Decision-making in obstetric emergencies. Individual differences and professional boundaries.

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Decision-making in obstetric emergencies

Individual differences and professional boundaries

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GABRIEL RAOUST serves as a Senior Consultant in Obstetrics and Gynecology at Ystad Hospital, and has a keen professional interest in the unpredictable and collaborative nature of delivery care. A dilettante in essence, his affinity for the visual arts and postmodern philosophy subtly informs and shapes his research.

This thesis delves into the intricate influence of obstetricians', gynecologists', and midwives' personal and professional identities on decision-making in obstetric emergencies. It highlights the complex and sometimes conflicting aspects of such situations, setting the stage for rethinking collaborative practices. Given the significant issues identified, the thesis suggests a need for targeted interventions in maternity care, aimed at unifying the goals and values of obstetricians and midwives.

"Livet kan kun forstås baglæns;
men det må leves forlæns"
– Søren Kierkegaard

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Decision-making in obstetric emergencies

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Individual differences and professional boundaries

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Abstract

In affluent nations, variations in obstetric care, particularly during emergencies, perplexingly manifest in differing intervention and outcome rates. Although these variations mirror systemic disparities, they are also suggested to reflect the interplay of social and professional interactions between obstetricians/gynecologists and midwives, stemming from adherence to distinct professional paradigms and the influence of personal factors on decision-making and collaboration. This thesis sought to unpack these complexities by exploring individual differences and professional perspectives in decision-making during obstetric emergencies through a blend of interpretive and statistical approaches in a series of studies.

Utilizing a narrative methodology with in-depth interviews and subsequent thematic analysis, Papers I and IV investigated the experiences of obstetricians/gynecologists (N=17) and midwives (N=27) during obstetric emergencies. Paper I used images of artwork as associative triggers in interviews, helping to illuminate decision-making processes, while Paper IV critically evaluated its thematic findings through the sociological lens of "boundary work". Concurrently, Papers II and III employed psychometric instruments, including online questionnaires and the Five Factor Model personality test, to collect and analyze data from obstetricians/gynecologists and midwives (N = 472 for Paper II and N = 447 for Paper III). This involved investigating variables, such as Decision-Making styles, Negative Impact of Inductions, Healthcare Crisis Experience, and Job Satisfaction, alongside personality dimensions and complementary variables through various statistical tests.

The studies revealed a diversity of findings: Paper I highlights that obstetricians/gynecologists navigate flexible decision-making environments, crystallizing into one of three distinct styles intertwining with their identities and practice narratives. Paper II unveils a specific personality profile among obstetricians/gynecologists and demonstrates correlations between personality traits, particularly Neuroticism, and distinct decision-making styles, while spotlighting gender and experience as significant influential factors. Paper III identifies divergent perspectives between the professions regarding labor inductions and job satisfaction, and highlights correlations among job satisfaction, views on labor inductions, and Neuroticism. Lastly, Paper IV underscores the multifaceted roles of midwives, who navigate, and sometimes resist, medical hierarchies to advocate for women's physical and emotional well-being during childbirth, in a manner reshaping healthcare norms yet potentially sustaining historical tensions with obstetricians/gynecologists.

This research highlights the intricate ways in which the personal and professional identities of obstetricians/gynecologists and midwives impact decision-making during obstetric emergencies. These insights invite a thoughtful reevaluation: How can training, support systems, and collaboration be recalibrated to encompass these influential dynamics comprehensively? How can we as practitioners create work environments that not only acknowledge but also actively integrate varied personal perspectives and professional values and goals?

Key words: Childbirth, Midwives, Physicians, Decision-Making, Individual Differences, Emergencies, Medical Education, Intrapartum Care, Patient Safety, Teamwork, Clinical Competence, Personality, Professional Identity

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Decision-making in obstetric emergencies

Individual differences and professional boundaries

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“Desire, is to build an arrangement”

— Gilles Deleuze in his interview with Claire Parnet, 1988

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I. **Raoust, G.**, Bergström, J., Bolin, M., & Hansson, SR. (2022). Decision-making during obstetric emergencies: A narrative approach. *PLoS ONE* 17(1): e0260277. https://doi.org/10.1371/journal.pone.0260277

II. **Raoust, G.**, Kajonius, P., & Hansson, SR. (2023). Personality traits and decision-making styles among obstetricians and gynecologists managing childbirth emergencies. *Sci Rep* 13, 5607. https://doi.org/10.1038/s41598-023-32658-6

III. **Raoust, G.**, Hansson, SR., & Kajonius, P. (2023). Swedish maternity care professionals' perception of labor induction. Manuscript submitted 08 Aug 2023. *Midwifery*.

IV. **Raoust, G.**, Thies-Lagergren, L., Bergström, J., Andersson, M., Hansson, SR., & Selberg, R. (2023). Navigating the tensions: Swedish midwives' boundary work and experiences of their role in obstetric emergencies. Manuscript submitted.

Abbreviations

Ob&Gyn:	Obstetricians and gynecologists
CS:	Caesarean Section
FFM:	Five Factor Model
N:	Neuroticism
E:	Extraversion
O:	Openness
A:	Agreeableness
C:	Conscientiousness
HH:	Honesty-Humility
EFA:	Exploratory factor analysis
RMSEA:	Root Mean Square Error of Approximation
TLI:	Tucker-Lewis Index
IPIP-NEO:	International Personality Item Pool – Neuroticism, Extraversion & Openness
SSOG:	Swedish Society for Obstetrics and Gynecology
NII:	Negative Impact of Inductions
HCE:	Healthcare Crisis Experience
JS:	Job Satisfaction
SAM:	Swedish Association of Midwives
SAHP:	Swedish Association of Health Professionals

Abstract

Background: Obstetric care, even in nations with standardized practices, reveals persistent variations in intervention and outcome rates, especially during emergencies. It has been suggested that these variations reflect not only systemic disparities but also arise from the interactions between obstetricians/gynecologists and midwives, each adhering to their respective paradigms, with personal factors also influencing decision-making and collaborative strategies.

Aim: The thesis' aim was to investigate individual differences and professional perspectives in decision-making in obstetric emergencies.

Methods: A combination of interpretive and statistical approaches was used in a series of studies.

Papers I and IV employed a narrative methodology, using in-depth interviews and subsequent thematic analysis, to explore the experiences of obstetricians/gynecologists (N=17) and midwives (N=27) in the context of obstetric emergencies. Specifically, Paper I incorporated images of artwork as associative triggers during interviews to elucidate decision-making processes. Concurrently, Paper IV critically navigated its inductive findings through the sociological concept of "boundary work".

In Papers II and III, data from obstetricians/gynecologists and midwives (N = 472 in Paper II, and N = 447 in Paper III) were collected using various psychometric instruments, including specialized online questionnaires and the Five Factor Model personality test. Variables – such as Decision-Making styles, Negative Impact of Inductions, Healthcare Crisis Experience, and Job Satisfaction – were analyzed alongside personality dimensions and other complementary variables. The statistical tests involved comparisons and correlations, with multiple linear regression additionally employed in Paper II and mediation and moderation analyses applied in Paper III.

Results: Paper I shows that obstetricians/gynecologists navigate a flexible decision-making environment, adapting their choices beyond protocols and responding to the immediate situation. This adaptation crystallizes into three distinct decision-making styles, each blending aspects of physicians' identities and practice narratives.

Paper II reveals that obstetricians/gynecologists have a specific personality profile compared to the general Swedish population, with lower levels of Neuroticism (d = -1.09) and higher in Extraversion (d = 0.79), Agreeableness (d = 1.04), and Conscientiousness (d = 0.97). Notably, personality traits, particularly Neuroticism, are correlated with distinct decision-making styles. Furthermore, the study identifies sex/gender and work experience as significant factors: women and those of older age lean toward a Team decision-making style, whereas increased years of clinical experience corresponds with a reduced dependency on Team-based decision-making.

Paper III shows a divergence in perspectives between obstetricians/gynecologists and midwives regarding labor inductions (d = 1.39) and job satisfaction (d = -0.26). In terms of personality dimensions the two professions show similar trait profiles. An observation from this study is the correlations among job satisfaction, the views on labor inductions, and Neuroticism. A negative view of labor inductions mediates the relationship between Neuroticism and job satisfaction (P = .017), with 10% of the total effect.

Paper IV highlights midwives' multi-faceted roles, navigating and sometimes resisting medical hierarchies to advocate for the well-being of birthing women, both physically and emotionally. While their efforts reshape healthcare norms, they also inadvertently risk hampering collaborative practices, potentially sustaining historical tensions with obstetricians/gynecologists.

Significance: The findings in this thesis confirm that making decisions during obstetric emergencies is influenced by the personal and professional identities of the obstetricians/gynecologists and midwives involved. This isn't just a coincidental observation but a crucial point, calling into question our current practices in maternity care. Are the forms of training and collaboration encompassing enough of the diverse, and at times divergent, perspectives and expertise present in the field? Moreover, how can we as practitioners create a work environment that not only acknowledges but also harmonizes disparate professional values and objectives?

Summary in Swedish

Det finns fortfarande oförklarliga skillnader i förlossningsrelaterade åtgärder och utfall mellan olika länder och mellan olika förlossningsenheter in om samma land. Framför allt vad gäller i akuta förlossningssituationer. Även om skillnaderna till viss del speglar olika typer av sjukvårdsystem, finns det antydan till att andra faktorer har inflytande på beslutsfattandet, så som individers påverkan och de yrkesmässiga interaktionerna mellan obstetriker/gynekologer och barnmorskor.

Denna avhandling syftade till att utforska dessa komplexa förhållanden genom att undersöka individuella skillnader och professionellas perspektiv i beslutsfattande i akuta förlossningssituationer. Studierna omfattar en blandning av kvalitativa och kvantitativa metoder.

I Artikel I och IV användes narrativ metodik med fördjupade intervjuer och efterföljande tematisk analys. Båda artiklar undersökte obstetrikers/gynekologers- (N=17) respektive barnmorskors (N=27) erfarenheter från akuta förlossningssituationer. Artikel I använde konstverk som associativa triggers i intervjuerna, för att fördjupa samtalen kring beslutsprocesserna, medan Artikel IV kritiskt utvärderade de narrativa teman som uppstod genom det sociologiska begreppet av ”boundary work”. I Artikel II och III användes psykometriska instrument, inklusive specifika online-formulär och Fem Faktor Modellens personlighetstest, för att samla in och analysera data från obstetriker/gynekologer och barnmorskor (N = 472 för Artikel II och N = 447 för Artikel III). Detta innebar att undersöka nyckelvariabler, såsom Beslutsstilar, Negativ Inverkan av Induktioner, Erfarenhet av Vård-relaterade Kriser, och Jobbnöjdhet, samt personlighetsdimensioner och kompletterande variabler med hjälp av olika statistiska tester.

Studierna gav flera resultat: från Artikel I framkom det att obstetriker/gynekologer både anpassar sig och skapar förutsättningar för beslut. Detta gestaltade sig i en identitet och beslutstil. Tre distinkta beslutstilar utkristalliserade sig. Artikel II visade att obstetriker/gynekologer har en specifik personlighetsprofil som skilde sig från den svenska befolkningen i stort. Den visade även samband mellan personlighetsdrag, särskilt Neuroticism, och de olika beslutsfattande stilarna. Även kön och erfarenhet är inflytelserika faktorer. Artikel III identifierade skilda perspektiv mellan obstetriker/gynekologer och barnmorskor gällande igångsättning av förlossning och jobbnöjdhet. Artikeln fann även samband mellan

jobbnöjdhet, synen på igångsättning av förlossning och Neuroticism. Slutligen understryker Artikel IV barnmorskors mångfacetterade roller, som anpassar sig till och ibland motstår befintliga medicinska maktstrukturer för att förespråka kvinnors fysiska och känslomässiga välbefinnande under förlossningen, även i akuta situationer. Detta tycks främja en holistisk syn på födandet samtidigt som det upprätthåller historiska spänningar med obstetriker/gynekologer.

Denna forskning understryker betydelsen av de personliga och professionella identiteterna hos obstetriker/gynekologer och barnmorskor vid beslutsfattande i akuta föreläsningssituationer. Detta bjuder in till reflektion: Hur kan träning, lärande, stödsystem och det professionella samarbetet omkalibrera till denna påverkan? Hur kan vi som praktiker skapa en arbetsmiljö som inte bara tar hänsyn till skillnader utan även aktivt integrerar olika personliga och professionella värderingar och mål?

Preface

At the outset, this project was inspired by my experiences as a young trainee in obstetrics and gynecology. During those formative years, one dedicates quite a bit of time to observing the actions and behaviors of more experienced colleagues and midwives, particularly during those "terrifying" obstetric emergencies. Naturally, everything feels so new, confusing, and distressing. As one endeavors to make sense of it all and aspires, perhaps, to one day become *one of them*, there is a period of intense absorption and emulation.

Unfortunately, as I came to realize, the initial confusion only dissipated much later. Emulating others proved to be more complex than anticipated. Although clinical training consistently emphasizes delivering safe care within a clearly defined framework, the fundamental goal of ensuring the well-being of both mother and child seemed to manifest differently across individuals. Practices varied, and each practitioner often believed their method was the correct one, frequently citing "evidence" as justification. Adding to the complexity, the perceptions and accounts from colleagues, midwives, assistant nurses, patients, and their families often clashed with personal values, challenging the formation of a unified understanding of optimal practice.

I confess; I've always been obsessed with wanting to *do the right thing*, or at the very least, to strive for it. And perhaps there lies the real impetus for this project, at the intersection between my always-unfulfilled desire and the ironic observation – where "variation among the many coexists with the individuals' self-righteousness". And then, pressing questions eventually emerged: Beyond inevitable personal biases and differences, could there be superior ways of practicing obstetrics, especially during emergencies? And if so, from which viewpoint should this be assessed? Or could it be that individual variations actually played a role? Could such questions, originating from personal reflections, potentially resonate with broader themes that others have also contemplated?

This dissertation may not provide definitive answers, but my hope is that it may shed light on some complex aspects of decision-making in maternity care. Understandably, our actions and behaviors, especially in the realm of healthcare, are shaped by myriad personal and interpersonal factors. Recognizing that our actions within obstetrics also occur within this intricate framework – and perhaps

even more so – is crucial. With the subsequent pages, I hope not only to offer insights but also to encourage reflection and spark discussions about the nuanced decision-making processes engaged in during obstetric emergencies.

Introduction

Childbirth is a pivotal event in human experience. Physiologically demanding and psychologically transformative, it is deeply embedded with emotional, biological, and cultural nuances [1, 2]. In high-income countries like Sweden, advancements in medical interventions have significantly reduced maternal and neonatal mortality, making childbirth safer than ever before [3]. Despite these advancements, puzzling variations persist between high-income countries, even when accounting for differences in healthcare systems [4-7]. Similarly, within individual nations, discrepancies emerge even after considering variations in maternal and perinatal characteristics [8-10].

Such variations, particularly within countries, may hint at potential disparities in the use of interventions [5, 9, 11]. The implications of these interventions become even more pronounced in obstetric emergencies. While they can be essential in reducing neonatal and maternal morbidity [12], if applied without a clear medical indication, they could result in unintended harm [3, 13, 14]. It is evident that the choices made during these critical moments carry profound implications. But what drives these decisions, and how are they influenced by the diverse factors at play?

Decision-making in high-stakes situations, especially within healthcare, has been a focal point of previous research and analysis [15-24]. Clinical decisions are not only informed by empirical evidence and situational pressures but also potentially influenced by practitioners' personal experiences, training, and beliefs, even in the face of standardized guidelines and practices [25-29]. These individual variations might influence decisions as much as the broader professional ethos, even during emergencies.

Swedish maternity care provides a valuable context for delving into both individual nuances and prevailing professional perspectives. Within this setting, the distinctive perspectives of obstetricians and gynecologists (Ob&Gyn) and midwives become particularly evident. While midwives have traditionally seen childbirth as a normal, woman-centered, holistic process – serving as guardians of non-medical birth practices [2, 30-34], Ob&Gyn, on the other hand, emphasize addressing complications during pregnancy, childbirth, or the postpartum period [31, 35-37]. Their approach is often underscored by technological advances and evidence-based protocols [36, 37]. This divergence in approaches becomes

particularly clear when interventions are required, prompting a shift in medical oversight from midwives to Ob&Gyn [36-38].

While both professions actively pursue a collaborative approach despite their differing views [39-41], the separation between natural processes and technological interventions, as well as between uncomplicated and challenging births, underscores a prevailing hierarchy in maternity care [23, 24, 26, 42]. In this hierarchy, Ob&Gyn often have precedence over midwives, and medical science and interventions hold greater weight than midwifery care [43].

Research suggests that, as childbirth transitions from routine to critical, it not only activates pre-established hierarchical structures but also initiates a social process that goes beyond basic notions of normalcy and complications [23, 26, 42, 44]. This transition underscores the complex interaction between those with medical responsibility and those signaling the need for intervention. Concurrently, each practitioner brings their unique experiences, adding layers of nuance to this dynamic. This thesis sets out to unravel these layers, illuminating both individual and collaborative facets of decision-making during obstetric emergencies within the Swedish context.

Background

Study setting

Swedish maternity care

In Sweden, maternity care receives public financing and operates under guidelines set at the national, regional, and local levels. With 40 birthing centers, the nation supports its 10.2 million inhabitants, managing approximately 115,000 to 120,000 deliveries each year [45]. Notably, the great majority of births occur in hospital settings and are midwifery-led. About 100 children per year are born at home, highlighting the preference for hospital births in Sweden.

Sweden is considered to be one of the safest countries to give birth in and has amongst the lowest intervention rates in the world [3, 5]. In 2021, the Caesarean section (CS) rate was 18.5% and the rate of births without significant interventions or complications stood at 82% [45]. “Significant interventions or complications” encompass procedures and outcomes such as CS, vacuum extraction/forceps, postpartum bleeding above 1500 mL, blood transfusions, sphincter ruptures, or Apgar scores below 7 at 5 minutes [45]. These markers, which are used to evaluate the extent to which a birth can be considered normal post-factum, are annually documented in a national registry known as Graviditetsregistret (See https://www.medscinet.com/gr/). This registry is serving as a pivotal tool for follow-up over time and is enabling comparisons between different maternity units across the country.

In modern Swedish maternity care, the clear line between natural and medicalized births from the 1960s to 1980s has seemingly changed. Today, there’s either a balanced perspective or a mix of views, seeing pregnancy and childbirth mainly as natural processes [39-41]. However, in practice, the clear line between normal and complicated births still defines the roles of midwives and Ob&Gyn [46]. During healthy pregnancies, births, and after, the midwife is the main caregiver for the woman. An Ob&Gyn steps in only if there are health issues or emergencies with the mother or baby.

To become a midwife, one must first obtain a bachelor’s degree in nursing. Afterward, an 18-month midwifery education program is undertaken, which culminates in a master’s degree in reproductive, perinatal, and sexual health [47].

While the medical education curriculum is currently under revision, traditionally it comprises a 5½-year undergraduate university program. This is followed by a mandatory 18-month internship. To specialize in Ob&Gyn, an individual must undergo approximately 5 years of residency. Those Ob&Gyn practitioners working in maternity care can either be residents or specialists in the field.

Normal birth

In 2001, the Swedish Social Services introduced a state-of-the-art guideline for managing normal births. Midwives and Ob&Gyn created the document together [46]. It describes normal birth based on the WHO's definition, focusing on the birth process rather than medical interventions [48]. The criteria for normal birth are: singleton pregnancy, length of pregnancy between 37+0 and 41+6 (i.e., weeks + days), lack of medical risk factors at labor onset being able to influence the birth outcome, spontaneous labor start, labor progress without complications from start to placental delivery, spontaneous head delivery, and that both mother and child feel well after delivery.

Obstetric emergencies

Obstetric emergencies represent some of the most challenging moments in pregnancy and labor, posing significant risks to both the woman and the fetus. These emergencies can arise from specific conditions or from rapidly deteriorating situations during birth. Grounded in collaboration and evidence-based practices, the management of these emergencies relies on pre-established protocols [3, 12, 49]. However, not all scenarios fit neatly into a predetermined framework. Recognizing and navigating the shift from a normal to a complicated situation can be complex [26, 50]. Beyond textbook cases, certain scenarios exist in a "gray zone" [44]. In these situations, midwives, who are primarily responsible for overseeing births, must use their discretion and judgment to determine when to call upon obstetricians for assistance [42].

