued how nursing culture can be a
19 sociological barrier that discourages entrepreneurship (Nielsen et al., 2014). On the other hand,
20 the findings highlight how entrepreneurship gives the nurse entrepreneurs courage to challenge
21 the existing professional culture, as the nurse entrepreneurs during the entrepreneurial process
22 learned to be less silo-thinking and more process-oriented.

23 In this study, two of the participants had received formal entrepreneurial education and three
24 participants had received entrepreneurial consulting through entrepreneurial ideation
25 competitions. Nevertheless, all participants requested knowledge and competences within
26 business, innovation and entrepreneurship, legal matters, product development and economy. As
27 education and courses in entrepreneurship are believed to make a positive contribution to the
28 entrepreneurial activities and process (Nielsen et al., 2014), and in order to meet the demands of
29 the future healthcare system, nursing education needs to provide students with the right
30 knowledge and skills for entrepreneurship (Arnaert et al., 2018; Bagheri & Akbari, 2018; Colichi et

1 al., 2019). Research shows that the attitude towards entrepreneurship is strengthened through
2 entrepreneurial education, increases students' desire to become entrepreneurs, and even creates
3 more entrepreneurs (Neergård, 2020; Moberg et al., 2015; Martin et al., 2013;). This indicates a
4 positive impact on introducing entrepreneurship already at the bachelor level or even in primary
5 or secondary school, and it stimulates a more innovative culture, perhaps because it makes it
6 possible for nurses to practice failing in a safe, non-zero-error culture. Potentially, this can affect
7 the clinical nursing culture as well, as entrepreneurial education teaches nurses to think outside
8 the box in a broader perspective, enabling the creation of solutions that can benefit more
9 professionals and patients. Thus, the ICN points out that healthcare can be slow to adapt to the
10 expanded nursing role that occurs when nurses become entrepreneurs (Sanders & Kingma, 2012),
11 suggesting how the nursing culture can be changed through entrepreneurship with time. Overall,
12 whether in institutional education or a clinical environment, entrepreneurship in general can play
13 a positive role in the development of the nursing culture.

14
15 Our study also revealed that the nurse entrepreneurs were challenged by their traditional role as
16 employee and work-life balance as they came to realise the many other ways to work besides the
17 traditional employee role. According to the literature review by Neergård 2020, in 51% of the
18 literature, nurses choose entrepreneurship to control their workdays and careers and to increase
19 autonomy and job satisfaction after feeling discontent with traditional employment (Neergård,
20 2020). A similarity is seen within other literature, where nurses' traditional understanding of their
21 own professional role was expanded during the entrepreneurial process (Sankelo & Akerblad,
22 2009; Wall, 2013). This worry-free approach to entering entrepreneurship can be attributed to the
23 fact that a background in nursing created confidence because it was always possible to return to
24 the role as a nurse employee. Furthermore, we found that nurse entrepreneurs perceived the
25 entrepreneurial process as difficult and time consuming. In line with the literature, particularly
26 partial liberation from the traditional employee role can lead to double or triple working hours
27 (Boore & Porter, 2011; Colichi et al., 2019; Copelli et al., 2019). Becoming an entrepreneur
28 involves dealing with uncertainty, complexity, and risk (Nielsen et al., 2014), and there may be
29 periods of great workload, stress, and ambiguity, as well as periods of stability and predictability
30 (Sankelo & Akerblad, 2009). Conversely, research suggests that anxiety, uncertainty, and stress in

1 the transition may cause nurse entrepreneurs to return to their former role as a nurse (Sharp &
2 Monsivais, 2014). Our findings suggest that the time perspective was a barrier for the nurse
3 entrepreneurs, as it required a special mould to prioritise in the way that the entrepreneurship
4 process required. This may complicate a rebellion against the traditional role as employee. Overall,
5 our findings suggest that it is not only nurses who must grow accustomed to new potential
6 professional roles, but also nurse entrepreneurs themselves, in order to challenge the current
7 nursing culture. In line with the literature, our findings indicate that nursing entrepreneurs during
8 the process learn to cope with the high work load and time pressure that entrepreneurship entails
9 (Sankelo & Akerblad, 2009), which can have a positive impact on the ability to challenge and
10 change the nurse's current role. Taking on new professional roles can thereby have future
11 significance by creating the opportunity to achieve greater understanding and a broader
12 perspective on care and nursing, increasing the value of care and nursing across professional
13 groups and health services (Wall, 2013).

