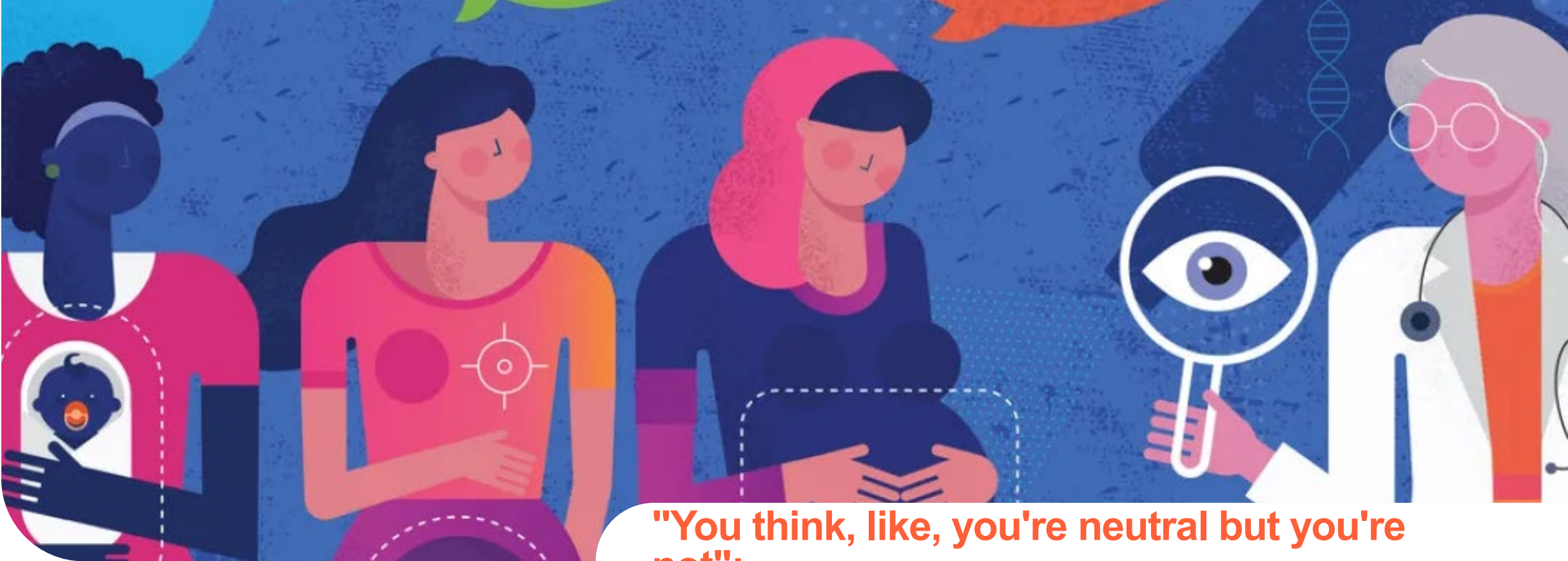




"You think, like, you're neutral but you're not":

**a mixed- methods study of racial/ethnic bias
in pain assessment, management and
treatment in maternal and newborn care in
the Netherlands**

Kitty Bloemenkamp



Evelien Overtoom Syllona Kanu Bahareh Goodarzi



rationale

Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites

Kelly M. Hoffman^{a,1}, Sophie Trawalter^a, Jordan R. Axt^a, and M. Norman Oliver^{b,c}

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Edited by Susan T. Fiske, Princeton University, Princeton, NJ, and approved March 1, 2016 (received February 1, 2016; accepted February 1, 2016)

Black Americans are systematically undertreated for pain relative to white Americans. We examine whether this racial bias is related to false beliefs about biological differences between blacks and whites (e.g., "black people's skin is thicker than white people's skin"). Study 1 documented these beliefs among white laypersons and revealed that participants who more strongly endorsed false beliefs about biological differences reported lower pain ratings for a black (vs. white) target. Study 2 extended these findings to the medical context and found that half of a sample of white medical students

These disparities in pain treatment are also clear evidence of racial bias. For example, a study of white medical students found that half of a sample of white medical students

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DOI 10.1007/s40140-013-0035-4

OBSTETRICAL ANESTHESIA (LR LEFFERT, SECTION EDITOR)

Racial and Ethnic Disparities in Obstetrics and Obstetric Anesthesia in the United States

Paloma Toledo · Jorge A. Caballero

Published online: 14 September 2013
© Springer Science + Business Media New York 2013

Abstract Disparities are prevalent within healthcare. Racial and ethnic disparities have been described in the use of neuraxial labor analgesia, in the prevalence of some obstetric conditions, and in obstetric outcomes. The origins of these disparities are likely to be multi-factorial, with patient, provider, and systems-level contributors. One of the objectives of *Healthy People 2020* is to achieve health equity, thus eliminating racial and/or ethnic disparities in care. In this review, we give an overview of disparities in obstetric anesthetic and obstetric care.