Decision-making

Evidence-based practices, cognitive insights and team dynamics

In maternity care, and for complications or emergencies in particular, decisions are traditionally underpinned by an evidence-based approach. This ensures that the most appropriate course of action is selected based on empirical research, with the ultimate aim of optimizing patient outcomes [3, 12, 49]. Outside of obstetrics, research on decision-making in healthcare has delved into various aspects beyond

just evidence-based practices. An agent-centered perspective examines the cognitive and affective dimensions of decision-making [15-18], highlighting the biases, attitudes, and thought patterns of practitioners. Subsequent efforts have focused on offering tools and training to address these identified challenges [15-17, 19]. Complementing this individual-centric view is the perspective of teamwork in decision-making. In healthcare settings, teams function in a resilient manner, adapting and responding dynamically to evolving challenges [27]. Their efficacy isn't derived solely from individual "correct decisions" but rather from the collective interactions, relationships, and coordination among all team members [23, 51]. This understanding underscores the importance of team training and refining interpersonal communication to enhance overall team performance [52, 53]. Additionally, studies on expert decision-making in naturalistic settings have gained attention. These emphasize the nuanced role of intuition and experiential knowledge, which often emerge from years of practice and complement structured decision-making processes [54-56].

A few models applicable to maternity care.

Decision-making has also been modeled in various ways as an attempt to understand the intricate processes involved in healthcare settings. The model by Scott and Bruce [57] identifies four distinct styles: a rational approach based on thorough analysis, an intuitive style relying on feelings and hunches, a dependent method seeking external advice, and an avoidant style which tends to defer or avoid decisions. Meanwhile, Dreyfus and Dreyfus [58, 59] outline the progression of professionals from novices, who strictly apply technical knowledge, to experts, who draw on extensive experience and can rapidly adapt to dynamic scenarios. Hammond's cognitive continuum theory [60-63] presents decision-making as a spectrum ranging from intuitive to analytical approaches, with the specific mode being influenced by factors such as time constraints, type of knowledge available, and the nature of the health issue at hand.

Identity

> *"When we are thrust out into the world just as we are, we first have to identify with that particular throw of the dice, with that accident organized by the divine computer: to get over our surprise that precisely this (what we see facing us in the mirror) is our self. Without the faith that our face expresses our self, without that basic illusion, that arch-illusion, we cannot live or at least we cannot take life seriously. And it isn't enough for us to identify with our selves; it is necessary to do so passionately, to the point of life and death. Because only in this way we can regard ourselves not merely as a variant of a human prototype but as a being with its own irreplaceable essence."*
>
> - Milan Kundera, Immortality

The complexity of identity

Identity is a multifaceted concept, drawing from elements of our history, our roles and connections within communities, and the interplay between society's influences and our individual perceptions – ultimately crafting our unique sense of selfhood. While these dimensions frequently intersect, they don't always align harmoniously. Our individual and collective identities are fluid, continually evolving and adapting to the times and environments. Yet, identity, even in its mutable nature, is indispensable. It provides stability to our personhood, merging diverse elements into a cohesive whole. Through identity, we find constancy, building trust, self-confidence, and deriving a sense of value. It's a means to simplify and navigate the vast complexities of human existence [64].

Delving deeper into the complexities of identity reveals aspects such as narrative identity, professional identity, and foundational traits framed by the Five-Factor Model (FFM).

Narrative identity

Narrative identity emerges as a fundamental means through which we shape and understand our lives. By engaging in the act of storytelling, individuals create order from chaos, making sense out of the complexity of life events, especially during more challenging episodes [65-69].

Storytelling plays a dual role in shaping our sense of identity [68, 69]. Firstly, on an autobiographical level, narratives help us make sense of our own life journey. Jerome Bruner emphasizes this introspective dimension by suggesting that individuals essentially become the autobiographical narratives they craft, thus defining their internal self-understanding [66]. These personal stories offer a

temporal and logical order, demystifying events and creating coherence across past, present, and potential futures.

Secondly, on a biographical level, the stories we share with others serve specific purposes in social contexts [68-70]. They act as tools for persuasion, engagement, and even mobilization. Beyond recounting personal events, these narratives have the power to evoke empathy, align communities, and drive societal change. Hence, by telling stories, we don't just recount events; we construct our very identities, aligning them with the broader narratives of our culture.

Boundaries and professional identity

In professional settings, boundaries define the roles, expertise, and responsibilities of different professionals [71, 72]. These boundaries are continually shaped by interactions and collaborations between professionals [73, 74]. Such adjustments are key in defining and reinforcing professional identity [75, 76].

Professionals often employ various strategies to clarify, safeguard, or broaden their roles and expertise. A notable method is using formal qualifications as a distinguishing factor, ensuring only those with specific knowledge and training are acknowledged [77]. Furthermore, as roles and responsibilities in the profession might shift, due to internal developments or external pressures, there are frequent reassessments and refinements of these defining boundaries and the professional identities they represent [78, 79].

This process of reassessment can manifest at a broader level, steering the direction of whole fields of expertise, or at a more granular level, dictating daily work practices [75, 80]. For instance, in response to societal shifts, professional associations might redefine their boundaries [81], or on an individual basis, professionals might address role overlaps by deliberating tasks with peers [82]. Amidst these shifts, the challenge of this “boundary work” becomes evident, especially when roles and expertise overlap, such as in midwifery and obstetrics, leading to potential ambiguities and conflicts in defining professional identity [75, 82].

Personality

Personality represents the unique patterns of behavior, emotions, and thoughts that distinguish one individual from another. Personality defines a person over time in various situations [83]. The FFM is a trusted, evidence-backed tool for evaluating personality [28, 29, 84-86].

The language-lexical hypothesis

The language-lexical hypothesis posits that significant and universally recognized personality traits are embedded in our language. In other words, if a characteristic is crucial to understanding human behavior, it is likely represented by a word in our language [86]. For example, if many cultures have lots of words for "being friendly" or "being cautious", then friendliness and caution might be essential parts of human personality. The hypothesis originated in the late 19th century and became prominent in the 20th century, especially in English and German psychology. It is the foundational idea behind the FFM of personality.

The Five Factor Model

Psychometrics

The end of the last century saw the development of innovative statistical methods, such as correlation analysis, multiple regression analysis, and exploratory and confirmatory factor analysis that immensely benefited personality science [83]. Indeed, as researchers in psychology delved deeper into these advancements, they were eventually able to scientifically identify, and validate personality traits into systems [87]. Among these, the FFM stood out as the most influential framework, categorizing personality into five core dimensions: Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C) (Table 1).

The five dimensions of personality

The FFM is a scientifically backed and rigorous tool for personality assessment, highlighting observable traits of human behavior [28, 29, 84-86]. Each of its five dimensions is described neutrally and exists on a scale. Being more or less pronounced in a dimension can offer advantages or disadvantages, depending on the situation.

Neuroticism describes our level of emotional reactivity and stability [88, 89]. In other words, it represents the tendency towards negative emotions like fear, anxiety, and anger and how we handle them. While it is often viewed negatively by many, N can be beneficial in situations that require caution or teamwork [90, 91]. Women typically score higher than men on this dimension, and it tends to decrease with age [29, 92].

Extraversion refers to an individual's inclination to engage with the external world [88]. Individuals with high E are typically driven by external stimuli and seem to possess an abundance of energy, making them stand out in social settings. In contrast, introverted individuals are more reserved, drawing inspiration from their inner world and might find extended social interactions draining. Extraverts

have been described as “geared to respond”, while introverts as “geared to inspect” [88, 93].

Openness, often termed “Openness to Experience”, is the most multifaceted of the five dimensions, making it notoriously challenging to measure. It reflects an individual’s intellectual curiosity and adaptability regarding feelings, values, and experiences [94]. While those with low O often value tradition and stability, those with high O might be more inclined to explore even potentially harmful experiences or make choices outside societal norms. Empirical evidence associates O with intelligence, cognitive abilities, and an inclination for intellectual pursuits [95, 96]. Additionally, creativity has a distinct relationship with this dimension [88].

Agreeableness represents an individual’s inclination to connect and harmonize with others, often interpreted as “caring” or “friendliness” [83, 87, 97, 98]. This dimension encompasses two aspects: empathy (i.e. feeling for others) and decency (i.e. abiding by societal norms). However, it is important to note that individuals with low A might still foster strong relationships; they simply tend to be more selective. While groups dominated by agreeable individuals often prioritize consensus and show sensitivity to others’ emotions, an overemphasis on A can compromise group effectiveness and put certain members at risk of being taken advantage of. Additionally, a high degree of A might challenge an individual's ability to make tough decisions. Typically, women score higher than men in this dimension.

Conscientiousness encapsulates focus and responsibility. Individuals with high C are diligent, and uphold discipline or existing organizational structures, making them highly valued in the workplace [99]. Evidence also suggests that C improves team performance and interpersonal interactions in occupational settings [97, 100]. Nevertheless, being excessively conscientious can lead individuals to set unrealistic expectations for themselves and others.

Tabel 1. The five dimensions of personality [83, 84, 86]

DIMENSIONS	SUMMARY DESCRIPTION
Neuroticism (N)	Emotional instability, anxiety and pessimism
Extraversion (E)	Sociability and assertiveness
Openness (O)	Intellect and assertiveness
Agreeableness (A)	Compassion and civility
Conscientiousness (C)	Responsibility and achievement

The Honesty-Humility factor

More recent research has explored the possibility of an additional and distinct honesty-humility (HH) factor [83, 101]. The honesty-humility scale delves into one’s tendencies towards fairness, sincerity, and self-perception. Individuals with high scores on this scale display a tendency for straightforwardness and

truthfulness. Their interactions reflect sincerity, free from manipulative or deceitful undertones. Moreover, they exude humility, shunning arrogance, and not perceiving themselves as superior to others. In practical scenarios, such traits manifest as cooperative behaviors, with these individuals avoiding exploitative or self-serving tactics [102]. Contrastingly, those scoring lower might exhibit greater opportunism, self-interest, and manipulative tendencies.

Cross-cultural stability and underlying genetic structure of personality

Different cultures worldwide have begun to identify with this structure, likely stemming from shared human biology and genetics. Despite the depth and diversity of cultural influences, extensive studies across 22 nations highlighted that cultural exposure accounted for less than 5% of personality variations [28, 103, 104]. Interestingly, while certain personality traits change over time, such as Neuroticism, the core aspects of personality appear resilient to significant life events [105-107]. This relative stability suggests that transient experiences don't drastically alter our intrinsic personality makeup. Further supporting the FFM's validity are advancements in neuroscience and genetic mapping [98]. These fields indicate that cultural influences on personality might be more superficial, barely scratching the underlying genetic and neural structures.

Personality and behavior

While traits might not predict behavior in isolated situations, they become prominent indicators when behavior is observed across multiple scenarios. Personality traits, by their inherent nature, predispose individuals to certain patterns of behavior. This means that a person's consistent reactions and actions over a range of situations become the litmus test for their underlying traits. This principle holds true whether traits are assessed through self-reports or observations by others, resulting in robust and validated measurements of personality [97, 98, 108].

Aims

The aims of the thesis were to investigate the intricacies of decision-making processes in obstetric emergencies, emphasizing the role of individual differences such as personality traits and the complexities introduced by inter-professional dynamics.

Specific aims

Paper I. To explore how Ob&Gyn make sense of and give meaning to their decision-making during obstetric emergencies.

Paper II. The primary aim was to describe the personality trait levels of obstetricians and gynecologists, and the secondary aim was to examine the relationship between obstetricians' and gynecologists' personality traits and decision-making styles in obstetric emergencies.

Paper III. The primary aim was to systematically describe and compare obstetricians and gynecologists, and midwives, with regards to their views on labor induction, and other work-related variables, and the secondary aim was to explore the mechanisms influencing maternity care professionals' views on labor induction.

Paper IV. To examine midwives' boundary work and demarcation strategies in the context of obstetric emergencies.

Methods and materials

Studying decision-making

Studying decision-making in obstetric emergencies poses both conceptual and methodological challenges. Decision-making, in this context, refers to the process through which maternity care professionals assess, evaluate, and choose among various courses of action during obstetric emergencies. With this definition in mind, the heart of such an investigation presents a multifaceted problem: Are we examining the cognitive processes that underpin these decisions, the tangible actions of individuals, or the cooperation among professionals? Furthermore, the unpredictable nature of such situations makes them hard to study in controlled experiments, such as simulations. An early attempt to use an ethnographic approach in this project further illuminated the methodological difficulties [109, 110]; observing real-time decisions in this high-stakes setting brought forth issues of interpretation, consent complexities, and logistical hurdles. Given these various challenges, an alternative approach was eventually chosen, employing interviews and surveys to focus on potential individual and inter-professional factors influencing the decision-making process in those crucial moments.

Qualitative interviews

This method of inquiry can generally provide deep insights into individuals' experiences, beliefs, and motivations. Results from interviews are, however, subject to interpretation and may not be generalizable [110-112].

All interviews in this thesis adopted a co-creative narrative form, with meanings jointly constructed by the interviewer(s) and interviewee(s) [113]. Informed by hermeneutic phenomenology, the approach acknowledges that true objectivity is elusive, as further discussed in the section on methodological considerations [114, 115].

The interviews, while unstructured and fluid, emphasized active listening. The interviewer(s) maintained an empathetic, non-confronting attitude. Clarifying questions and occasional shared insights by the interviewer(s) enriched the conversation(s), while an interview guide was only used when necessary [111,

116]. The interviewer(s)' expertise and mutual contextual understanding was actively used to enrich the interview process [117, 118].

Surveys and questionnaires

Surveys and questionnaires are invaluable tools for collecting data from large populations, offering insights into attitudes, beliefs, and self-reported behaviors [119, 120]. One of their strengths is that once scales and constructed items have been designed, they can be statistically tested for validity and reliability, provided they have theoretical grounding [121, 122]. Additionally, the collected data can be subjected to various statistical analyses, like correlations and regressions, providing a deeper understanding of relationships and patterns.

However, using these tools also comes with inherent challenges [119, 120]. Achieving a sufficient response rate can be difficult, and spreading awareness about the survey to the target audience requires effort [123]. The design phase is important as well, crafting reliable scales and questions demands meticulous attention to avoid leading respondents or introducing errors [124]. The finitude of information is also a concern; the insights derived are often confined to the specific manner in which questions are framed. Furthermore, these tools hinge on accurate self-reporting and are susceptible to biases.

Narrative analysis

> *"Humans have an almost unlimited capacity to believe anything. People are infinitely easily influenced - but it works in both directions. If we don't like a story, and I'm not better than the other - we say that it's not credible. If we like it, we can say that it's credible. People choose side when two stories are pitted against each other. We are captivated by stories, far more than by evidence. The evidence always plays second fiddle to the stories."*
>
> - Errol Morris

Narrative analysis is a set of methods often used in social sciences to understand and interpret people's stories, while often preserving their authenticity and meaning [65, 67, 68, 70, 125]. It is based on the assumption that individuals naturally make sense of their lives through storytelling. The goal with narrative analysis isn't just to find concrete results but to gain a deeper, richer understanding of individual experiences and perspectives [68, 69, 126, 127].

Narrative analysis contextualized

The emergence of narrative analysis

Narrative analysis emerged as a compelling interdisciplinary set of methods within the social sciences in the 1970's, reflecting the shift towards *interpretivism* [69, 110, 115]. This transition was primarily driven by U.S. scholars in reaction to natural science methods, which were viewed as insufficient for capturing the complexities of human social life.

Indeed, while nature doesn't tell stories, humans invariably do, utilizing their agency and imagination. Through narratives, individuals not only recount past events but also assert their identities and shape their lives [67]. And, these personal tales often resonate with broader community narratives, forming deeper structures that offer insights into the very essence of human existence [70].

The interpretivist perspective

This perspective argues that the methods used in the natural sciences cannot effectively examine the social realm, primarily because this domain requires a distinct epistemology [68, 69, 128]. It holds that the tools – concepts and language – employed by researchers inherently influence their understanding of the world they examine [129-131]. Recognizing the challenge of achieving objectivity when studying human behavior, interpretivists advocate for embracing this subjectivity [132]. They seek to uncover the underlying meanings in individuals' subjective experiences; often immersing themselves in the very settings they study. This approach, influenced by the philosophical traditions of hermeneutics and phenomenology, values the depth and uniqueness of human interactions over broad generalizations.

The varieties of narrative analysis

Narrative analysis is not confined to one method but comprises a variety of approaches [68, 69, 127]. What unites these approaches is their deep exploration of events, delving into aspects from chronological arrangement to thematic connections, the context in which they are situated, the narrative style adopted, and the emotions they evoke. The elements of analysis also exist on a spectrum spanning from in-depth studies of single narratives to broader investigations of multiple stories. Originally, narratives were even considered independent pieces that could stand alone on their own merit.

As narrative analysis has been adopted across various disciplines – such as psychology, anthropology, political sociology, and discourse analysis – its methodologies have evolved to suit their respective needs. Within these various

domains, several key approaches have crystallized, encompassing thematic, structural, dialogic, performance, and visual analysis techniques.

The fluid nature of narratives

The narrative approach in this thesis aligns with the pragmatist philosophy, which posits that narratives are fluid and evolving entities best interpreted within their unique time and context [129-131]. No narrative framework is permanent or universally applicable but always opened for re-interpretation.

Moving away from overarching narratives encourages diverse storytelling and discussions, highlighting the inherent unpredictability in narrative construction. However, this unpredictability does not make narratives inexplicable. Just as life seems to unfold with purpose, narratives similarly evolve, and their core significance emerges from the ongoing shaping and reshaping of their themes – a reflection of the creative process of building meaning.

Thematic narrative analysis

Within narrative research, data can be analyzed in various ways. The specific mode of interpretation used in Papers I and IV of this thesis was inductive and thematic as described by Riessman, with insights from Czarniawska, and performed in a stepwise fashion [68, 126].

Initially, a meticulous review of the content was undertaken, which entailed multiple readings to immerse in and familiarize oneself with the data. With a deepened understanding, the next step focused on discerning recurring patterns, notable similarities, and distinct differences in the interviewees' responses [68, 126]. Following this, particular segments of text, especially those related to the specific questions of each Paper, were systematically extracted. The final step involved grouping these excerpts. Importantly, these categorizations were not influenced by pre-established frameworks but were derived from the inherent ideas and themes they organically expressed [68, 126]. The interpretation was a team effort among authors, continuously comparing the main themes with specific parts of the transcripts [68, 111, 126].

Statistical methods

The statistical methods described in this section are based on resources and notes from relevant statistical courses, as well as the following books: Essential Medical Statistics by Kirkwood [133], Praktisk statistik för medicin och hälsa by Björk

[134], and Statistical Power Analysis for the Behavioral Sciences by Cohen [135]. Additional references are cited where appropriate for supplementary information.

Hypothesis testing

Hypothesis testing is used to determine if a noticeable difference between groups is actually meaningful or simply due to chance. The process starts by setting up a "null hypothesis", which usually assumes that there is no significant effect or relationship between the variables being studied (e.g., in the context of medicine, no connection between a treatment and its outcome). In the context of personality trait psychology, the null hypothesis typically posits that there is no significant difference in the specific personality trait being examined between the two groups under study.

P-values

After gathering and analyzing the data, a p-value is calculated. This p-value represents the chance of getting the observed results if the null hypothesis is actually correct. A low p-value serves as the criterion to reject the null hypothesis in favor of an alternative hypothesis, thereby suggesting that the observed disparity is statistically significant. Conversely, a high p-value suggests insufficient evidence to refute the null hypothesis. The conventional threshold for statistical significance is often set at a p-value of 0.05.