14

15 This study revealed a normative attitude in the nursing culture that a 'real' nurse must do good
16 and make a difference. This normative attitude within the nursing profession is also present in
17 international literature as it portrays entrepreneurial nurses as nurses first and foremost, where
18 nurses are trained to function as 'good' employees who carry out orders (Neergård, 2020; Copelli
19 et al., 2019; Wall, 2013). Kari Martinsen (2010) explains that good nursing must be learned from a
20 professional judgment by assessing how we best act in the situation based on trust, openness of
21 speech, mercy, and interdependence. In relation to our findings and based on the above, it can be
22 argued that nurse entrepreneurs act out of their duty to fulfil the normative role as a 'good nurse'.
23 However, research emphasises that the 'good nurse' is contrary to the entrepreneur's logic, which
24 is based on the creation of innovation and new opportunities (Copelli et al., 2019). This indicates
25 that the duty to be a good nurse becomes a barrier in the transition from nurse to entrepreneur
26 and clarifies a need to change the existing perception of what a 'good' nurse is. According to
27 Martinsen (2010), the professionally skilled nurse must remain reflective and critical on both
28 working conditions and structures within the field of care. Thus, findings indicate that the nurse
29 entrepreneurs have been reflective and critical throughout the entrepreneurial process and
30 thereby challenged traditional nursing thinking, their own prejudices, and the nursing role. This

1 indicates that the nurse entrepreneurs through entrepreneurship learn to think reflectively and
2 critically, which can contribute to develop and improve working conditions and cultures in the field
3 of nursing. This also points out that the entrepreneurs' logic is not as contradictory for nurses as
4 believed, as similarities are seen with the above-mentioned skills described by Martinsen. Through
5 entrepreneurship, the nurses gain influence in providing health services in new ways, which can
6 contribute to better quality of care, access to necessary services, and increased patient
7 empowerment (Neergård, 2020; Wall, 2013). This is because the attitude of what 'good' nursing is
8 to a greater extent is adapted to the demands that society places on the field of health (Boore &
9 Porter, 2011; Højgaard & Kellberg, 2017). Thus, if the attitude towards the 'good' nurse changes
10 and develops, it may have a positive effect on the healthcare system in the future.

11

12 **Strengths and limitations**

13 The purpose of the study was to provide in-depth information about nurse entrepreneurs'
14 experiences with entrepreneurship, so a qualitative research design with an IPA analytical
15 framework is well chosen (Kvale & Brinkmann, 2015; Smith & Osborn, 2008). The strength of using
16 IPA is that multiple readings and active work with the transcriptions made it possible to become
17 very familiar with the data material. IPA is very structured and allowed us to access the analysis
18 systematically throughout all stages. IPA recommends using between three and six informants in
19 order to avoid excessive data flow (Brinkmann & Tanggaard, 2015; Smith & Osborn, 2008). Since
20 we were two interviewers, we involved nine participants. During the interviews, several
21 commonalities between participants were found, indicating an approach towards data saturation
22 (Brinkmann & Tanggaard, 2015). Even though too much data can hinder the ability to conduct a
23 coherent and innovative analysis and interpretation (Brinkmann & Tanggaard, 2015), this is
24 considered a strength, as it may indicate that a smaller number of participants would not have
25 provided such an in-depth and nuanced amount of data. However, the study and substantiate data
26 saturation could be strengthened by adding field observations on how the participants have
27 developed their nursing roles and professional identity in clinical practice.

28

29 Another study limitation could be the location, as some participants (n=3) chose locations where
30 the interview was interrupted. This might have affected the degree of intimate and in-depth

1 answers. On the other hand, it is a strength that the participants chose the time and place for the
2 interview, as it might make them more relaxed and confident in the situation (Smith et al., 2009).
3 Author reflexivity was strengthened by awareness of how the researchers' attitudes and pre-
4 conceptions affected the interview situation. In order to respect the informants' integrity and
5 vulnerability the interviews were aware of the informant's body language and used active listening
6 and neutral questions (Smith & Osborn, 2008; Norwegian National Research Ethics Committees,
7 2016). Thus, during the three telephone interviews researchers were more guided by the
8 interview guide. We followed the interview guide less rigorously as the interviews were
9 conducted, indicating an open and actively listening in the interview situation (Smith et al., 2009).