However, the choice of p-value threshold is a topic of ongoing debate in the scientific community [136]. Some researchers argue for more stringent thresholds, such as a p-value of 0.01 or even 0.001, to reduce the rate of false positives, especially in fields where studies might be hard to replicate. Others advocate for a more nuanced interpretation of p-values, suggesting that the p-value is just one piece of evidence that should be considered along with effect sizes, confidence intervals, and the broader context of existing research.

Recently, there has also been a move towards transparency in psychological research, encouraging the reporting of exact p-values, effect sizes, and confidence intervals, rather than simply stating whether a result is significant at a particular level.

Furthermore, it is advised to differentiate between statistical significance and clinical or practical importance. Results may yield statistical significance, particularly in large sample sizes, without necessarily indicating a meaningful, clinically or practical relevance [137].

Welch's t-test

Welch's t-test is a statistical hypothesis test used to compare the means of two independent samples. It is an adaptation of Student's t-test and is more reliable

when the two samples have unequal variances and/or unequal sample sizes [138]. The null hypothesis for the test is that the two population means are equal. The alternative hypothesis is that the two means are different.

Levene's test

Levene's test is the statistical procedure used, in the preliminary stages of data analysis, to assess the equality of variances for a variable calculated for two or more groups. It tests the null hypothesis that the variances across multiple groups are equal. If Levene's test is significant ($P < .05$), suggesting a violation of the assumption of equal variances, Welch's t-test instead of Student's t-test is used for comparisons.

Cohen's d

Cohen's *d* is a measure of effect size that quantifies the difference between two groups in terms of standard deviations, rather than raw or scaled units [139, 140]. It is often used to supplement hypothesis testing results in order to provide a standardized measure of the size of the effect or difference observed. Cohen's *d* is commonly used in psychology, and other social sciences.

Interpretation of Cohen's *d*[140]

	THRESHOLD Values
Effect size	**Cohen's *d***
Small	0.2
Medium	0.4
Large	0.6

These interpretations are somewhat arbitrary and should be considered as rough guidelines. The relevance of the effect size also depends on the context of the research and the specific field of study.

Reliability analysis

Reliability analysis is used to evaluate the consistency or stability of a measuring instrument or scale. In the context of psychological research, reliability analysis can be crucial for ensuring that a questionnaire used to measure a construct like a personality trait provides consistent results across different conditions or points in time. High reliability increases confidence that the measurement tool is capturing a stable construct or trait rather than random error.

Cronbach's alpha (α)

Cronbach's alpha is the reliability measure most commonly used [141, 142]. When there is a set of questions that are intended to measure a particular trait or skill

(e.g., a scale for measuring job satisfaction or a test assessing a decision-making style), Cronbach's alpha helps to understand how closely related these questions are. The commonly used threshold value for an acceptable Cronbach's alpha in psychological research is $0.6 \leq \alpha$.

Similarly to the interpretation of Cohen's *d*, these guidelines are approximate and context dependent. A higher Cronbach's alpha suggests that the items on the test are closely related and likely measuring the same underlying construct, whereas a lower value indicates that the items are less related and the scale may not be reliable.

A high Cronbach's alpha means that the test is consistent, but does not guarantee that the test is measuring what it is supposed to measure (i.e., validity). Also, Cronbach's alpha assumes that the items are measuring a single underlying construct; other methods, like McDonald's omega, are better suited for multi-dimensional scales.

McDonald's Omega (ω)

McDonald's omega is another statistical measure used to assess internal consistency of an instrument [143]. It is considered a more robust and accurate measure of reliability, especially when the data are not strictly unidimensional or when the items on a scale have different levels of variance. In other words, McDonald's omega allows for the existence of multiple factors, acknowledging that not all items necessarily contribute equally to a construct. The threshold values for interpreting McDonald's omega are identical to those for Cronbach's alpha.

Factor analysis

Factor analysis is used to identify the underlying relationships between a set of variables [122, 144]. It is commonly used to reduce the dimensionality of data, that is, to identify a smaller set of variables that can effectively summarize the information contained in a larger set of variables. This is particularly useful in situations where you have a large number of correlated variables and you want to find a way to simplify the structure of the data without losing too much information.

Bartlett's test of sphericity

Bartlett's test of sphericity helps to answer the question: "Are these variables related in a way that makes it worthwhile to group them together?" If the test result is significant, it suggests that the variables are correlated, and factor analysis may be appropriate [145].

Exploratory factor analysis (EFA)

EFA aims to explore or uncover the underlying structure of a dataset. After collecting data on multiple, potentially correlated variables, factor extraction is carried out to identify the underlying latent constructs. Scree plots and/or eigenvalues are used to determine the optimal number of factors to retain.

In the process, so-called rotation techniques such as Oblimin are applied, guided by statistical software, to simplify the factor structure and enhance interpretability. These techniques adjust the ”viewing angle” to facilitate a better understanding of what each factor represents in relation to the original variables.

In EFA, calculating factor loadings and scores is an essential step. Loadings show how variables correlate with extracted factors, helping to identify related variables. Factor scores represent each observation’s relation to these latent traits. Both are key for understanding the data's underlying structure and for future analyses.

Scree plot and eigenvalues

A scree plot is a graphical representation used in EFA, alongside other methods, to determine the number of factors to retain for further analysis [146]. The plot displays the eigenvalues associated with each factor in descending order. The factors are typically represented on the x-axis and the eigenvalues on the y-axis. Eigenvalues represent the amount of variance explained by each factor. A factor with a high eigenvalue explains a large amount of the total variance in the dataset, whereas a factor with a low eigenvalue explains only a small amount of the total variance.

The number of factors can be visually determined in two ways. The first way is to find the “elbow” in the scree plot, or the point where the plot starts to level off. Factors that appear before the elbow are considered significant and are typically retained for further analysis, while those that come after the elbow are considered to contribute little to the explanation of variance and are usually disregarded. The second way is by the “eigenvalue criterion”, or Kaiser criterion. A horizontal line is drawn at an eigenvalue of 1. Factors with eigenvalues greater than 1 are usually considered significant, as they explain more variance than a single original variable.

Choosing how many factors to keep can also be based on how much they help explain the overall pattern (i.e., total variance explained). This is usually less important than the “elbow” method. Finally, the number of factors to retain is also influenced by theoretical considerations.

Model fit tests

In the context of EFA various statistical tests are used to assess how well the proposed model represents the observed data, such as Chi-Square (χ^2), Root Mean

Square Error of Approximation (RMSEA), and Tucker-Lewis Index (TLI). Each of these fit indices provides different information about the fit of the model.

Chi-Square is a basic test of how well the model reproduces the observed data but is sensitive to sample size. The larger the sample, the more likely it is to find a statistically significant difference between the observed and estimated measured correlations, even when the difference is trivial. A low Chi-Square is difficult to achieve in complex models with many parameters.

RMSEA provides a reliable measure of fit that is generally less sensitive to sample size and incorporates the model's ability to accommodate various patterns in the data [147]. It estimates how well the model aligns with the underlying patterns in the entire population, not just those observed in the sample.

TLI also provides a relative measure of fit (i.e., model compared to the null hypothesis). It is more sensitive to model complexity but less sensitive to sample size [148].

Because each index has its limitations, it's common practice to report multiple fit indices when conducting factor analysis allowing for a more comprehensive evaluation of model fit.

Interpretation of model fit tests

	MODEL FIT	TESTS
Fit	**RMSEA**	**TLI**
Excellent	< 0.05	> 0.95
Acceptable	0.05 to 0.08	0.90 to 0.95
Poor	> 0.10	< 0.90

Correlation analysis

Pearson correlation analysis

Correlation analysis is used to evaluate the strength and direction of the linear relationship between two quantitative variables. A correlation coefficient *r* quantifies the degree to which two variables are related, and ranges from –1 to +1. The most common method for calculating the correlation coefficient is the Pearson correlation analysis, which assumes that the variables have a linear relationship and are normally distributed. As often stated, a correlation does not imply causation. Additional methods, such as regression models, or mediation and moderation analyses, are needed to explore causality.

The terms "Pearson correlation analysis" and "zero-order Pearson correlation" are often used interchangeably. However, the term "zero-order Pearson correlation" is more typically used in the context of multiple regression analysis and refers to the correlation coefficient between each independent variable and the dependent

variable, without considering the effect of other independent variables. This provides a baseline understanding of each variable's individual relationship with the outcome, separate from the combined effects when multiple variables are included.

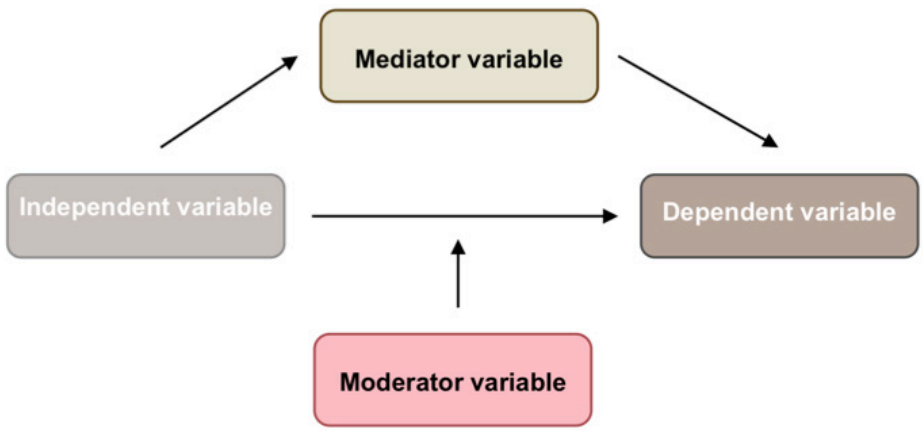
Interpretation of correlation *r* or regression estimates β [140, 149]

	THRESHOLD Values
Strength	Correlation *r* or regression estimates β
Weak	0.2
Moderate	0.2 to 0.3
Strong	0.3

Mediation and moderation analyses

Mediation analysis aims to understand the process that underlies an observed relationship between an independent variable and a dependent variable, effectively answering the "how" or "why" behind the relationship [150]. Specifically, it examines whether the effect of the independent variable on the dependent variable is explained through a third variable, known as the mediator.

Moderation analysis examines "when" or "under what conditions" an independent variable affects a dependent variable. Essentially, it seeks to identify a third variable, known as the moderator, that modifies the strength or direction of the relationship between the independent and dependent variables.



Multiple linear regression analysis

Regression analysis is a flexible statistical method used to model the relationship between a dependent variable – often referred to as the outcome – and one or more independent variables – known as predictors. The goal is to find the best-fitting model that accurately predicts or explains the outcome. Various types of regression models exist, including linear regression, logistic regression, and

Poisson regression; each is suitable for different types of outcome variables. Multiple linear regression is specifically used when there is more than one predictor variable. While linear regression is commonly applied to continuous variables, it can also accommodate dichotomous ones, such as sex.

A multiple regression analysis produces several important metrics for interpretation, including the R^2 value for explained variance, F-statistics to test the overall fit of the model, p-values for individual predictors, and slope coefficients, which can be either unstandardized or standardized (β).

The **F-statistic** tests the null hypothesis that all the regression coefficients are equal to zero, which means that the predictors have no effect on the outcome variable [151, 152]. The most direct way to interpret the F-statistic is by looking at the p-value. A small p-value indicates that you can reject the null hypothesis, concluding that the model fits the data better than a model with no predictors. A larger F-statistic relative to a critical value indicates a greater likelihood that the observed differences in the outcomes are due to the predictor variables, rather than random variation.

Another way to assess the model's performance is by examining the proportion of **variance** in the dependent variable that it explains, often reported as R^2. A higher R^2 value indicates that the model accounts for more of the variation in the dependent variable.

The **Slope coefficient (unstandardized coefficient)** represents the average change in the dependent variable for each one-unit change in the predictor, while holding other predictors constant. The units are those of the original variables.

The **Standardized estimate (standardized coefficient or beta coefficient)** is the slope coefficient obtained if the variables in the analysis were standardized to have a mean of zero and a standard deviation of one. Standardized estimates allow for direct comparison of the strength of association among different predictors, as they are unitless.

Power calculation

A power calculation is used to determine the sample size required for a study to detect an effect of a given size with a certain degree of confidence [153]. To put it differently, it helps in assessing how many participants are needed to have a good chance of finding a statistically significant result if there truly is one. Power calculations are often performed before a study begins to guide its design, but can also be used retrospectively to interpret results.

The concept of "power" refers to the probability that a test will correctly reject a null hypothesis when it is, in fact, false. In other words, power is the likelihood of finding a significant effect when there actually is one. Typically, a power level of

80%, and a significance level (α) of 0.05, which is the probability of rejecting the null hypothesis when it is true, will be used [154-157].

Computer software and online resources

Data collection and initial processing

The online questionnaires for Papers II and III were designed using *Google Forms*. Data collected through these questionnaires were saved in *Microsoft Excel.* Personality trait data for the Swedish population sample in Paper II were sourced from the International Personality Item Pool (IPIP-NEO; see http://ipip.ori.org). Both versions of the FFM used – namely the IPIP-NEO-30 in Paper II and the Mini-IPIP-6 in Paper III – were also obtained from this site [158]. For the assessment of cognitive ability in Paper II, three cube rotation tests from the International Cognitive Ability Resource were used (ICAR-3; See https://icar-project.com) [159].

Statistical and thematic analysis

All statistical computations were carried out in the open-source software *Jamovi*, *version 2.3.21*, with the exception of sample size estimation, which was performed using both the web-based *Sample Size Calculators* (https://www.sample-size.net/) [160] and the free *G*Power 3.1* software. Thematic analysis in Paper III was facilitated by *NVivo* software, *version 14.23.0* (QSR International).

Documentation and presentation

Word processing was completed in *Microsoft Word*. Graphics for posters and images were generated using *Affinity Designer, version 2.1.1* (Serif). Language and grammar checks for Papers III and IV, and the Thesis were performed using the web-based *ChatGPT 4.0* (https://www.openai.com/).

Paper-specific methods

Paper I

For this study, we applied narrative approach using individual interviews inspired by event recollections and supported by art images.

Interviewees

The study was conducted at the maternity units in: Malmö, Lund, Helsingborg and Ystad, which all followed similar protocols. Ob&Gyn involved in delivery care were selected by purposive and referral sampling, aiming for diversity in gender, experience, and specialty focus (Table 2). Inclusion ceased when additional interviews no longer produced new information [161, 162]. The interviewer and the interviewees had a prior professional relationship.

Table 2. Interviewees' characteristics

CHARACTERISTICS	
Specialists/trainees	16/1
Men/women	7/10
Age	M = 45 years ± 8.7 years
Work experience	[3 – 31 years], M = 15 ± 9.4 years
Obstetrics/gynecology	10/2, and 5 with no preference

Interviews

Interviews were conducted in a collaborative storytelling format from October 2018 to February 2020 in mutually agreed upon settings [113]. The interviews were carried out in two phases. In the first phase, interviewees were prompted to recall a memorable childbirth emergency they had experienced. For the second phase, participants browsed art books and selected images that resonated with their experiences in obstetric emergencies. They then created their own drawings from those images with crayons, followed by discussions about their image choices and drawings. An interview guide was used only when conversation lagged (Table 3) [111, 116]. Interviews, which were audio-recorded, lasted between 35 to 97 minutes, averaging 63 minutes.

Table 3. Interview guide

Beginning: framing of the conversation and creation of interviewees' story	
1.	Can you tell about the case, what you thought and how you felt at the time?
2.	Feel free to tell more about…
More exploratory questions	
3.	Was there anything that surprised you? Was there anything you felt was challenging? Did you feel the need to adapt? Did you have to sacrifice anything during your decisions?
4.	… in what way?
5.	Feel free to tell more about…
Opportunity for self-reflection concerning the presented case	
6.	Is there something you wish you had done differently? Why?
Interviewees' perception on their own of decision-making process	
7.	What do you think about your way of making decisions, and how would you describe it? How competent do you perceive yourself to be in decision-making? What does it look like under time pressure?
8.	How do you make decisions? Is there any special information you know you are looking for, or need (e.g., algorithms, emotions, confirmation from others, thinking out loud, etc.)

Transcript analysis

Each interview was first transcribed verbatim, including pauses and emotional sounds. Transcripts were then edited for readability while preserving the original language's essence. Participants verified the final transcripts for accuracy. Data interpretation relied on an inductive thematic narrative analysis, drawing from methodologies by Riessman and Czarniawska [68, 126, 163]. The analysis had two dimensions. First, common ideas across interviews were grouped into broad themes, offering a cross-sectional view. Second, each transcript was analyzed independently to capture individual decision-making approaches. Preliminary findings from both dimensions were shared with participants for feedback, with the interpretive process being collaborative and iterative [68, 111, 126].

Paper II

In this study, a survey-based approach was used to investigate the relationship between Ob&Gyn's personality traits and decision-making styles in childbirth emergencies. The survey utilized an online questionnaire (Appendix A) that incorporated a simplified version of the FFM, and 15 questions based on a model of decision-making styles categorized into Individual, Team, and Flow. Data were analyzed using Pearson's correlation analysis and multiple linear regression analysis.

Instruments

Personality traits were measured using a shorter 30-item version of the FFM (http://ipip.ori.org) [158], featuring six items for each of the five factors on a 1-5 Likert-scale. Decision-making styles were assessed using fifteen questions based on a prior study [164], focusing on individual, team, and flow-oriented approaches (Table 4) and backed by evidence [16-18, 20, 55, 56, 165, 166]. The same Likert-scale was applied. Control variables, such as cognitive ability, age, sex, and clinical experience were also included in the analysis. Cognitive ability was tested using three spatial tasks from the International Cognitive Ability Resource (https://icar-project.com) [159]. The questionnaire was distributed to Swedish Ob&Gyn, members of the Swedish Society for Obstetrics and Gynecology (SSOG) over two months in 2020.

Table 4. Three decision-making styles during childbirth emergencies
Items refer to question 23.1 to 23.15 in the questionnaire, see Appendix A.

DECISION-MAKING STYLES	ITEMS (During emergencies…)
Individual-centered: an agent-centered, a decision-making style that involves carefully considering and logically assessing options [57, 164].	• the responsibility rests with me. • I take in information, process and give directives. • guidelines are important. • structure creates a sense of safety. • there are right and wrong decisions.
Team-based: a dependent decision-making style marked by seeking guidance [57, 164].	• my focus is on the birthing woman and her partner. • it's nice to have a sparring partner. • we help each other out in the team. • different team members' contributions are important. • I think of the consequences for the birthing woman.
Flow-oriented: an intuitive decision-making style based on intuition and feelings [57, 164]. Flow is a focused state where someone is deeply and naturally engaged in an activity, enjoying every moment of it [166].	• I trust my intuition. • I don't always know what's right. • I sometimes need to improvise. • the outcome is beyond my control but it's important that everyone does her/his best. • I trust the process/higher powers.

Samples

Of the initial 513 responses forty-one were excluded, due to erratic or duplicate responses. A sample of N = 472 (79% women, M_{Age} = 46.4 years, 28-90 years), called Ob&Gyn was eventually used for all analyses. All sample characteristics are shown in Table 7 of the results section. According to the 2019 annual report of the SSOG, it comprised 2180 members, including 480 retired Ob&Gyn. The response rate was effectively 21.5%.

The personality trait levels in Ob&Gyn were also compared with those of the general population. A sample from the general Swedish population (N = 1943) was used as reference group. This sample was collected via an anonymous voluntary personality-testing website, using the same items (IPIP-NEO) as in the present study [158]. The reference sample had about the same number of women and men (48 % women, M_{Age} = 29.6 years, 19-66 years). Preparatory power calculation aimed to find effects larger than $r > 0.15$ ($\alpha = 0.01$, 75% power) indicated a necessary sample size of N = 465 [154].

Statistical analyses

Welch's t-test was used for comparisons. Reliability analyses were conducted with Cronbach's alpha. Zero-order Pearson's correlations were used to assess relationships between personality traits and decision-making styles. Multiple linear regression analysis was performed for each dependent decision-making style Individual, Team and Flow with all five personality traits, together with covariates as independent variables.

Paper III

In this study, a survey-based approach was used to investigate maternity care professionals' views on labor induction, and other work-related variables. An online questionnaire (Appendix B) was used. The data were analyzed using Welch's t-test and Pearson's correlation analysis. Post-hoc mediation and moderation analyses were also performed.

Instruments

Fifteen questions, reflecting aspects of maternity care work, were used to assess effects of labor inductions on professionals' experienced job performance (Negative Impact of Inductions, NII), as well as professionals' experience with healthcare-related crisis situations (Healthcare Crisis Experience, HCE), and overall job satisfaction (Job Satisfaction, JS) (Table 5). The NII measure was created from authors' experience, conversations with midwives, and research [40, 167]. As of now, no other tool focuses on this aspect. How individuals relate to Crisis events in maternity care is indicative of their occupational resilience [168]. JS indicates stress, similar to studies elsewhere [169]. A 1 to 5 Likert-scale (1 = not at all/almost never, and 5 = very much/almost always) was used for measurement.

Samples

The questionnaire was sent out to all Swedish Ob&Gyn, members of the SSOG and to all Swedish midwives, members of the Swedish Association of Midwives (SAM), or members of the Swedish Association of Health Professionals (SAHP). Data was gathered over three months in 2022. SSOG's 2021 report showed 2,213 members, with 439 retired. Membership details for SAM and SAHP aren't available. After checking for duplicates, all 447 replies were used. There were about equal responses from Ob&Gyn and midwives. A sample of $N_{Ob\&Gyn} = 240$ (83% women, $M_{Age} = 44.3$ years (SD = 10.4), 27-74 years) and a sample of $N_{Midwives} = 207$ (99% women, $M_{Age} = 45.2$ years (SD = 10.4), 27-70 years) were used for all comparison analyses. A compounded sample $N_{Ob\&Gyn+Midwives} = 447$ was used for correlation analysis. Descriptive characteristics for each sample are shown in Table 10 of the results section. An initial power analysis targeting effects greater than $r > 0.20$ (with $\alpha = 0.01$ and 75% power) indicated a required sample size of N = 260 [154].

Table 5. Aspects of maternity care work
Items refer to question 9.1 to 9.3 (Negative Impact of Induction), 11.1 to 11.5 (Healthcare Crisis Experience), and 7.1 to 7.7 (Job Satisfaction) in the questionnaire. Question 11.1 was excluded from the item generation because relating to quantity rather than quality. Questions 7.1 and 7.7 were excluded from the item generation because relating to work choice instead of workplace, and because being contradictory, respectively. See Appendix B.

Negative Impact of Inductions:	**The increased number of inductions…**
Detrimental effects of labor inductions on professionals' job performance.	• Affects my work situation negatively. • Creates a sense of conflict in my professional role. • Gives me a bad conscience in relation to the birthing woman.
Healthcare Crisis Experience:	**What is your experience of a healthcare-related crises?**
A sudden, or unexpected, time-sensitive event that poses a significant threat to the health or well-being of patients, professionals, or the medical facility itself.	• Experienced several. • Has subsequently made me feel more secure in my professional role. • Have become more skilled in my profession as a result. • Cooperation has usually been good. • Have eventually become better at collaborating.
Job Satisfaction:	**How true is the following statement to you?**
Feelings towards one's current work, including the effect of stress.	• Happy with my career choice. • Enjoy my work place. • Often feel stressed at work. • Experience a good balance between what is demanded of me and what I can perform. • Feel bad before the work shift. • Stress affects my work negatively. • Make better decisions when I'm stressed.

The FFM's short 24-item version was usedto assess personality differences, including the HH dimension (Mini IPIP-6; See http://ipip.ori.org) [28, 29, 101, 158]. Personality traits were measured using a similar Likert-scale. Our analysis also looked at gender, age, years of experience, and the count of labor inductions per shift, medium-risk patients per shift, and high-risk patients per shift (Appendix B).

Statistical analyses

We used Welch's t-test for making comparisons. To evaluate reliability, we employed both Cronbach's alpha and McDonald's omega. EFA and model fit tests were performed for examining the construct validity of the variables: NII, HCE and JS. We assessed the connections between aspects of maternity care and other factors, like personality, with Pearson's correlation analysis, adjusting for gender and age. We conducted additional analyses to see if NII might mediate or modify the link between N and JS. We also looked at how profession might influence the relationship between NII and JS.

Paper IV

For this study, a two-step analysis was conducted. Initially, a narrative approach was used, combining data from individual and focus-group interviews. Additionally, the themes from the narrative analysis were examined through the lens of the sociological concepts of boundary work and professional demarcation (i.e. strategies to clarify, safeguard, or broaden ones professional identity)*Interviewees*

The study was conducted at the maternity units in Malmö, Lund, Ystad, Kristianstad, Stockholm, Gothenburg, and Falun. The units had similar obstetric guidelines, but varying delivery capacities, between 1,300 and 10,000 per year and averaging 4,800. Midwives, with varying years of experience in delivery care, were chosen through convenience and referral sampling (Table 6). Inclusion ceased when additional interviews no longer produced new information [161, 162]. Some of the interviewers and interviewees had a prior professional relationship.

Table 6. Interviewees' characteristics

CHARACTERISTICS	
Midwives	27
Men/women	0/27
Age	M = 42 years ± 8.0 years
Work experience	M = 11 ± 8.6 years

Interviews

Seven focus-group interviews and six individual interviews were carried out between June and October 2022. Most of them were through videoconference, at the exception of three focus-groups in Malmö and Lund. During the interviews, participants were asked three main questions about their role in obstetric emergencies, factors influencing collaboration with the lead obstetrician, and any deviations from their professional duties. The interviews were mostly unstructured, with the focus on attentive and empathetic listening [112, 113, 116]. Interviewers occasionally interjected to seek clarity or probe deeper, always staying true to the participant's original thought [112, 116]. Interviews lasted between 42 and 99 minutes, averaging 68 minutes.

Transcript analysis

Interviews were transcribed verbatim and then refined for clarity while ensuring the original essence remained intact [68, 126, 163]. Two-step were used during the analysis. First, an inductive thematic narrative analysis was performed [68, 69, 170, 171], with support from *NVivo v. 1.7.1*. After regrouping the 120 initial codes, 16 original themes were created. These were further refined into three primary themes (see Table 14 of the results section). For the second step, the three

themes were examined in light of the sociological concepts of boundary work and professional demarcation. Throughout the process, authors continuously reflected and fine-tuned their analysis to ensure participants' perspectives were authentically captured [112].

Ethical considerations

All studies were approved by the Regional Ethics Review Board (Lund University, permit number LU 2018/198). Studies III and IV were also approved by the Swedish Ethical Review Authority (permit number 2022-01371-02). Informed consent was obtained from participants in all studies and withdrawal from a study was optional at any time. Written consent was provided for Studies II and IV. Consent for Studies II and III was provided by clicking on 'submit' at the end of the online questionnaire.

The interviewees were also assured of their anonymity and the strict confidentiality in handling interviews and results. All transcripts were de-identified and participants' identities only known to the interviewers. Participants in the focus-group interviews collectively agreed to maintain the confidentiality of the conversation by not sharing any information disclosed during the interview outside of that setting.

To create a supportive environment during interviews, special care was taken by the interviewer to be compassionate and empathetic [111, 113], especially in Study I since discussing obstetric emergencies could potentially trigger distressing memories. Recognizing that some memories could be traumatic, a psychotherapist was consulted for the duration of the study. However, no interview participants indicated a need for specialized counseling.

The data collected from the questionnaires in Studies II and III were structured to preclude the possibility of tracing responses back to any specific individual, IP address, email, or workplace.

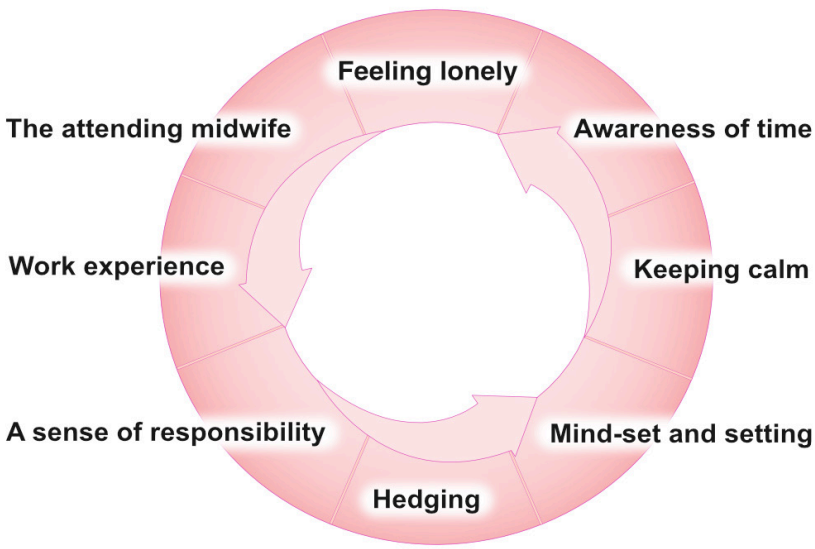
All studies were conducted in alignment with open science principles and published studies are compliant with the Creative Commons BY 4.0 license. The fully anonymized data for Studies I and II are mandated to be available upon request to The Swedish National Data Service for research purposes only.

Results

Paper I

Eight themes emerged from across the interviews: a. feeling lonely, b. awareness of time, c. sense of responsibility, d. keeping calm, e. work experience, f. the attending midwife, g. mind-set and setting, and h. hedging. Additionally, based on the premise that each interviewed individual expressed a unique perspective on decision-making, three distinct approaches were identified: I. individual-centered strategy, II. dialogue-distributed process, and III. chaotic flow-orientation. Ob&Gyn' decision-making styles revealed their individual identities, influenced by various themes. The list of chosen artworks can be found in Appendix C.

Themes from obstetric emergencies



a. Feeling lonely

> *"You're very lonely. You are often very, very lonely"*

Ob&Gyn frequently felt isolated in obstetric emergencies, despite a work culture that values teamwork. This isolation carried emotional weight, from mere solitude to existential anxiety or even empowerment. The loneliness often originated from the burden of decision-making and responsibility. For some, years of experience naturally alleviated this emotional strain, aided by personal growth through challenges.

b. Awareness of time

> *"The most important thing is to be aware of time and... Know that sometimes you have to act quickly. Time is always in the background"*

Ob&Gyn often felt time pressure intensify in urgent situations, causing stress and prompting quick decisions. Experience helped them better assess urgency and adapt their actions. With more time, they sought team input; under high pressure, they tended to make unilateral decisions. Some Ob&Gyn uniquely balanced taking control and seeking input, regardless of time constraints.

c. Sense of responsibility

> *"I've always felt a big responsibility, but... After I was involved in a situation in which the child got affected, I became much more aware of it. It became clearer somehow... And a little scary"*

All Ob&Gyn acknowledged childbirth as both a natural and potentially high-risk process. While some felt the responsibility as a stressful burden, others adopted a patient-centered focus to minimize the impact of their interventions. A few found the weight of the responsibility empowering and valued each team member's equal contribution in effectively managing situations.

d. Keeping calm

> *"I try to radiate... That I control the situation even if it doesn't feel that way. It's important to try to convey that, so as not to create anxiety, especially for the parents. Anxiety is contagious. But if you're calm instead, that can also spread"*

Ob&Gyn highly valued keeping their composure, a skill they worked on throughout their careers. Some had seen how a colleague's loss of calm disrupted the team. For most, staying calm was a conscious effort, aimed at easing the tension and enabling better team performance. This also created a safer

environment for the expecting mother and her partner, which in turn, reinforced the Ob&Gyn' own calm. A few found that staying calm came naturally, especially when fully engaged in the situation.

e. Work experience

> *"We fill the gaps with what we bring with us. With the knowledge and experience we have. And if you've worked for a long time, you can handle more bits of the puzzle"*

With more experience, Ob&Gyn built routines and expertise that increased their confidence and adaptability. They became more attuned to nuances, valuing details that a novice might overlook. Some seasoned Ob&Gyn developed a form of intuition that extended beyond expertise, fully engaging their awareness and past experiences in the present situation to actively open up new decision-making possibilities.

f. The attending midwife

> *"It's a special dynamic... You have to weight her reactions somehow, because she still has control over the patient. And been there... And everything. At the same time, you still have to be a little immune to that emotional game. So both and. Because I'm the one deciding. So I have to relate to the things she conveys that can be valuable information. It can be both factual and emotional, but also... Her opinions and will in this, and her thoughts on how the process should move forward. You can't let yourself be dragged along either"*

In Sweden, midwives manage routine pregnancies and childbirth, involving Ob&Gyn only for complications. Despite existing guidelines, the decision to consult a physician falls to the midwife, as does the extent of information shared. Ob&Gyn often found themselves reliant on midwives for decision-making, leading them to adapt their roles, especially when new staff was introduced or they switched workplaces. In practice, Ob&Gyn viewed midwives as gatekeepers, sometimes discouraging intervention for fear of disrupting natural childbirth. The transition of medical responsibility could be murky, leaving Ob&Gyn unsure if the midwife's call for involvement was genuine or procedural. This uncertainty was sometimes fueled by emotional factors rather than clear medical need.

g. Mind-set and setting

> *"It can be how I feel that day... What mindset I bring with me or what I've done earlier. There are lots of things that can affect. How tired you are. The impressions you get in the situation"*

Both internal factors like mood and stress, and external factors such as workload and delivery room conditions, influenced Ob&Gyn' decisions during obstetric emergencies. These decisions were also shaped by past experiences and future expectations, like previous conflicts or anticipated scrutiny. Ob&Gyn employed different coping strategies, some treating each emergency as a unique situation requiring tailored solutions. Sensitivity to these factors varied among Ob&Gyn but was generally managed through reflection and discussions with colleagues. A few considered such variables inevitable in emergencies and had come to accept them.

h. Hedging

> *"What's the best thing we can do based on the prevailing conditions... And in the next moment, and the moment after that. And then you have to be at it again, all the time: 'what's advisable now? How do I relate to that?'"*

Hedging involved evaluating various options based on medical guidelines and past experiences, often "thinking out loud" to engage team input. This practice enriched team trust and occasionally involved the patient and partner, often for educational or preventive reasons. More than a mere contingency planning, hedging shaped an adaptive mindset for flexible decision-making in evolving situations.

Decision-making perspectives

I. Individual-centered strategy

> *"I'm the one in charge… I'm the one that needs to make that decision"*

Seven Ob&Gyn preferred an individual-centered decision-making strategy, viewing themselves as the central processors of all information. In this approach, team members were seen more as tools to implement their directives. These Ob&Gyn relied on established rules and guidelines, had clear sense of 'right' and 'wrong' decisions, and respected authority. They found this approach particularly useful in uncertain or unfamiliar situations, aiming to minimize risks by opting for familiar interventions like Caesarean section instead of breech birth for example. They were driven by a strong sense of personal responsibility, a desire for control,

and often perceived the patient as vulnerable and in need of their intervention to restore a sense of order.

II. Dialogue-distributed process

> *"Nowadays, we make decisions together. We have a conversation. You don't need to be the one with all the answers and have a solution to every problem"*

Seven Ob&Gyn advocated for a dialogue-distributed approach to decision-making, viewing themselves as team members rather than sole decision-makers. They prioritized communication, including non-verbal cues, to collectively address situations. The technique of "thinking out loud" allowed for collaborative problem-solving, with the physician often serving as a final approver. Existing relationships among team members facilitated this approach. Even under stress, these Ob&Gyn maintained open dialogue rather than asserting authority. In summary, this approach prioritized team collaboration over individual roles, making the process less stressful and more rewarding for all involved.

III. Chaotic flow-orientation

> *"It's not always we have firm ground to stand on. Sometimes we're just treading water, even if we think we know what we're doing. We don't really have control over things"*

Three Ob&Gyn preferred a chaotic flow-orientation for decision-making, a perspective developed through personal and professional growth. Comfortable with switching between approaches, they embraced the uncertainty inherent in obstetric emergencies. Acknowledging their human limitations, these doctors saw their role as contributing to a purpose greater than individual concerns. They viewed emergencies as dynamic scenarios where everyone's participation was crucial. Attention to small details was valued, as they could lead to unexpected solutions. Rooted in a balance between faith in the situation and active involvement, this approach favored creativity and improvisation. Ob&Gyn with this viewpoint believed outcomes would evolve "as they should", while recognizing that may not always be the case.

Decision-making during obstetric emergencies - a narrative approach

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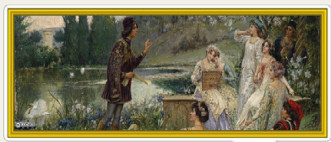
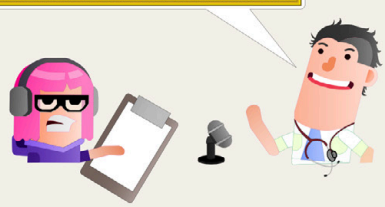
The problem

Childbirth is considered safe in the wealthiest parts of the world. However, variations in both intervention rates and delivery outcomes have been found between countries and between maternity units of the same country, such as Sweden. Interventions can prevent neonatal and maternal morbidity but may cause avoidable harm if performed without medical indication.





Our approach

To gain insight into the possible causes of this variation, we turned to first-person perspectives, and particularly physicians' as they hold a central role in the obstetric team. This study was conducted at four maternity units in the southern region of Sweden. Using a narrative approach, individual in-depth interviews ignited by retelling an event and supported by art images, were performed between Oct. 2018 and Feb. 2020. In total 17 obstetricians and gynecologists participated. An inductive thematic narrative analysis was used for interpreting the data.

What we found

Eight themes were constructed: feeling lonely, awareness of time, sense of responsibility, keeping calm, work experience, attending midwife, mind-set and setting, and hedging.

What this means

This study showed how various psychological and organizational conditions synergize with physicians during decision-making.

The findings have significance for teamwork, team training, patient safety and for education of trainees.

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Familjen Kamprads stiftelse · SKÅNE

Paper II

Levels of personality traits in Obstetricians and Gynecologists

The levels of personality traits in Ob&Gyn were assessed according to Table 7 on the next page. N showed the lowest levels, while A the highest. Women scored higher than men in N, A and C. Compared to a representative sample of the Swedish population, Ob&Gyn scored lower in N, and higher in E, A and C.

Correlations between personality traits and decision-making styles

The results from the correlation analyses (Table 8) showed that N was negatively correlated with Individual decision-making, and slightly positive with Team decision-making. Overall, E, O, A were positively correlated with both Individual and Team decision-making. The correlations between decision-making styles were overall small.

Table 8. Correlations between personality traits and decision-making styles
Above the diagonal are disattenuated correlations, controlled for unreliability (Cronbach's α). All correlations above .15 are significant on the p <.01 levels.

	1	2	3	4	5	6	7	8
1.Neuroticism		– .32			– .39	– .38	.21	
2.Extraversion	– .26		.24	.33	.30	.19	.19	
3.Openness		.18		.27		.24	.24	.17
4.Agreeableness		.23	.18		.33	.31	.29	
5.Conscientiousness	– .30	.23		.22		.24		
6.Individual	**– .28**	**.14**	**.17**	**.20**	**.17**		.14	.19
7.Team	**.15**	**.13**	**.16**	**.18**		**.09**		.25
8.Flow			**.11**			**.12**	**.15**	

Effects of personality traits on decision-making styles

Multiple linear regressions (Table 9) showed that even after controlling for age, sex, and clinical experience, Neuroticism was still significantly (P <.001) negatively related to the Individual decision-making style. Women and older age were positively related to Team; while the more years of clinical experience the less decision-making was based on Team. Cognitive ability did not show any relationships to decision-making style.