10

11 **Conclusion**

12 In conclusion, nurse entrepreneurs are caught between traditional and new ways of viewing
13 nursing identity, norms, values, and roles. Nurse entrepreneurs face a complex context in clinical
14 practice when met with stereotyped views on 'real' nursing, such as the existing nursing culture,
15 stigmatised view on the nursing employee role, and conflict of professional values. Our findings
16 show that entrepreneurship entails a huge learning process, as it develops nurses' ability to think
17 outside the box in a broader health perspective and challenges nurses' own stereotyped views on
18 nursing and entrepreneurship. Nurse entrepreneurs affect the nursing identity and role in clinical
19 practice by questioning what 'real' nursing is, giving the nurses courage to challenge the existing
20 nursing culture and view on the traditional professional role and employee role. However, our
21 study points out that nurse entrepreneurs' ability to engage in entrepreneurship is compromised
22 by nursing culture and professional values, the duty to behave as a good nurse, and their own
23 prejudices towards entrepreneurs.

24

25

26 **Implications for practice, research, education, management and policy**

27 This study provides knowledge on how development of the nursing role and identity through
28 entrepreneurship and entrepreneurial nurses is important and can benefit nursing management,
29 patients, healthcare professionals as well as the rest of the healthcare system. By stimulating a
30 more innovative culture through entrepreneurship and nurse entrepreneurs, it is possible to

1 increase the number of nurses who choose to become a nurse entrepreneur and manage to
2 develop a product or a company inside or outside the clinical environment. The nursing culture
3 can be changed to be more receptive to entrepreneurship by introducing entrepreneurial activities
4 already at the educational level, which can have a positive effect on nurse entrepreneurs' fear of
5 making mistakes and resistance to change. Thus, further research is required to understand the
6 impact entrepreneurship and entrepreneurial nurses can have on clinical practice.

7

8 **Conflict of interest statement**

9 No conflict of interest has been declared by the authors.

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Introduction

Welcome, thank you for participating

Introduction of researchers; name, previous work experience, study

- The interview lasts approx. 30-60min and will be recorded on a dictaphone
- The interview is subsequently transcribed. No one but the researchers us will listen to the recordings, and all data will be deleted afterwards
- No information referring to you, your colleagues or your department will be passed on, so you remain anonymous

Interview purpose

- The purpose interview is of the to examine your experience of becoming an entrepreneur through the development of innovative solutions that improve clinical practice
- I am interested in hearing about your experiences with (idea / product name) and how the process from idea to product has been

Declaration of consent is handed out and signed

Do you have any questions before we start?

Dictaphone is turned on

Questions

Tell me about your professional background:

Age, how many years of experience do you have as a nurse? Continuing education?

Can you briefly tell us about your project / idea / company and where in the process you are right now?

Are you part-time / full-time / self-employed - and since when?

Research questions	Interview questions
What motivates nurses to become entrepreneurs?	<ul style="list-style-type: none">• Can you tell me how you got the idea for the product/idea/company?• Can you try to put into words how you experienced starting a project? What made you start the project?

	<ul style="list-style-type: none"> • What significance does your product/idea/company have for you? • Have you previously worked with innovation and development in your career? Can you tell more about it? What experiences have you been able to use? • How much did you know about being an entrepreneur before you started on your product/idea/company? How did it affect your motivation to start the project?
<p>What opportunities does the nurse experience in the development from idea to product?</p>	<ul style="list-style-type: none"> • Can you tell me what help and support you have received during the process? Do you have any examples of specific situations where you received help or positive feedback? Which help has been most important? <i>Internally: Family, friends</i> <i>Externally: mentors, the workplace, management, collaboration, patients</i> • Which nursing competencies have you been able to use during the development? Has the project provided you with competencies that you can apply in clinical practice or in your current job? • How have you experienced the transition from being a nurse to being an entrepreneur? What does an entrepreneur mean to you? Can you tell me something more about how you see yourself? <i>Does she see herself as a nurse or entrepreneur</i> • Where do you see yourself in 5 years? Do you see yourself developing more things? <i>Back in practice, own business, develop more products for the health organization</i> • Where do you see your product/idea/company in 5 years?
<p>Which barriers does the nurse experience in the development from idea to product?</p>	<ul style="list-style-type: none"> • Can you describe a situation or experience that was particularly challenging for you during the process? Can you give other examples? How did it affect you? • How do you think others perceive your idea/product/company? Do you remember situations where you have experienced resistance?