Table 7. Descriptive characteristics of the Ob&Gyn sample (N=472)

		M (SD)	SKEWNESS	KURTOSIS	CRONBACH's α	SEX Differences (Cohen's d)	Differences with reference sample (N=1943) (Cohen's d)
Decision-making styles	Individual	4.37 (0.46)	– 0.49	0.10	.67	NS	-
	Team	4.67 (0.51)	– 1.27	2.20	.62	**– 0.45**	-
	Flow	3.20 (0.63)	0.16	– 0.46	.60	NS	-
Personality traits	Neuroticism	1.97 (0.60)	0.66	0.23	.82	**– 0.45**	**– 1.09**
	Extraversion	3.81 (0.65)	– 0.37	– 0.04	.78	NS	**0.79**
	Openness	3.73 (0.67)	– 0.49	0.11	.73	NS	NS
	Agreeableness	4.27 (0.48)	– 0.47	– 0.14	.62	**– 0.56**	**1.04**
	Conscientiousness	4.12 (0.54)	– 0.66	0.45	.73	**– 0.30** (p =.014)	0.97
Covariates	Cognitive ability	1.06 (1.13)	0.59	– 1.11	-	NS	-
	Age	46.4 (12.3)	0.66	– 0.38	-	**0.68**	**1.54**
	Clinical experience	15.5 (12.1)	0.73	– 0.43	-	**0.61**	-

All differences are significant on the p <.001 levels, unless specified otherwise. Men=0, Women=1. All variables were measured on a 1-5 Likert scale, except for *Age* and *Clinical experience* that were measured in years. *Cognitive ability* was measured on a 0-3 scale

Table 9. Regression models: the effects of personality traits on the decision-making styles

	INDIVIDUAL		TEAM		FLOW	
	R^2 = .13 F(5,433) = 13.20 p <.001 β	**R^2 = .18** F(9,419) = 10.20 p <.001 β	R^2 = .09 F(5,435) = 8.74 p <.001 β	**R^2 = .15** F(9,421) = 7.93 p <.001 β	R^2 = .03 F(5,430) = 3.01 p =.011 β	R^2 = .05 F(9,417) = 2.20 p =.021 β
Neuroticism	– 0.24	**– 0.17**	0.20	0.12 (p =.025)	0.06	0.07
Extraversion	– 0.01	0.00	0.11 (p =.023)	0.10 (p =.041)	– 0.06	– 0.06
Openness	0.11 (p =.013)	0.09	0.13 (p =.005)	0.16	0.12 (p =.012)	0.11 (p =.021)
Agreeableness	0.16	0.15 (p =.002)	0.13 (p =.007)	0.11 (p =.021)	0.08	0.07
Conscientiousness	0.08	0.07	0.03	0.02	– 0.07	– 0.08
Cognitive ability		– 0.01		0.04		– 0.08
Age		0.02		**0.31** (p =.019)		– 0.03
Sex		0.05		**0.26** (p =.032)		0.16 (NS)
Clinical experience		0.22 (NS)		**– 0.46**		0.11

SE = Standard Error (0.00 - 0.08), β = standardized estimate. All estimates above .15 are significant on the p <.001 levels, unless specified otherwise. Men=0, Women=1.

Personality traits and decision-making styles among obstetricians and gynecologists managing childbirth emergencies

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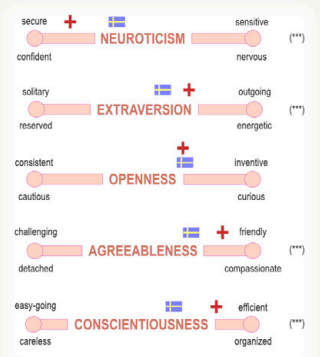
The problem

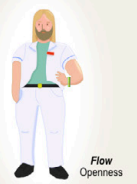
The management of a childbirth emergency is a complex phenomenon during which the team's resilience and success will also be dependent on the diversity of individuals and the variation of their responses. Such differences can be explained through personality traits.

The objectives of this study were I) to compare the personality traits of obstetricians and gynecologists with those of the general population and II) to examine the relationship between obstetricians' and gynecologists' personality traits, cognitive ability, clinical experience, sex and three decision-making styles (*Individual*, *Team* and *Flow*) during childbirth emergencies.



Our approach

Obstetricians and gynecologists, members of the Swedish Society for Obstetrics and Gynecology (n = 472) responded to an online questionnaire that included a simplified version of the Five Factor Model (IPIP-NEO-30), a spatial ability test (ICAR) and 15 general questions about decision-making during childbirth emergencies relating to three decision-making styles (*Individual*, *Team* and *Flow*). A control group (N = 1943) from the general Swedish population was used. The data was analyzed using Pearson's correlation analysis and multiple linear regression.



What we found

Swedish obstetricians and gynecologists scored ($P < 0.001$) lower on Neuroticism (d = − 1.09) and higher on Extraversion (d = 0.79), Agreeableness (d = 1.04) and Conscientiousness (d = 0.97) compared to the general population.

The most important trait was Neuroticism, which correlated with the decision-making styles Individual (r = − 0.28) and Team (r = 0.15), while for example Openness only trivially correlated with Flow. Multiple linear regression showed that personality traits with covariates explained up to 18% of decision-making styles.

What this means

- Obstetricians and gynecologists have a specific personality profile.
- Personality traits affect decision-making during childbirth emergencies.
- The assessment of medical errors in childbirth emergencies and their prevention through individualized training should take account of these findings.

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Familjen Kamprads stiftelse

SKÅNE

Paper III

Professionals' views on aspects of maternity care work

Midwives scored higher in NII (d = 1.39, $P < .001$) and lower in JS (d = – 0.26, $P = .006$) compared to Ob&Gyn. No other differences between the samples were found, including personality dimensions. For the Ob&Gyn sample, women scored higher than men in A (d = 0.75) and C (d = 0.55). Other descriptive characteristics of the samples are described in Table 10.

Correlations between aspects of maternity care work

JS correlated with NII, N and the number of High-risk patients per shift. NII also correlated with Profession (e.g., Midwives). The number of High-risk patients per shift correlated with HH (Table 11).

Mediation effect of Negative Impact of Inductions

Exploratory follow-up mediation and moderation analyses with NII and Profession showed that NII significantly mediates the relationship between N and JS ($P = .017$), with a mediation effect accounting for 10% of the total effect (Table 12 and Figure 1). Nor NII or Profession did have moderating effects.

Table 10. Descriptive characteristics of the study samples
Differences are significant on the p <.001 levels, unless specified otherwise; a. There were only two men in the Midwives sample, gender differences were therefore not calculated. Men=1, Women=0 were used for the Ob&Gyn sample. All variables were measured on a 1-5 Likert scale, except for *Age* and *Clinical experience* that were measured in years. The number of *Medium-* and *High-risk patients* were measured on a scale from 0 to 10. The three rows for each variable represent values for the $N_{Ob\&Gyn}$ =240, $N_{Midwives}$ =207, and $N_{Ob\&Gyn+Midwives}$ =447 samples respectively.

		M (SD)	SKEWNESS	KURTOSIS	Cronbach's *α*	McDonald's *ω*	GENDER differences[a] (Cohen's *d*)
Aspects of maternity care work	Negative Impact of Inductions	2.47 (0.92)	0.15	– 0.65	.85	.86	NS
		3.70 (0.86)	– 0.20	– 0.53	.83	.84	
		3.04 (1.08)	– 0.04	– 0.71	.89	.90	
	Healthcare Crisis Experience	3.78 (0.60)	– 0.40	0.49	.80	.81	– 0.45
		3.80 (0.60)	– 0.46	1.08	.78	.79	(p =.011)
		3.79 (0.60)	– 0.42	0.74	.79	.80	
	Job Satisfaction	3.59 (0.66)	– 0.42	0.01	.77	.77	NS
		3.42 (0.63)	– 0.49	– 0.34	.73	.73	
		3.51 (0.65)	– 0.42	0.14	.75	.76	
Personality	Neuroticism	2.51 (0.74)	0.25	– 0.17	.71	.72	NS
		2.62 (0.69)	0.21	0.11	.62	.64	
		2.56 (0.72)	0.22	– 0.07	.67	.68	
	Extraversion	3.28 (0.89)	– 0.05	– 0.70	.83	.83	NS
		3.30 (0.79)	0.12	– 0.44	.72	.73	
		3.29 (0.85)	0.01	– 0.58	.78	.79	
	Openness	3.91 (0.68)	– 0.20	– 0.95	.62	.63	NS
		3.90 (0.66)	– 0.55	0.28	.60	.62	
		3.90 (0.67)	– 0.35	– 0.43	.61	.62	
	Agreeableness	4.22 (0.61)	– 0.94	0.90	.78	.78	0.75
		4.26 (0.53)	0.33	– 0.58	.57	.60	
		4.24 (0.58)	– 0.74	0.53	.69	.70	
	Conscientio-usness	3.90 (0.71)	– 0.42	– 0.23	.70	.71	0.55
		3.97 (0.68)	0.62	0.24	.71	.71	(p =.002)
		3.93 (0.70)	– 0.51	– 0.05	.70	.71	
	Honesty-Humility	3.98 (0.68)	– 0.64	0.14	.60	.60	NS
		3.94 (0.68)	– 0.46	– 0.04	.57	.60	
		3.96 (0.68)	– 0.55	0.03	.57	.60	
Other variables	Age	44.3 (10.3)	0.67	– 0.46	-	-	– 0.53
		45.2 (10.4)	0.33	– 0.80			(p =.003)
		44.7 (10.4)	0.51	– 0.66			
	Clinical experience	13.2 (10.3)	0.87	– 0.25	-	-	– 0.66
		12.8 (9.94)	0.77	– 0.27			
		13.1 (10.1)	0.82	– 0.26			
	Inductions	3.49 (1.34)	0.34	0.23	-	-	NS
		3.29 (1.37)	1.19	3.07			
		3.40 (1.35)	0.73	1.38			
	Medium-risk patients	4.31 (1.93)	0.89	0.30	-	-	NS
		4.35 (1.74)	0.62	0.07			
		4.33 (1.84)	0.78	0.22			
	High-risk patients	1.82 (1.12)	1.65	2.85	-	-	NS
		1.68 (0.93)	2.01	5.97			
		1.76 (1.04)	1.81	3.97			

Table 11. Correlations between aspects of maternity care work

y	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Negative Impact of Inductions		− .13	− .34	.14					− .15	.56	− .14			.12
2. Healthcare Crisis Experience	− .11 (p =.023)		.19						− .22				.13	.14
3. Job Satisfaction	**− .30**	.15 (p =.002)		− .40			.15		.28	− .14	.18			− .22
4. Neuroticism	.11 (p =.030)		**− .29**						− .42					
5. Extraversion						.37	.38		− .17				.11	.14
6. Openness					.26		.47							0.13
7. Agreeableness			− .11 (p =.028)		.28	.31						0.12	0.13	0.14
8. Conscientiousness									− 0.18		0.17			
9. Honesty-Humility	− .12 (p =.012)	− .15 (p =.002)	.19	− .27	− .12 (p =.013)			− 0.12 (p = .014)					0.14	− 0.37
10. Profession	**.55**		− .12 (p =.011)								− 0.15			
11. Clinical experience	− .13 (p =.008)		.16 (p =.002)					0.14 (p =.019)		− 0.15 (p =.002)			0.51	0.41
12. Inductions							.10 (p =.042)							0.34
13. Medium-risk patients		.10 (p =.046)			.10 (p =.039)		.11 (p =.022)		− 0.11 (p =.024		0.51			
14. High-risk patients	.11 (p =.032)	0.11 (p =.025)	**− .19**		.12 (p =.012)	.10 (p =.044)	.12 (p =.011)		**− 0.29**		0.41	0.34		

$N_{Ob\&Gyn+Midwives}$ = 447. Above the diagonal are disattenuated correlations, controlled for unreliability (McDonald's ω). All correlations above .15 are significant on the p <.001 levels, unless specified otherwise. Ob&Gyn = 0, Midwives = 1. Correlations are controlled for gender and age.

Table 12. Mediation and moderation effects of Negative Impact of Inductions on Job Satisfaction

EFFECT	LABEL	β (SE)	95% CI	Z	*P*	R^2
Mediation						
Direct	N –> NII	0.20 (0.07)	0.05 to 0.33	2.59	.010	
	NII –> JS	– 0.16 (0.02)	– 0.21 to 0.11	– 6.10	< .001	
	N –> JS	– 0.27 (0.04)	– 0.35 to – 0.192	– 6.76	< .001	0.90
Indirect	N –> NII x NII –> JS	– 0.03 (0.01)	– 0.06 to – 0.01	– 2.38	.017	0.10
Total	N –> JS + N –> NII x NII –> JS	– 0.30 (0.04)	– 0.38 to – 0.20	– 7.27	< .001	1.00
Moderation	N ⁎ NII	– 0.05 (0.04)		–1.48	.140	

N = Neuroticism, NII = Negative Impact of Inductions, and JS = Job Satisfaction

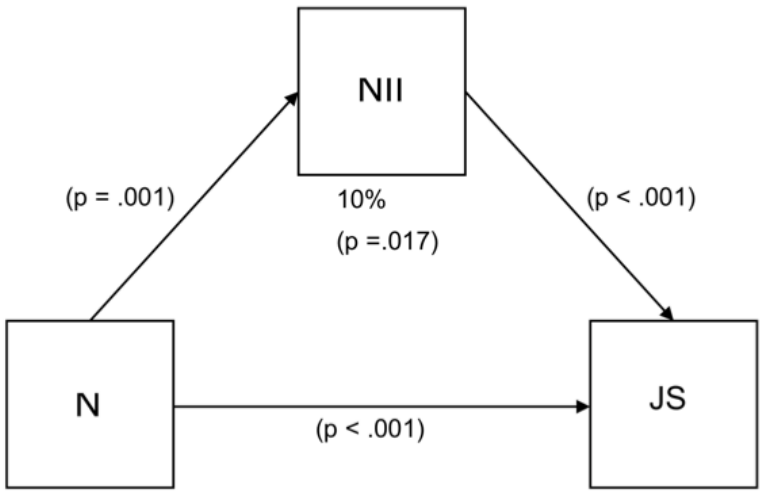

Figure 1. Mediation effect of Negative Impact of Inductions
N = Neuroticism, NII = Negative Impact of Inductions, and JS = Job Satisfaction

Validity of maternity care work variables

Bartlett's test of sphericity was found significant ($P < .001$) confirming the suitability for factor analysis. Three factors extracted using the Kaiser criterion (see scree plot in Figure 2) explained up to 52% of the variance: 19%, 17%, and 16% respectively. These three factors coincidentally matched the theoretical constructs of the new variables NII, HCE, and JS (Table 13).

Table 13. Factor loadings
Minimum residual extraction method was used in combination with Oblimin rotation. The numbers in the item column refer to respective question in the questionnaire. R = reversed item. Items are labeled after the questions' content. Items 9.1 to 9.3 reflect NII. Items 11.2 to 11.5 reflect HCE. Items 7.2 to 7.6 reflect JS.

ITEMS	FACTOR 1	FACTOR 2	FACTOR 3	COMMUNALITIES
Negative work impact (9.1)	**.77**	–.01	.01	.41
Professional role conflict (9.2)	**.96**	.01	.02	.09
Bad conscience towards parturient (9.3)	**.85**	–.00	–.04	.26
Increased professional confidence (11.2)	.04	**.77**	.08	.38
Increased professional skills (11.3)	.01	**.86**	–.00	.26
Good cooperation (11.4)	–.19	**.49**	.09	.69
Increased collaborative skills (11.5)	–.02	**.65**	–.14	.59
Workplace appreciation (7.2)	.02	.02	**.50**	.76
Feeling relaxed at work (7.3R)	.04	–.01	**.74**	.48
Balance between demand and capacity (7.4)	–.01	.01	**.56**	.68
Feeling good before work (7.5R)	.02	.05	**.67**	.55
Positive effects of ease (7.6R)	–.16	–.04	**.58**	.59

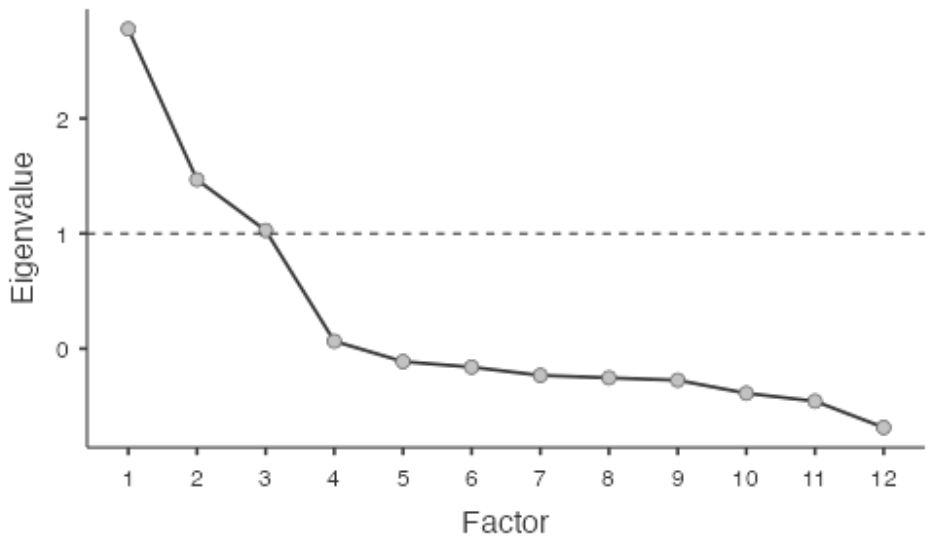

Figure 2. Scree plot

The model fit measures Chi-square (χ^2 = 103 (447, 33), $P < .001$) indicated a poor fit while both the Root Mean Square Error of Approximation (RMSEA = .07, 90% CI [.06 - .09]) and the Tucker-Lewis Index (TLI = .93) showed an acceptable fit. The results of the reliability analyses are shown in Table 10.

Paper IV

One overarching theme was constructed from the narrative analysis, called Navigating the tensions. This overarching theme consisted of three themes (Table 14). The three themes were: I. Work climate challenges, II. Balancing professional obligations, and III. Preserving norms and shaping perceptions.

Table 14. Overarching theme, themes and subthemes

OVERARCHING THEME	Navigating the tensions		
THEMES	Work climate challenges: eroding expertise and organizational barriers	Balancing professional obligations	Preserving norms and shaping perceptions

Additionally, the secondary analysis, viewed through the lens of the sociological concepts of boundary work and professional demarcation, is presented at the end of each theme.

I. Work climate challenges: eroding expertise and organizational barriers

Midwives expressed that a worsening work environment, staffing issues, workload, and management challenges greatly affect their ability to help during childbirth, especially in emergencies. Over the past two decades, the midwives noted major changes in their work environment, attributing a knowledge and experience void to high staff turnover and the retirement of senior professionals. This has led to increased insecurity surrounding childbirth. Midwives are concerned about fear influencing modern obstetric practices and desired deeper reflection between their profession and Ob&Gyn. The current climate places undue pressure on newer midwives and Ob&Gyn, and in the process, often sidelining midwives' actual experience, especially in emergencies.

> *"We don't make the decisions, but we want to be involved in the decision-making process because we have the experience… We automatically compare the situation with many other, previous situations… And we've seen good outcomes and less good outcomes"*

Furthermore, the influence of key figures, often senior Ob&Gyn or midwives resistant to change and engaging in bullying, hindered collaborative efforts. Despite this, midwives mentioned honing skills and strategies to proficiently navigate their roles, highlighting their dedication to fulfilling their professional duties.

Boundary work expressed in Work climate challenges

In the theme of Work climate challenges, midwives actively engage in boundary work to establish and maintain their roles during childbirth emergencies. They emphasize their **expertise**, advocating for a greater voice in decisions due to their deep experience. The highlighting of a growing knowledge gap further reinforces the significance of the more experienced midwives' unique skills. Furthermore, midwives underscore their **adaptability**, emphasizing their dedication to their profession despite challenges like high staff turnover and sometimes unfavorable work atmospheres. Their resilience in navigating these barriers is a testament to their commitment to retaining influence and respect. Lastly, midwives **critique the prevailing focus on risk and safety** in modern obstetrics. By questioning certain risk-reduction strategies that might sideline them, they distance themselves from what they see as excessively fear-based approaches in the profession.

II. Balancing professional obligations

Midwives stressed the importance of constantly navigating their professional responsibilities concerning normal birth, medical safety, and patient advocacy.

Midwives emphasized the value of peer support. Often, they preferred guidance from experienced colleagues to that of Ob&Gyn. They posited that the essence of midwifery is founded on mutual trust and respect. This belief extended to a call for younger midwives to understand natural birth processes deeply and to advocate for decreased reliance on medical interventions. However, concerns arose about some colleagues' potential hesitancy to act promptly in emergencies or to share vital information with Ob&Gyn. Such behavior can jeopardize birth outcomes and the profession's credibility.

Midwives viewed their role in childbirth akin to vigilant "watchmen", being in constant observation mode – monitoring labor, assessing fetal health, and noting any deviations from the norm. During crises, midwives often took on leadership roles, asserting that their expertise can sometimes outweigh traditional hierarchies. They viewed themselves as essential communicators, translating the woman's feelings and needs to the medical team, especially when Ob&Gyn might come across as distant. Their responsibilities also included safeguarding the birthing woman's experience, ensuring she remains at the forefront of care. Part of this advocacy involved modulating the delivery room's atmosphere, making certain that the parturient and partner are apprised of the situation without inducing panic. Furthermore, midwives see themselves as bridges – bridging the gap between medical intervention and care, and ensuring the birthing woman and her family are well-informed and involved.

> *"My role is to elevate the patient's perspective, to elevate the patient to be, really, at the top of this decision-making hierarchy."*

As advocates, they felt duty-bound to question and, if necessary, challenge potentially detrimental decisions by Ob&Gyn during delivery. Taking a stand, even under trying circumstances, was seen as essential.

> *"As an experienced midwife I might try to figure it out for myself. But ultimately, the doctor is my help… And the woman's help. I'll never choose to give that up!"*

Midwives recognized the importance of working closely with Ob&Gyn and viewed themselves as invaluable supports, especially during emergencies, assisting with decision-making and logistics. However, they also acknowledged that their role sometimes demands adaptability. Depending on various factors, like the attending Ob&Gyn or time of day, midwives might have to make on-the-spot decisions, such as administering an oxytocin-drip without a direct order. Despite these moments of independent decision-making, maintaining transparency and open communication with Ob&Gyn remained paramount.

Boundary work expressed in Balancing professional obligations

In the theme of Balancing Professional Obligations, midwives express several layers of boundary work and demarcation strategies. Firstly, they accentuate the importance of **mutual support** and collaboration within their community, setting a distinct identity that's separate from Ob&Gyn. This distinction becomes even more pronounced when they emphasize their profound **knowledge of natural childbirth**, cautioning against over-reliance on medical interventions – a contrast to some Ob&Gyn who may advocate for more interventionist strategies. Their self-perception as "watchmen" further anchors this distinction, underscoring their specialized expertise in **safeguarding both the mother's and child's well-being**, even when it means countering the actions of Ob&Gyn. Beyond this expertise in the physical aspects of childbirth, midwives emphasize their **unique emotional attunement**, acting as pivotal bridges between the medical world and the birthing mother. Recognizing the dynamic nature of childbirth, they exhibit **adaptability**, understanding that situations might necessitate **deviations from established norms**. Yet, underlying all these aspects is a foundational **belief in transparency**, open communication, and an active collaboration with Ob&Gyn.

III. Preserving norms and shaping perceptions

Midwives emphasized their roles as lifelong learners, constantly adapting based on self-reflection and an acute understanding of their unique position in the medical hierarchy. They often felt that some Ob&Gyn operated under outdated models, which sometimes prioritized procedural efficiency over the well-being of the birthing woman. In response, midwives adopted a proactive stance, striving to enlighten and influence Ob&Gyn's viewpoints through demonstrations and constructive feedback, aiming to challenge deep-rooted medical norms.

> *"There is no point in over-treating someone when there is nothing wrong… It's important to identify if there is something harmful going on. But if there isn't, we shouldn't intervene. We don't want to unnecessarily carry out procedures that may be uncomfortable for the woman or her child"*

Pushing for a more inclusive decision-making process, midwives believed in the paramount importance of both safety and well-being. They championed trust, respect, and collaboration, refusing to be limited to merely delivering babies. They actively pushed back against the dominant idea of Ob&Gyn holding all authority and advocated for diverse insights in childbirth processes. Their commitment to preserving the normalcy of childbirth was evident.

> *"Above all, what we actually do, maybe more than they realize, is that we avoid involving the doctor when we see that the process goes in the wrong direction. In fact we have a lot of measures that we take to curb the situation and return it to a normal course"*

Moreover, midwives sought to reshape the maternity care environment by educating women in their care about childbirth. They saw themselves as not only caregivers but also as educators, empowering women to recognize and call out inadequate care. By doing so, they believed they were setting the stage for more fulfilling birthing experiences.

Boundary work expressed in Preserving norms and shaping perceptions

Under the theme of Preserving norms and shaping perceptions, midwives emphasize their commitment to woman-centered care and differentiate their role from that of Ob&Gyn. They challenge and aim to reform outdated medical paradigms that prioritize procedural efficiency over a woman's well-being. This critique establishes them as advocates for a woman-focused approach in contrast to conventional medical models. They actively suggest and demonstrate alternative methods, underscoring their expertise in natural childbirth. Advocating for a larger role in decision-making, they challenge traditional Ob&Gyn dominance and promote a balanced and collaborative maternity care culture. They also educate expectant mothers and their partners about the birthing process and their rights, even in emergencies, empowering them to be vigilant and further solidifying the midwives' advocacy role.

Interrupted studies

In the course of this research project, various original studies encountered a range of challenges and unforeseen interruptions, which, while impeding expected conclusions, offered unique insights into the research process. The intention is not

to underline setbacks, but rather to provide a comprehensive perspective. A detailed discussion on these interrupted studies is presented in Appendix D. It will hopefully enrich the understanding of the successful outcomes presented and illustrate the iterative, often non-linear, nature of scientific projects.

Discussion

Obstetric emergencies represent pivotal moments in the lives of birthing women and their partners, events that most individuals will, perhaps fortunately, never experience. For maternity care professionals, these instances are more common but can still be uniquely demanding, necessitating rapid decisions, diverse expertise, and the harmonious collaboration of various roles. The primary objective of this thesis was to delve into the complexities of decision-making in these emergencies. In particular, we were interested in the influence of individual differences such as personality, and the intricacies arising from inter-professional dynamics. Through a series of Papers, a consistent theme emerges: decision-making in obstetrics, and particularly emergencies, transcends a mere objective clinical procedure, being shaped by multiple layers of identity.

Individual differences and decision-making processes

Modern obstetric care heavily relies on evidence-based practices [3, 49, 172, 173]. Yet, decision-making, particularly in high-stakes scenarios like obstetric emergencies, has traditionally been grounded in clinical knowledge and experience [53, 174-176]. A growing body of research, however, challenges this view, emphasizing the role of individual differences in shaping decision-making processes [16, 26, 42, 44, 177-181]. Papers I and II delve deeper into this notion, revealing an intricate interplay between personality traits and decision-making mechanisms during obstetric emergencies [164, 182].

In Paper I, we discovered that Ob&Gyn's decision-making processes extend beyond mere clinical knowledge and skill. Ob&Gyn are not just following protocols; they are actively engaged in interpreting and assigning meaning to the evolving situations they confront. While clinical guidelines offer a foundational structure, Ob&Gyn also draw from their past experiences, underlying beliefs, immediate context, and even innate personalities – some even characterized themselves as "naturally calm". These influences are reflected in the eight dominant themes that guide their actions and decisions in emergencies, which in turn shape and mold these very themes.

Furthermore our research identified three distinct decision-making perspectives, or styles: the individual-centered strategy, the dialogue-distributed process, and the chaotic flow-orientation. These perspectives emerge based on the prioritization and valuation of various themes in specific situations, encapsulating the diverse narratives of professional identity and practice in obstetrics and gynecology. Yet, these narratives often remain hidden, even from the Ob&Gyn themselves [183, 184]. We postulate that such underlying perspectives significantly influence their actions and interactions with team members, impacting the care provided.

Shifting focus to existing research, our identified perspectives resonate with established findings in decision-making literature. The individual-centered strategy aligns with studies focusing on the cognitive and emotional facets of decisions [15-18]. The dialogue-distributed process finds parallels in research on team dynamics and collaborative decision-making [20, 22, 51, 165, 185], while the chaotic flow-orientation is consistent with insights on effortless attention and intuition [54-56, 166].

Strikingly, our findings mirror three of the four decision-making styles highlighted in Scott and Bruce's study: the rational, the intuitive, and the dependent [57]. This is complemented by Dreyfus and Dreyfus' model of skill acquisition, which depicts a progression in professional decision-making [58, 59]. Intriguingly, our interviewees noted a similar evolution – from "individual" to "dialogue" to "chaos" – as their experience grew. If this progression is universally applicable, it could reshape training methods, acknowledging the contrasting decision-making tendencies between novices and experts [59, 186]. Aligning with this, Hammond's cognitive continuum theory positions decision-making on a spectrum, from intuitive to analytic, shaped by various contextual factors [60-63].

While we identified three distinct perspectives, most Ob&Gyn rarely confined themselves to one. They often merged elements from different perspectives, with a particular style becoming dominant based on individual traits and the situation at hand.

In Paper II, we further this exploration, examining the relationship between personality traits and decision-making styles in obstetric emergencies [182]. Our study revealed that Swedish Ob&Gyn, compared to the general Swedish population, exhibit lower N and higher levels of E, A, and C. Such personality variations are consistent with literature suggesting links between personality, occupational choices [85], and academic disciplines [187]. Given the high-stakes nature of obstetrics, especially during emergencies [42], these trait differences seem aptly suited for the profession. For instance, reduced N can be advantageous when confronted with stress and unpredictability [88, 89]. E, encompassing a comfort in leadership and collaborative challenges, is similarly beneficial [88]. Additionally, heightened A and C are conducive to following protocols and collaborating effectively, especially in crisis situations [188]. Expanding upon this,

in Paper III we compared the personalities of Ob&Gyn and midwives, finding no significant differences. Despite the relatively low reliability in midwives' personality traits scores, both groups seem to share a similar profile, possibly explaining their aptitude in working in the same type of environment such as delivery care.

Our findings in Paper II further highlight the predictive capability of personality in determining preferred decision-making styles. Notably, low N emerged as a significant predictor, even after accounting for variables like cognitive ability, age, sex, and clinical experience. The characteristics of N – marked by anxiety and vulnerability – showed inverse relationships with individual decision-making and direct relationships with team-oriented decision-making. This mirrors literature suggesting that heightened N can foster caution and peer dialogue [90, 91]. Other findings, such as women's higher N leading to fewer risks [92], and its modulation with age [29], further nuance our understanding.

In terms of clinical experience, lesser-experienced Ob&Gyn showed a greater inclination towards team-based decision-making. Given the consensus on teamwork being integral to complex clinical problem solving [20, 52, 53, 165, 189], this is hardly surprising.

The contrasting perspectives of midwives and Ob&Gyn

In Paper I, a distinct perception emerges of Ob&Gyn viewing midwives as decision-making gatekeepers. Midwives determine when to engage Ob&Gyn in complications and the extent of information they share. This structure, intended to streamline childbirth procedures, sometimes introduces ambiguities [26, 42]. Particularly in new or unfamiliar contexts, Ob&Gyn often adapt and rely on midwives for pivotal decisions. At times, they are left discerning the genuine medical intent behind a call for their involvement. Yet, within these dynamics, numerous Ob&Gyn advocate for a dialogical approach. Thus, to expand our understanding of decision-making processes in obstetric emergencies, Papers III and IV explore the nuances of midwives' professional identities and perspectives on care. We eventually draw on findings from both papers to further enrich our understanding of inter-professional dynamics.

In Paper III, we explored Ob&Gyn's and midwives' perspectives and on labor induction. In the context of this thesis, labor induction serves as a lens, offering insights into midwives' professional identities and their nuanced perspectives on obstetric care. The findings reveal a considerable gap between the perspectives of Ob&Gyn and midwives, despite labor inductions' recognized benefits to perinatal outcomes [190]. At its core, we suggest that this divergence may be anchored in

their contrasting roles, responsibilities, and the depth of interactions with patients [39, 40, 191].

Midwives, deeply involved with patients, experience the impacts of labor inductions firsthand. This involvement potentially causes an internal struggle as the pressures of performing inductions can disrupt their self-perception as patient advocates [167]. In contrast, Ob&Gyn, often more distant from these direct patient interactions, prioritize medical responsibilities and evidence-based practices [36, 192, 193]. Their clinical lens to view labor inductions is less personal, emphasizing the procedure's medical necessity. Interestingly, our study highlighted that despite many similarities between the two professions in several areas, job satisfaction stood out as a difference.

It seems that the complexities midwives face with labor induction and the impact on their professional identity plays a significant role in shaping their overall job satisfaction [88, 89, 182, 188, 194]. This is further complicated by the divergence in views with Ob&Gyn; as they uphold evidence-based guidelines, midwives may feel their unique perspectives are overshadowed, exacerbating potential conflicts and reflecting recent findings on midwives' attitudes [40, 167, 191]. The discrepancy we observe between Ob&Gyn and midwives may not be a mere surface-level difference but a manifestation of profound, underlying disparities between the professions. To gain a more comprehensive understanding, we now delve deeper into the unique perspectives, understandings, and views of midwives concerning obstetric emergencies.

Midwives' boundary work and professional identity

In a complementary way, Paper IV amplifies the voices of midwives through their perspectives on obstetric emergencies. The paper also offers a counterbalance to some of the findings expressed by Ob&Gyn in Paper I.

Paper IV highlights midwives' profound expertise in managing normal births, casting them as defenders of natural birth processes [2, 30-34, 195, 196]. Even in the face of emergencies, midwives view their involvement as a seamless progression of their core competence. Moreover, their professional identity is grounded not just in clinical knowledge and skills but in a holistic understanding of a woman's needs – both physical and emotional – during birth [1, 2, 30-34]. This deep-rooted commitment contrasts starkly with the more clinical, procedural approach observed in Ob&Gyn [31, 35-37].

Building on this foundation, midwives' dedication extends beyond clinical care. They prioritize woman-centered care, empowerment, and advocacy. Their active partnership with expectant mothers encompasses knowledge-sharing and

championing their rights within the maternity care system. This commitment also involves shielding women from unnecessary obstetric interventions, occasionally leading to tensions with Ob&Gyn. This protective stance, evident even during emergencies, underscores midwives' proactive effort in delineating and reinforcing their professional domain.

Indeed, this proactive assertion inherently brings midwives into disgreement with Ob&Gyn and the medicalized environment [36, 39-41, 197]. More generally, their commitment to preserving traditional midwifery practices often challenges established medical norms. In this context, the insights regarding the Ob&Gyns' relationship with midwives in Paper I become particularly notable [164]. As midwives perceive their expertise in normal birth as invaluable even in obstetric emergencies [3, 13, 14], their attempts for a more active role can appear confrontational to Ob&Gyn. This juxtaposition brings to the fore the historical tension between the two professions.

Paper IV further elaborates on the midwives tread a delicate balance between hierarchy and autonomy. Indeed, while midwives assert their expertise and reshape the landscape of maternity care [37, 40, 196, 198], this often comes at the expense of existing medical hierarchies and norms, transgressing the traditional domain of Ob&Gyn and underscore a persistent push and pull between midwives and Ob&Gyn [26, 31, 42, 50, 197, 199, 200].

In conclusion, Paper IV brings to the fore a profound paradox at the heart of Swedish maternity care. On one hand, midwives, as champions of natural birth and primary patient advocates, play an invaluable role in defining the contours of a normal birthing process. Yet, when complications arise and the situation deviates from this normalcy, it is they who must initiate the intervention of the medical hierarchy by summoning an Ob&Gyn. In this shift from normal to emergent, midwives grapple with the dual desire to retain their integral role and advocacy, even as they acknowledge the necessity of external, hierarchical intervention. This dynamic captures the intricate balance between natural birth advocacy and the medicalized environment, exemplifying the continuous negotiation and tension in the realm of maternity care. The landscape of childbirth, as portrayed in Paper IV, is thus as much about clinical decision-making as it is about the ideologies, relationships, and power structures that underpin it.

Methodological considerations

Narrative truth(s)

The narrative approach in this thesis is inherently interpretive, aligning with Richard Rorty's *pragmatist* perspective (Appendix E) [129-131, 201]. We acknowledge that the original data in both Papers I and III are context-sensitive and open to multiple, new interpretations [128]. Furthermore, the findings and analyses reflect the authors' backgrounds and their varying levels of engagement in the process. We posit that this thesis offers value to both clinicians and researchers as its contribution(s) helps us make sense of the world and ourselves [126]. However, the ultimate merit of our research lies in the readers' assessments [68, 69].

To ensure the integrity and robustness of our narrative reconstruction (i.e. interpretation), we took several methodological measures. These aimed at creating a trustworthy narrative aligned with participant responses [202]. We sought consistent interpretation across all interviews believing that our identified themes and viewpoints provide depth and clarity for the professional community [163, 203]. In Paper I, to enhance the reliability of our findings, we provided our interpretations to the interviewees for their feedback [67, 68, 111]. Throughout the process of crafting both Papers I and III, discussions among the authors played an important role in refining our interpretations, with our varied backgrounds offering fresh perspectives and insights [126, 204].

Being an insider

As an experienced obstetrician and gynecologist, my active role in maternity care gave me a unique perspective but also introduced potential biases to the inquiry presented in this thesis. On one hand, my background provided an intimate familiarity with the intricacies and challenges often discussed during interviews. This knowledge naturally facilitated rapport with colleagues, leading to deeper and more insightful conversations. However, being so closely tied to the subject matter risked blurring the boundaries between "the observer" and "the observed", possibly coloring interpretations with personal assumptions and preconceptions

[114, 115]. While the core challenge revolved around recognizing and tempering these biases to prevent them from excessively steering the interviews, hermeneutic phenomenology emphasizes our inescapable entanglement with our own predispositions – they are intricately woven into our worldviews [114, 132, 205]. However, this philosophy also points to the potential for creating a dynamic research interview environment. By cultivating a conscious dialogical interpretive engagement, it becomes possible to establish a setting where both interviewer and interviewee collaboratively shape the discourse [65, 66, 113, 117, 118, 126, 206].

Visual materials as a strategy

In Paper I, visual materials were introduced as a strategy to address professional and personal biases. Two core ideas underpinned this approach. Firstly, we believed these materials would encourage interviewees to reflect more profoundly and challenge certain entrenched professional narratives [125, 207]. Secondly, we anticipated that the visuals would empower interviewees, giving them greater agency in the process [208]. Some nuances and implications of this methodology will be discussed in further detail in a subsequent section.

Focus-groups as a strategy

In Paper IV, while we conducted individual interviews, focus-group interviews were our primary strategy. This method was chosen to address gender biases and to mitigate the inherent professional power dynamics related to the project [112, 209]. Within this group setting, we anticipated that midwives would collaboratively validate, challenge, or enrich shared experiences, thus capturing a collective perspective [65, 113]. Our approach was informed by the observation that midwives typically function more collectively, unlike the individualistic behavior often seen among Ob&Gyn. Recognizing the possibility for participants to gravitate towards socially acceptable viewpoints or feel compelled to conform to prevailing narratives, we included a female midwife as an interviewer [209]. She served as guardian, ensuring a balanced interaction during sessions.

Multidisciplinary collaboration as a strategy

All four papers in this thesis resulted from multidisciplinary collaboration, crucial for addressing the complex issues they present [126, 204]. This approach ensured that our findings extended beyond a singular viewpoint. We believe that such expansive collaboration provided the possibility for more comprehensive interpretations, balanced biases, enriched discourse, and produced a wider spectrum of insights.

On the use of visual materials

Visual materials have proven effective in generating insights that conventional methods might miss [202, 207]. Utilizing images and discussing them in a research interview setting offer several advantages, including: equalizing the dynamic between the interviewer and the interviewee [208], re-introducing novelty to familiar experiences for those involved [210], revealing unnoticed aspects of routine experiences, and enhancing the collaborative nature of the interview process [211]. In Paper I, art images and drawings served to stimulate fresh discourse, moving beyond the repetition of entrenched ideas and concepts within the profession [125, 207].