	<p>How did you react to that?</p> <ul style="list-style-type: none">• If you had to do it all over again, what competences/knowledge would you like to have? <i>Education, knowledge of business</i>• Based on the experience you have described in the last half hour/hour, what advice would you pass on to other nurses who want to develop an idea/product/company in the future?
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Debriefing

Thank you for your answers. I have no further questions.

Do you have anything you want to add or any questions before we end the interview?

Dictaphone is turned off

Inclusion criteria	Exclusion criteria
Registered Nurses (RNs)	Nurses with less than 1 year experience in clinical practice
Nurses who alone or together with colleagues came up with an idea and took initiative to develop a product and/or company that improves clinical practice	Nurses with level of education higher than the master level*
Nurses with employment in a health organisation at the time the idea occurred	Nurses who have developed products and/or companies where the idea has emerged at management level
Nurses who have either developed a product and/or a company	Nurses who have developed a product and/or company unrelated to clinical practice or conducted entrepreneur activities not focused on nursing actions
	Nurses who have developed products and/or companies more than 10 years ago
	Nurses who have worked on innovation projects that have not led to entrepreneurship**

* Nurses with education higher than master level were excluded because the study cf. the theoretical framework was interested in nursing-initiated bottom-up processes, ideas, products or companies and to a lesser extent management- and organizational-specific top-down driven processes and initiatives

** Nurses who have worked on innovation projects that have not led to entrepreneurship were excluded to ensure that all included nurses were working at an entrepreneurial level with products and/or companies that creates value for other than the nurse. These nurses have not gone through all three stages of the entrepreneurial model as stated in the background section (Nielsen et al., 2014).

Author

Single interview analysis				Cross-interview analysis		
Phase 1 Reading and re-reading	Phase 2 Initial notes	Transcript	Phase 3 Emergent themes	Phase 4 Correlation across emergent themes	Phase 5 Continue with the other interviews	Phase 6 Master table
Repeated readings of one transcript and listening to the recording	Meets skepticism, became 'someone else' in the eyes of others Felt that people did not know you anymore — identity crisis? People's prejudice on incentives: nurse will help the healthcare system, business owners make money Hard to recognise others' prejudice	<i>'I was met with a wall of skepticism: "Now you just want to make money." It was like they didn't know me now, now you were a completely different person. It was hard to get through that one' (P5).</i>	Difficulties in recognising the prejudices of others towards business owners Feeling people don't know you anymore To feel like the same, while others see you as a completely different person Other people's view of business owners When others question your identity and treat you differently	Challenged professional identity and new professional roles Conflicts of value Prejudice towards entrepreneurship	Go through phases 1–4 for the next transcriptions individually	Becoming an entrepreneur in a nursing professional culture

Sex	1 male 8 females
Age	36–63 years old
Years of seniority as registered nurses (RNs)	6–34 years
Supplementary education	Master's degree (n=3) Other specialised nursing education (n=4)
Received formal entrepreneurial training/education before or during their entrepreneurial activity	Diploma degree in innovation and entrepreneurship (n=2) Entrepreneurial ideation competition (n=3)
Entrepreneurial nursing role	Nurse entrepreneur (n=5)* Nurse intrapreneur (n=4)**
Work status at the time of the study	Working full time in their own business (n=4) Regionally employed nurses (n=4) Municipal nurse (n=1)

* Nurse entrepreneur refers to nurses that autonomously drives an entrepreneurial process through new venture creation, for instance, by establishing health care institutions or home visit services and products (Neergård, 2020).

** Nurse intrapreneur refers to nurses that initiates an entrepreneurial process as an employee in an established public or private organisation/institution, e.g. entrepreneurs who do not own a business of their own, but acts as corporate employee entrepreneurs (Neergård, 2020).

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