The influence and impact of visual materials in interviews

Incorporating visual materials into the interview process notably enhanced the depth of responses, occasionally sparking fresh insights. Nevertheless, while many interviewees benefited, some participants faced challenges in selecting and discussing images, hinting that the methodology might not be universally applicable or may necessitate specialized guidance. A significant shift was observed among many Ob&Gyn who initially found the drawing component unsettling; as they grew familiar with the method and became eager to share their narratives, their apprehension dissipated. This shift in mood and comfort, though subtle and perhaps challenging for a casual reader to quantify, was palpable within the interaction between interviewer and interviewee. By empathizing with the situation, one might deduce that this transition was significant for both parties [111, 113]. The results of Paper I highlight the effectiveness of combining personal narratives with visual aids effectively enriches the interview experience [212]. Readers are invited to delve into the original transcripts for their personal interpretations [128].

Beyond representation, towards co-creation

One may wonder: had the art images been omitted from the interviews, would the Ob&Gyn' reflections in Paper I still have revolved around the same themes? Could sufficient time and a different framing of questions have conceivably produced similar results? However, drawing definitive conclusions from such hypotheticals invites the pitfalls of hindsight bias and counterfactual reasoning [213]. It is essential to note that art images were, in fact, introduced, and the dialogues proceeded as they did. An in-depth comparison of interviews conducted both with and without imagery could shed more light on the art images' influence on interview content.

But beyond these valuable considerations lies a deeper level of inquiry. Within this discourse rests an often unexamined assumption about cognition: that thinking is fundamentally representational. According to this perspective, our thoughts, ideas, and concepts are discernable entities, waiting to be unveiled by tangible triggers, such as art [214-217]. There is an implied belief that a piece of art might unearth otherwise inaccessible dormant thoughts [218]. Such a psychoanalytical view is beyond the scope of this thesis and even contradicts another foundational premise for the methods used in Paper I: that thinking is, first and foremost, non-representational. This other, new form of non-representational thinking is primarily seen as a process unfolding over time, with the act of identifying or labeling thoughts coming afterwards [214-217]. From this perspective, the emphasis shifts from revealing hidden meanings within thoughts to the transformative potential of introducing a new medium, underscoring the co-creative nature of the dialogue over the interviews' intrinsic content [65, 113].

Critical assessment of the questionnaire based data

Sample sizes and response rates

In Paper II, the response rate stood at approximately 22%, which is seen as adequate for an online questionnaire given the absence of financial incentives and only a single reminder [219, 220]. In contrast, Paper III's response rate is more ambiguous, posing concerns of validity and generalizability. While precise data on the total number of active midwives in maternity care remains elusive [221], a 2020 report suggests that 6,100 midwives were operating within the Swedish healthcare system [221], equating to a response rate of 3.4%. Separately, the response rate for Ob&Gyn was about 11%. Notwithstanding these response rates, both Papers II and III achieved the necessary respondent count for robust statistical analysis, as determined by preliminary power calculations. However, the findings, though statistically significant, could have restricted relevance in wider contexts, emphasizing the importance of interpreting them within the scope of each specific Paper.

In Paper I, the reference sample from the Swedish population, notably younger and diverse in professions, challenges strong conclusions, even though effect sizes were pronounced. For instance, 85% of Ob&Gyn practitioners exhibited trait levels exceeding the reference mean in areas like N, A, and C. The reference sample, gender-balanced unlike Ob&Gyn, may account for differences, especially in A and C. Ideally, a sample with similar age and/or profession would have been more comparative.

Additionally, respondents with higher traits like A and C could introduce selection bias, and their tendency to agree with items might have also influenced the results

[124]. However, this last effect is likely only in parity with the smallest correlation (r = .09), found between decision-making styles in Paper II. Previous studies also suggest a larger male presence could decrease levels of N, A, and C [105, 106].

Evaluation of personality traits and other constructed variables

Certain variables in Papers II and III exhibited low reliabilities, with Cronbach's alphas dropping to as low as .57, prompting concerns about their validity. In response, we employed disattenuated correlations, striving for a clearer depiction of variable relationships.

Yet, it is significant to note that this research is a pioneering evaluation of Ob&Gyn and midwives using the FFM. Paper II uniquely evaluates decision-making in obstetric emergencies through the lens of the FFM, while Paper III delves into maternity care work factors, notably the NII.

Although the decision-making variables in Paper II are supported by prior research, we refrained from conducting a detailed factor analysis [26, 42, 44, 57, 164]. Paper III's self-report questions might risk skewing towards midwives' prevailing views. However, the reliability and exploratory factor analyses in this paper achieved satisfactory levels, reinforcing the statistical legitimacy of the newly introduced constructs [122].

Conclusions and implications

Identity-based decision-making

Could the nature of decision-making in the high-stakes setting of obstetric emergencies be rooted in something else than just medical knowledge and expertise?

Previous research have highlighted that decision-making in emergency situations involves more than following rules and routines [23, 26]. Similarly, other studies have highlighted the intricate dynamics in the delivery room, pointing to the often unexamined and multifaceted dimensions of decision-making in obstetrics [42, 44, 222].

Our findings from Papers I to IV, focusing on individual differences and inter-professional aspects, suggest that decision-making during obstetric emergencies is inextricably linked to the individuals' professional and personal identities. From our research, several key patterns have become evident.

Personality traits serve as a foundational element for decision-making. Swedish Ob&Gyn, shaped by their unique personality profiles, are influenced not just by medical evidence but by inherent characteristics such as N, E, A, and C. These traits might dictate how they perceive emergencies, communicate with their team, and empathize with patients.

The question of labor induction served as a vivid illustration of the diverging views between Ob&Gyn and midwives. For midwives, deeply connected with expectant mothers and rooted in a natural birth ethos, labor inductions often lead to situations they perceive as more challenging for the mother, consequently affecting their professional identity. On the other hand, obstetricians, anchored in their clinical roles, approach inductions primarily from an evidence-based perspective, highlighting the contrasting foundations upon which care is viewed and provided.

Identity-based decision-making becomes profoundly evident when considering midwives' roles in obstetric care. Acting as guardians of natural birth, their professional identity deeply shapes not just their daily practices, but more crucially, their response to obstetric emergencies. In these critical moments, they prioritize the woman's well-being, sometimes challenging dominant medical

narratives and the authority of Ob&Gyn. As emergencies unfold, midwives' boundary work stands out. Through their efforts to assert their expertise against the medically-centered views of Ob&Gyn, they underscore the linkage between decisions, redefined practices, and professional identity.

In summary, our findings suggest that decision-making during obstetric emergencies has ties to identity. While medical facts and available scientific knowledge remain essential, the choices made are influenced by the professional identities of those involved. These inter-professional differences, expert assertions, and power dynamics highlight the role of identity in the decision-making processes of the professionals involved.

Bridging identities, expertise and advocacy

Given the influence of personal and professional identities on decision-making in obstetric emergencies, it is worthwhile reevaluating and adapting current training methodologies and peer support systems. Embracing comprehensive programs that emphasize both medical knowledge and the role of personal and professional identities can bridge existing gaps. The persisting divide between natural and medicalized birth, highlighted by our findings, underscores the necessity for targeted interventions. The distinct, yet equally valuable, perspectives of Ob&Gyn and midwives call for regular interdisciplinary dialogues that can foster mutual understanding and align the goals and values of both professions. By doing so, we can champion a more holistic approach to maternity care for birthing women. Furthermore, healthcare institutions should prioritize creating environments where diverse identities can coalesce, ensuring patient-centered care. Lastly, the assertive advocacy by midwives for woman-centered care underscores the need for integrating such perspectives into broader maternity care protocols. Together, these implications highlight a roadmap for a more holistic and collaborative approach in obstetric care.

Future perspectives

Future perspectives on decision-making in obstetrics

This thesis underscores that decision-making in obstetric emergencies is multifaceted, even when viewed from the practitioners' perspectives. Such intricacy underscores the need for continued research in this field. It also prompts a reevaluation of how we perceive our decision-making mechanisms and the methodologies employed in training to navigate them.

To enhance the depth and richness of the insights presented in this thesis, an ethnographic naturalistic approach stands out as promising. This method, rooted in real-world observations and immersive studies, has the potential to reveal nuances previously overlooked, and possibly answer the question of how practices match recommendations and guidelines. Moreover, findings in Paper I point towards unconscious motivations influencing Ob&Gyn during critical moments. These latent factors are potential decision-making dimensions waiting to be explored more deeply.

The insights suggesting that Ob&Gyn practitioners shape their own decision-making frameworks present intriguing opportunities. This understanding can empower trainees to navigate these personal and subjective decision-making realms with greater awareness. Immersive learning experiences can strengthen their decision-making skills. Additionally, recognizing and teaching different decision-making strategies can guide trainees in identifying their individual styles and potential growth. This knowledge equips them to leverage their unique strengths and effectively tackle challenges.

The future of visual materials in research interviews and beyond

There is an intrinsic challenge in attempting to understand practitioners' lived experiences especially as they adapt to dynamic situations such as obstetric emergencies. The innovative use of visual materials in Paper I presented some

insights with intriguing implications for the future of healthcare research and practice.

Yet, a more systematic and comprehensive exploration of the method seems necessary, if such should be used more widely in research interviews, extended to various healthcare settings or possibly be applied to other interview situations. A comparative analysis of the text material before and after the introduction of visual materials is an obvious starting point.

Future directions for personality research in healthcare

The findings from Paper II shed light on obstetricians' and gynecologists' personality traits profile and their influence on decision-making processes in obstetric emergencies. However, for Ob&Gyn working in obstetric care, the literature remains sparse concerning the impact of their personality on maternity care outcomes [16, 17, 177, 178], especially when viewed through the lens of the FFM. Further exploration of the possible relationship between personality traits according to the FFM and outcomes, and decision-making styles and outcomes seems warranted.

Furthermore, although this thesis focused on maternity care, extending this type of research to other medical specialties might highlight the distinct influence of personality on several healthcare facets. These include the selection of a medical specialty [223-225], correlations with job and patient satisfaction [89, 194, 226], and even the quality of care delivered [189, 227-229].

Future perspectives on professional identity, policy impact, and bridging discourses in maternity care

While Paper III focused on labor inductions post-term, its main ideas about professional identity, medical protocols, and patient care are relevant to other interventions and procedures in maternity care, such as elective CS on the woman's request, or in the discourse of natural versus medicalized birth for example. The findings also suggest there are psychological effects on professionals when policies and guidelines are implemented. Further examining, through statistical models, the effects of major procedural changes on healthcare professionals' work, performance, and well-being could offer insights to improve management strategies, support systems, and training.

While Paper IV shed light on the roles, challenges, and adaptive strategies of midwives during obstetric emergencies, all Papers hinted at the persistently

distinct viewpoints between midwives and Ob&Gyn. This adds to the existing research on this issue, across geographical and cultural contexts. However, there is limited knowledge regarding the cooperative strategies between these two professional groups. Delving deeper into these discourses is essential, and future research could involve focus-groups with both professionals in an action research setting.

Involving birthing women

It is essential to remember that at the heart of these debates are the birthing women. How do their perspectives intersect with those of their caregivers? Future studies could integrate patients' viewpoints on the various issues highlighted in this thesis, focusing on their experiences, preferences, and concerns.

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Appendices

Appendix A. Online questionnaire: Preferences in decision-making during obstetric emergencies

Swedish maternity and intrapartum care is designed in a way to ensure equality of servicesthroughout the country. Despite this, regional differences still persist regarding the frequency of a number of perinatal outcomes such as caesarean sections, lacerations, etc. A couple of American studies have suggested that physicians' personality traits are of importance for outcomes in intrapartum care. However, it is a question of whether personality can have similar effects in Sweden, where healthcare differs significantly from that in the US. The purpose of this study is to analyze preferences in decision-making and personality traits among Swedish gynecologists and obstetricians.

We wonder if you, as a member of SSOG, would consider participating in this study. It takes about 15-20 minutes to complete the survey. The research results will be used as part of the ongoing effort to improve Swedish maternity care. The intention is above all, to increase patient safety. Your contribution is valuable and we hope that it can feel motivating enough to participate.

By completing the form and by clicking on 'submit' on the last page, you certify that you have voluntarily consented to participate, in accordance with the latest GDPR (Personal Data Act). You can withdraw your participation at any time. All data is anonymous and encrypted, and no third party will have access to how you specifically answered a question.The quality of the answers is based on sincerity, generosity, and integrity.

Please note that there are no right or wrong answers. See your participation as a seriousopportunity to contribute to understanding more about an individual's unique profile. Themethods used in the survey are based on thousands of hours of scientific studies and underlying algorithms.

You will have to decide on a number of statements throughout six pages, requiring a bit of focused time. Our best advice is to have fun while filling out the form, keep a steady pace,and above all, trust your first, intuitive reaction - sincerity is rewarded by the analysis formulas.

Lets start

General information

General information

1. Tell us if you are a woman or a man (for statistics)

- Man
- Woman
- I don't identify as either woman or man

2. Tell us your age (for statistics)

3. Tell us where you work, city/region (for statistics)

4. To what extent are you clinically active?

- 20% or less
- Between 20 and 50%
- 50%
- Between 50 and 100%
- 100%

5. Tell us how many years you've worked with obstetrics and gynecology

Thank you for answering this first part.

Obstetrics or gynecology?						
		Strongly Disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
6.	**Which do you prefer?**					
	• Obstetrics					
	• Gynecology					
How well do the following statements relate to you? Answer preferably quickly, honestly and intuitively.						
7.	**I like obstetrics because…**					
	• Patient contact is usually quite limited					
	• You make quick, crucial decisions					
	• You get to be part of very special moments.					
8.	**I like gynecology because...**					
	• I help women					
	• Sick patients get well often					
	• Surgery is particularly stimulating					
9.	**I would have NOT liked to only work with obstetrics because...**					
	• There is too much uncertainty with/around pregnancy and childbirth					
	• I feel uncomfortable with the responsibility during childbirth					
10.	**I would have NOT liked to only work with gynecology because...**					
	• I would get bored from that type of interaction with patients					
	• I can't manage to stay concentrated for too long during surgery					
11.	**Briefly describe what motivates your preference.**					

We appreciate that you're still interested to continue the survey.

Personality traits					
How well do the following statements relate to you? Answer preferably quickly, honestly and intuitively					
	Strongly Disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
12.					
• Get easily stressed					
• Often feel anxious					
• Find it sometimes difficult to deal with things					
• Get easily panicked					
• Often feel down					
• Fear the worst					
13.					
• Feel comfortable together with others					
• Have an easy time making friends					
• Avoids people					
• Talk to a lot of different people during a party					
• Do a lot of fun things					
• Dislike crowded places					
14.					
• Believe in the importance of art					
• See beauty where others seldom do					
• Have strong imagination					
• Avoid philosophical discussions					
• Have difficulty understanding abstract theories					
• Dislike going to museums					
15.					
• Get emotionally affected by others					
• Am indifferent to other's feelings					
• Use others for my own needs					
• Do not give time for others					
• Am uninterested in other people's problems					
• Feel sympathy for those that have it worse than me					
16.					
• Waste my time					
• Follow through with my plans					
• Work hard					
• Always compete my tasks					
• Know how to get things done					
• Just do as much as I need					

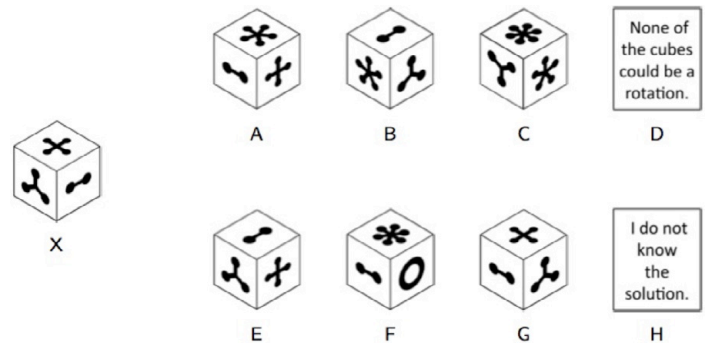
Good job! You've done more than half.

Spatial understanding

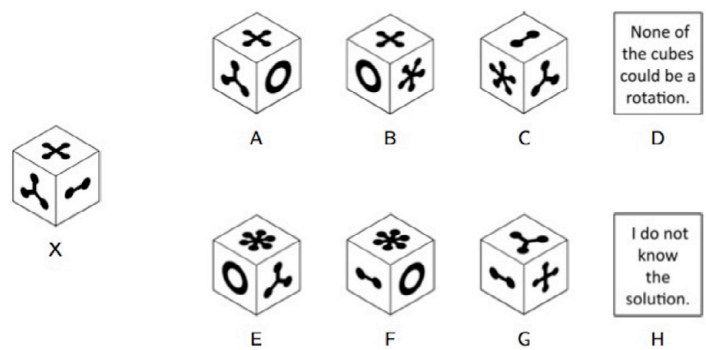
Which of the following alternatives is a rotated version of Cube X?

Your answers are important, please keep focus. And don't use Google search.

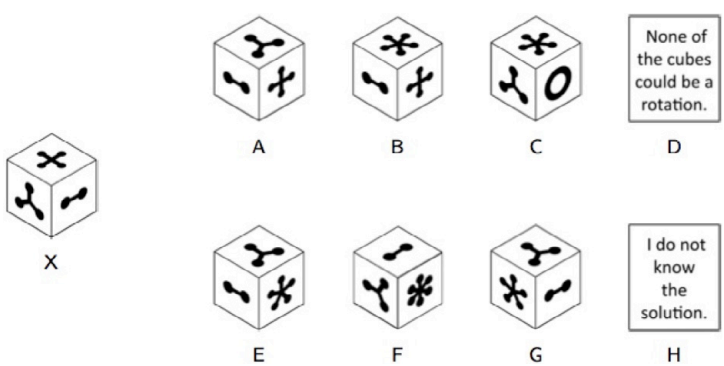
17.



18.



19.



Good job! Only one part left.

This last part is a little longer, but don't give up. Your answers are important, please stay focused.

Obstetric emergencies

20. Obstetric emergency 1.

You work as a young trainee in a medium-sized maternity unit with about 2,500 births per year. It's 01:30 at night. Your senior is 30 minutes away. You've taken care of a few gynecological emergencies, and have worked non-stop since the beginning of your shift at 16:30. You recon it's finally settling down and think of going to your room in the hope of getting a couple of hours sleep. But, you just want to check on the delivery suites one extra time. On your way there, the phone rings. It's a somewhat anxious voice at the other end: "the midwife wants you to come, there's a bad tracing". She hangs up before you even get the chance to ask anything. To your general state of anxiety and fatigue now adds a layer of annoyance. Finally inside the right suite, your gaze almost automatically turns to the CTG. The woman, who is giving birth to her second child, is kneeling in bed and leaning against the headboard. The partner is super-peppery. The midwife says: "she's fully dilated and the head is pretty far down. I just want you to check the CTG". You see a pathological tracing with repetitive complicated variable decelerations for just over 7 minutes. Variability is still good but the baseline rate seems to fall slowly.

How well do the following statements relate to you? Give an honest answer of what you would have done.

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
CTG is pathological. I tell the midwife that we should immediately deliver with a vacuum extractor					
The patient should shift position to either her side or her back					
I greet the patient and her partner. I listen to the midwife's report, and take peek at the CTG at the same time					
Together, we get the patient to shift position. The midwife wants to try an let the patient push a little more, which I think is reasonable					
CTG seems to have been normal earlier on, we give it a chance but I stay in the suite					
I take a lactate sample while the woman is standing on her knees, when the head is coming down, just to be sure					

21. Obstetric emergency 2.

You work as a young trainee in a medium-sized maternity unit with about 2,500 births per year. It's 01:30 AM. Your senior is 30 minutes away. You've taken care of a few gynecological emergencies, and have worked non-stop since the beginning of your shift at 16:30. You recon it's finally settling down and think of going to your room in the hope of getting a couple of hours sleep. But, you just want to check on the delivery suites one extra time. On your way there, the phone rings. An assistant nurse, who sounds a bit blasé, asks for "help on the third. The midwife wants you to come and help out with an instrumental delivery. The mom's too tired". When you get to examine the patient, you sense that there is plenty of space but that the head might be a bit too high up. The contractions are strong and painful but short-lived. The woman's giving birth to her first child and is completely exhausted. The CTG is normal with repetitive uncomplicated decelerations. You call for your senior but he does not answer the phone.

How well do the following statements relate to you? Give an honest answer of what you would have done.

	Strongly Disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
The head is probably too far up, patient is tired and it's late: "probably best to go for a c-section"					
I tell the midwife that the patient should stand up for an hour, after which a new assessment should be made, in the hope that a vacuum extractor or forceps can be applied					
I check-in with the midwife what she is thinking and suggest: "we should increase the oxytocin, and let the patient try to push"					
The assistant nurse reports that the woman has been lying down most of the time, and that she is scared. After a brief discussion outside the suite, the midwife and I suggest a plan for the patient and her partner					
After a thorough examination it feels that feels as if it should work with a vacuum extractor. I tell the couple that "it's going to be fine"					
The midwife and I have talked with each other, we believe that there's a fair chance she can give birth vaginally. While in the suite, I ask the midwife to increase the oxytocin drip, and for her help in hyperextending the hips					

22. Obstetric emergency 3.

You work as a young trainee in a medium-sized maternity unit with about 2,500 births per year. It's 01:30 AM. Your senior is 30 minutes away. You've taken care of a few gynecological emergencies, and have worked non-stop since the beginning of your shift at 16:30. You recon it's finally settling down and think of going to your room in the hope of getting a couple of hours sleep. But, you just want to check on the delivery suites one extra time. On your way there, the phone rings. A panicky voice that you barely recognize says: "you need to come now, it's room 2. The child is stuck!" You immediately think of a shoulder dystocia, and in the back of your mind "god I do not hope so"… Barely a couple of minutes later you enter the delivery suite, short of breath. The midwives' desperate gazes, and what you feel is as a mixture of fear and anxiety in the partner's face meet you. The patient pushesw with all she's got. One of the midwives says: "I can' t get hold of the posterior shoulder, it's been 4 minutes now".

How well do the following statements relate to you? Give an honest answer of what you would have done.

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I take control over the situation and start the HELPERR sequence, according to guidelines					
It is my job to solve the situation					
I first listen to what the midwife has to say					
The midwife suggest to use some nitroglycerine spray, and then we try HELPERR again, but that I stand between the patient's legs					
I ask for permission to get access, and see if I can help the baby out					
I finally break the baby's collar bone, since nothing else seems to work					

Please respond to the following statements. Your answers are important. Be honest, nobody is here to judge you.

23. During obstetric emergencies…

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The responsibility rests on my shoulders					
I take information in, process it and give directives					
Guidelines are important					
Structure creates a sense of safety					
There are right and wrong decisions					
My focus is on the birthing woman and her partner					
It's nice to have a sparring partner					
We help each other out in the team					
The different team-members' contributions are important					
I think of the consequences for the birthing woman					
I trust my intuition					
I don't always know what's right					
I sometimes need to improvise					
The outcome is beyond my control but it's important everyone does her/his best					
I trust the process/higher powers					

24. Final feedback.

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
This survey was important					
The questions were relevant					
It was difficult to answer					
It was rewarding for me					

Thank you for your contribution and effort! We trust that you had a good time. No one knows you better than yourself. Just click 'submit' to finish and send us your answers.

Appendix B. Online questionnaire: Situational awareness during complicated birth

Effective teamwork is essential for the successful management of complicated births. Routines and guidelines, simulation training, clear roles within the team, and good leadership are all contributing factors. However, it is often the lack of communication that becomes the focus of criticism when a medical injury or other serious events occur.

In safety research, it is believed that communication deficiencies mainly arise as a result of team members having different understandings of and during the specific incident. That is to say that "how" one perceives a situation matters. The idea originated from aviation, where the shared 'situational awareness' is the prerequisite for pilots' cooperation inside the cockpit. However, it is unclear whether this is actually the case in healthcare in general and during complicated births in particular.

We wish to examine the 'situational awareness' of professionals working with complicated birth. We are wondering if you, as a clinically active midwife, obstetrician/gynecologist or anesthesiologist, would like to participate. The questionnaire takes about 5-10 minutes to complete. The research results will be used as part the continuous improvement of maternity care, particularly with regards to increased patient safety and care quality. Your contribution is valuable and we hope this can feel motivating enough to participate.

By completing the questionnaire and clicking 'submit' on the last page, you certify that you agree and do this voluntarily. You can cancel your participation at any time. All data is anonymous and encrypted. The answers cannot be traced back to any individual, e-mail address, IP address or specific location and no third party will ever have access to how You specifically have answered any questions.

Please note that there are no right or wrong answers. You will have to decide on the number of statements on four pages, which will require focused time. The best advice we can give you is to have fun while filling out the questionnaire, keep a steady pace, and above all trust your first, intuitive reaction - sincerity is rewarded by the analysis formulas.

Now, lets start.

Part 1 of 4 - General information

1. Are you are a woman or a man (for statistics)?

- Man
- Woman
- I identify as neither woman nor man

2. How old are you (for statistics)?

3. What is your profession?

- Midwife
- Obstetrician/Gynecologist
- Anesthesiologist

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
4. As an Obstetrician/Gynecologist you prefer… (or skip to question 5.)					

- Gynecology
- Obstetrics

5. How many years have you worked in your specialty (for statistics)?

6. In what healthcare district do you work (for statistics)?

- Stockholm
- South
- West
- South-east
- Uppsala-Örebro
- North

Thank you for completing the first part

Part 2 of 4 - Workload, well-being and Stress

Here are some questions about how you experience your work situation

How well does the following statement agrees with you?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
7.					
• Happy with my career choice					
• Enjoy my workplace					
• Often feel stressed at work					
• Experience a good balance between what is demanded of me and what I can perform					
• Feel bad before the work shift					
• Stress affects my work negatively					
• Make better decisions when I'm stressed					

Aspects of work from the maternity ward (if you work as an anesthesiologist skip to question 11.)

Here are some questions about the flow of patients, the number of inductions and risk classification of patients in delivery

8. How many labor inductions are there on average during your work shift?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
9. The increased number of inductions…					
• Affects my work situation negatively					
• Creates a sense of conflict in my professional role					
• Gives me a bad conscience in relationship to the birthing woman					

10. How many risk-patients are there on average during your work shift?

	0-1	2	3	4	5	6	7	8	9+
Medium-risk									
High-risk									

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
11. What is your experience of healthcare related crises?					
Experienced several					
Has subsequently made me feel more secure in my professional role					
Have become more skilled in my profession as a result					
Cooperation has usually been good					
Have eventually become better at collaborating					

We appreciate that you keep your motivation up.

Part 3 of 4 - Now questions about how you usually function

Your answers are important. Answer honestly. No one is judging you.

12. How well do the following statements agree with you?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Is the one who keeps a party going					
Sympathize with other people's feelings					
Get jobs done right away					
Have frequent mood swings					
Have a vivid imagination					
Feel I am entitled to more of everything					
Doesn't talk much					
Is uninterested in other people's problems					
Have a hard time understanding abstract ideas					
Like order					
Create a messy environment					
Deserve more in life					
Is unimaginative					
Feel other people's emotions					
Is relaxed most of the time					
Get upset easily					
Rarely feel down					
Would love to be seen driving around in a very expensive car					
Keep myself in the background					
Not really interested in others					
Not interested in abstract ideas					
Often forget to put things back in their place					
Talk to a lot of different people at parties					
Would enjoy owning expensive and luxurious things					

Good work. Now, there's just the last page.

Part 4 of 4 - And now some questions about situational awareness

This last section is a bit longer, but don't give up. Stay focused, there isn't much left.

Case description: Labor, that started spontaneously at full term, is progressing well. The woman in labor is a first time mother and the cervix was recently dilated at 9 cm. Without warning, the parturient becomes unconscious, and begins to have convulsions. Bradycardia occurs. The partner looks terrified.

Note! Standardized scales are used, hence some wording may feel strange.

13. You are active in your professional role and are in the delivery room. How true are the following statements about the situation? Answer preferably quickly, sincerely and intuitively.

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A job needs to be done					
A person is counted on to do something					
Minor details are important					
Rational thinking is called for					
A complex problem needs to be solved					
Situation includes intellectual or cognitive stimuli					
Affords an opportunity to express unusual ideas					
Situation evokes values concerning lifestyle and politics					
Another person is under threat					
A person is being criticized, directly or indirectly					
A person is being blamed					
Someone is attempting to dominate					
Situation is potentially anxiety inducing					
Situation entails or could entail stress or trauma					
Someone else in the situation might be deceitful					
It is possible to deceive someone					
Situation may cause feelings of hostility					
A person or activity could be undermined or sabotaged					
Situation entails frustration					
Situation would make some people tense or upset					
A reassuring other person is present or have the potential to develop					
Behavior of others presents a wide range of interpersonal cues					
Social interaction is possible					
Situation is playful					
Situation is potentially enjoyable					
Situation is basically simple and clear cut					
Situation is humorous or potentially humorous					

14. Final feedback

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Do you think the questionnaire was important?					
Were the questions relevant?					
Was it difficult to answer?					
Was it rewarding for you?					

15. What type of research should be done about the emergency or complicated childbirth?

16. Any other thoughts or comments that you would like to share?

Thank you very much! Your input is valuable! We trust you had a good time. Nobody knows you better than yourself. Press 'submit' below to complete the questionnaire.Appendix C. List of visual materials

Appendix C. List of artworks selected by individual Ob&Gyn during their respective interviews for Study I (published as Paper I)

Ob&Gyn 1

Apollo in the forge of Vulcan [Painting] (1629 – 1630). Velázquez, D.
Diana and Actaeon [Painting] (1556 – 1559). Titian

Ob&Gyn 2

The dance [Painting] (1909). Matisse, H.
The flood [Painting] (1660 – 1664). Poussin, N.

Ob&Gyn 3

Texan, portrait of Robert Rauschenberg [Artwork] (1963). Warhol, A.
Portrait of an artist [Painting] (1972). Hockney, D.
The dance [Painting] (1909). Matisse, H.

Ob&Gyn 4

Highway and byways [Painting] (1929). Klee, P.
The scream [Painting] (1893). Munch, E.

Ob&Gyn 5

Grace Coddington wearing "The Footer" mini dress by Mary Quant [Fashion photography] (1967). Bailey, D.
The rondo of the hours [Painting] (1890). Mellery, X.

Ob&Gyn 6

Les Pieux [Painting] (1910). Spilliaert, L.

Ob&Gyn 7

Migrant mother [Photography] (1936). Lange, D.
Duchamp sitting in front of fountain [Photography] (1963). Wasser, J.
The dance [Painting] (1909). Matisse, H.
Francis Picabia [Photography] (1922). Ray, M.

Ob&Gyn 8

Figure on the rocks [Painting] (1926). Dali, S.

Ob&Gyn 9

Judith beheading Holofernes [Painting] (1598 – 1599 or 1602). Caravaggio.
Holy Virgin Mary [Painting] (1996). Ofili, C.
The water-lily pond [Painting] (1899). Monet, C.
Divorce in Moscow [Photography] (1966). Arnold, E.
The dance [Painting] (1909). Matisse, H.
The agony in the kitchen [Photography] (2012). Todd Harper, J.
The tiger who came to tea [Illustration, from a children's book with the same name] (1968). Judith Kerr, J.

Ob&Gyn 10

Dream caused by the flight of a bee around a pomegranate, one second before awakening [Painting] (1944). Dali, S.
Venus and Amorini [Painting] (1925). Dali, S.

Ob&Gyn 11

White car crash 19 times [Artwork] (1963). Warhol, A.
Dali, nude, entranced in the contemplation of five regular bodies metamorphosed in corpuscles, in which suddenly appears Leonardo's "Leda", chromosomatised by the face of Gala [Painting] (1954). Dali, S.
Number 5 (red wall) [Painting] (1952). Reinhardt, A.
The lightning field [Photography, of a lightning bolt hitting the ground, with a dark sky and seen from a distance] (1978 and 1979). Cliett, J. "The lightning field" is Walter de Maria's land artwork situated in Western New Mexico, (1977).

Ob&Gyn 12

The Blue phantom [Painting] (1951). Wolfgang Schulze, AO a.k.a. Wols.
The Cyclops [Painting] (1914). Redon, O.
The Doom fulfilled [Painting] (1885). Burne-Jones, E.
The jungle [Painting] (1943). Lam, W.

Ob&Gyn 13

The iceberg [Painting] (1891). Church, FE.
The wounded angel [Painting] (1903). Simberg, H.

Ob&Gyn 14

Galatea of spheres [Painting] (1952). Dali, S.
La Mariée mise à nu par ses célibataires, même alias Le Grand Verre [Sculpture] (1915 – 1923). Duchamp, M.
Self-portrait with cigarette [Painting] (1895). Munch, E.
The persistence of memory [Painting] (1931). Dali, S.

Ob&Gyn 15

Lysistrata haranguing the Athenian women [Illustration] (1896). Beardsley, A.

Ob&Gyn 16

The Apotheosis of Homer [Painting] (1944). Dali, S.

Ob&Gyn 17

Hatstand, table and chair [Sculpture] (1969). Jones, A.
The lightning field [Photography, of a lightning bolt hitting the ground, with a dark sky and seen from a distance] (1978 and 1979). Cliett, J. "The lightning field" is Walter de Maria's land artwork situated in Western New Mexico, (1977).
Rán [Illustration] (1911). Rackham, A.
The Rhine maidens lament the loss of the Rhinegold [Illustration] (1900). Rackham, A.

Appendix D. Interrupted studies

An ethnography of obstetric emergencies

Aim

The aim of this study was to map the decision-making process during obstetric emergencies in real time.

Research process

After securing the necessary ethical approval for the study, several weeks were spent between 2018 and 2019 at three different hospitals in Skåne, with the objective of observing emergency deliveries. In addition to these real-life observations, informal discussions were conducted with the staff, encompassing Ob&Gyn, midwives, and assistant nurses, at each of the three maternity units. A total of 7 observations were collected, with not all pertaining to emergency situations. The study was eventually interrupted due to the many challenges encountered.

Challenges encountered

Being an observer: Acceptance by the staff, patients, and partners was not an issue. However, the observation process posed difficulties. A self-reflective approach provided a guiding principle, but the lack of prior experience with field ethnography, combined with limited guidance, made observations challenging. The absence of a pre-established observational template and potential familiarity biases further complicated the process. Reliance solely on note-taking and memory recall raised concerns about the absence of "objective" reference material and potential skepticism from peers regarding the research methodology.

Consent issues: The need to secure consent during calmer moments, given that any regular birth could escalate to an emergency, meant collecting a significant number of consent forms, many of which were eventually unused.

Concurrent research projects: Multiple other clinical research projects were underway during the observation period. This posed limitations on which deliveries could be observed. While this didn't introduce bias, it did constrain the timeframe. With the potential of numerous emergency situations in a day, only a limited number were accessible for observation, indicating that comprehensive data collection could be protracted.

Pandemic impact: The emergence of the COVID-19 pandemic further compounded these challenges.

Comparative interpretations from three maternity units

Interpretations based on observations during a limited period of ethnographic immersion indicated distinct work-culture differences across the three maternity units, each showcasing unique operational and interpersonal dynamics.

Lund: The facility has a reputation for medicalization and structure. Centralized CTG is prominent, with significant reliance on the midwife coordinator's role. Although the facility is often active, some delivery rooms remain unused. There's a noticeable emphasis on the staff's role in the birth process, with patients often entrusting their care fully to the staff. There's also an observable trend in comparing their practices with other clinics.

Malmö: This unit experiences a high patient influx, leading to a persistent sense of urgency. Despite the busy environment, the facility tends to accommodate most patients, seldom referring out or closing the ward. There's a notable dynamism between professional categories, with both challenges and cooperative aspects. The focus often leans towards immediate solutions rather than reflection. The role of Ob&Gyn is prominent, with many deeply involved in patient care.

Ystad: The unit promotes childbirth as a physiological process and offers a more personalized experience for patients/couples. With a smaller patient volume, it provides opportunities for reflection and nuanced care. Unlike other units, there's less emphasis on strict guidelines, with more focus on teamwork and training. The roles of midwives and Ob&Gyn appear balanced, yet both professions perceive otherwise. Collaboration within all-female teams is especially notable for its harmony.

Concluding reflections

This study delved into the intricacies of ethnographic research within emergency deliveries in hospitals, revealing challenges in observation, consent acquisition, simultaneous research projects, and unexpected disruptions like the COVID-19 pandemic. Nevertheless, seven observations were secured, suggesting cultural variations across the maternity units in Lund, Malmö, and Ystad. Although interrupted, this study could serve as a foundational step for a more refined ethnographic research in similar settings.

Situational awareness during complicated birth

Aim

The aim of this study was to explore possible differences in situational perception of an obstetric emergency, between Ob&Gyn, midwives, and anesthesiologists using the DIAMONDS 8 taxonomy.

Research process

The DIAMONDS 8 situational taxonomy, derived from social psychology, categorizes situations into eight dimensions: Duty, Intellect, Adversity, Mating, pOsitivity, Negativity, Deception, and Sociality [230-232]. It has the potential to universally evaluate situations. A questionnaire (Appendix B), encompassing the FFM personality test, the DIAMONDS 8 evaluation, and questions of contemporary relevance to maternity care, was distributed to the respective professional associations. Of the respondents trained in obstetric emergencies, 495 participated. However, the segment of the study leveraging the DIAMONDS 8 taxonomy encountered interruptions due to significant challenges.

Challenges encountered

Due to an insufficient number of responses from anesthesiologists, combined with the inadequate reliability of results for most dimensions within the DIAMONDS 8, it became unfeasible to address our initial hypothesis that the three professions would score differently. Indeed, any subsequent statistical analysis would lack the rigor necessary for a credible publication.

Concluding reflections

While the data's "negative findings" shed light on potential limitations of the DIAMONDS 8 taxonomy – suggesting it might be context-sensitive or unsuitable for assessing specific medical situations like obstetric emergencies – publishing those at this stage, would significantly diverge from the primary theme of this thesis. Consequently, the decision was made to refocus on other results from the questionnaire initially purported for later publication. This change exemplified the rather fluid nature of research, highlighting the need for adaptability in the face of unexpected outcomes.

Appendix E. Richard Rorty's pragmatism

The dynamic nature of truth

At the heart of Rorty's pragmatism is the belief that no singular method offers a comprehensive understanding of the world. Instead, our interpretations are shaped by societal norms [130, 131]. As illustrated in this thesis through the field of obstetric emergencies, Ob&Gyn, viewing the situation through the lens of pathology, might address emergencies based on established medical guidelines. Their approach is procedural, focusing on medical intervention and immediate resolution. In contrast, midwives, despite being trained within a medical framework, might prioritize the woman's experience, her previously expressed needs, and her desires, viewing birth primarily as a physiological process rather than a potential pathology. This difference in approach illustrates how even within the same broad field, interpretations can diverge based on different prevailing norms and priorities. Unlike a realist who might argue for specific procedures yielding indisputable truths, Rorty suggested that any pursuit of such methods would merely reiterate established norms.

While relativism claims that each culture's "truths" are equally valid, even if conflicting, Rorty critiqued this stance as self-defeating. He emphasized that we may start from our own societal or cultural perspectives, but we are not permanently bound by them. Our norms and methods are dynamic, capable of adaptation and evolution. This evolution is driven by the collective goals of a society, its dialogues, and the need to address ever-changing practical challenges.

Community-based utility in scientific inquiry

Rorty's pragmatism reshapes our understanding of the scientific discourse. For Rorty, the value of scientific inquiry lies in its applicability and its capacity to address specific problems [129-131]. He asserts that the merit of research isn't its alignment with objective truth, but its practical outcomes and how it is received by the community. The "truths" of science are contingent on current methods, instruments, theories, and societal norms, and may shift as these elements evolve. Rorty emphasizes an internal, community-based validation of utility over an external objective truth. Thus, researchers are encouraged to prioritize knowledge that is relevant and beneficial to their community, focusing on impact and applicability rather than universal truths.

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