Keywords Disparities · Labor · Neuraxial analgesia · Obstetric outcomes · Patient-provider communication · Race/ethnicity

issue of national importance. The US Department of Health and Human Services has released the *Healthy People 2020* objectives to improve the health of the nation. One of the objectives of *Healthy People 2020* is to achieve health equity, thus eliminating racial and/or ethnic disparities in care. In this review, we give an overview of disparities in obstetric anesthetic and obstetric care.

Anesthesiology 2007; 106:19–25

Racial Differences in the Use of Epidural Analgesia for Labor

Laurent G. Gance, M.D.,^{*} Richard Wissler, M.D.,^{*} Christopher Glantz, M.D.,[†] Turner M. Osler, M.D.,[†] F.A.C.S.,[‡] Dana B. Mukamel, Ph.D.,[§] Andrew W. Dick, Ph.D.^{||}

Background: There is strong evidence that pain is undertreated in black and Hispanic patients. The association between race and ethnicity and the use of epidural analgesia for labor is not well described.

Methods: Using the New York State Perinatal Database, the authors examined whether race and ethnicity were associated with the likelihood of receiving epidural analgesia for labor after adjusting for clinical characteristics, demographics, insurance coverage, and provider effect. This retrospective cohort study was based on 81,883 women admitted for childbirth between 1998 and 2003.

Results: Overall, 38.3% of the patients received epidural analgesia.

CSP CADERNOS DE SAÚDE PÚBLICA
REPORTS IN PUBLIC HEALTH

The color of pain: racial inequities in prenatal care and childbirth in Brazil

A cor da dor: iniquidades raciais na atenção pré-natal e ao parto no Brasil

El color del dolor: inequidades raciales en la atención pre-natal y partos en Brasil

Abstract

Few studies on the influence of race/color on pregnancy and birth care experiences have been carried out in Brazil. Additionally, none of the existing studies are of national scope. This study sought to evaluate inequities in prenatal and childbirth care according to race/color using propensity score matching. The data comes from the study Birth in Brazil: National Survey into Labor and Birth, a national population study comprised of interviews and revisions of medical records that included 23,894 women in 2011/2012. We used logistic regression to estimate odds ratios (OR) and respective 95%

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How race features in pain-treatment disparities

Aysha Mendes

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Researchers from the UK have identified the steroid, dexamethasone, as the first drug to improve cervical entry in patients with CERVICAL DYSPLASIA.

'There are huge structural issues at work when it comes to how BAME [black, Asian and minority ethnic] communities access healthcare in the way we work with BAME

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ities in healthcare has found as are systematically undertreated (al. 2016). There have been over the years, and, while most of research in the UK is not a problem—only, perhaps, the stigmatize it further (Cox, 2018).

International collaboration of laboratory to collect data on those thoughts and

Joint Commission

Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites

Kelly M. Hoffman^{a,1}, Sophie Trawalter^a, Jordan R. Axt^a, and M. Norman Oliver^{b,c}

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Edited by Susan T. Fiske, Princeton University, Princeton, NJ, and approved March 1, 2016 (received for review August 18, 2015)

Black Americans are systematically undertreated for pain relative to white Americans. We examine whether this racial bias is related to false beliefs about biological differences between blacks and whites (e.g., "black people's skin is thicker than white people's skin"). Study 1 documented these beliefs among white laypersons and revealed that participants who more strongly endorsed false beliefs about biological differences reported lower pain ratings for a black (vs. white) target. Study 2 extended these findings to the medical context and found that half of a sample of white medical students and residents endorsed these beliefs. Moreover, participants who endorsed these beliefs rated the black (vs. white) patient's pain as lower and made less accurate treatment recommendations. Participants who did not endorse these beliefs rated the black (vs. white) patient's pain as higher, but showed no bias in treatment recommendations. These findings suggest that individuals with at least some medical training hold and may use false beliefs about biological differences between blacks and whites to inform medical judgments, which may contribute to racial disparities in pain assessment and treatment.



Pain 94 (2001) 133–137

Topical review

Race, ethnicity and pain

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Received 30 July 2001; received in revised form 6 August 2001; accepted 13 August 2001

Abstract

The utility of the Association for the Study of Pain (ASP) is discussed.

1. Intro

Racism in Pain Medicine: We Can and Should Do More

Natalie H. Strand, MD; Edward R. Mariano, MD, MAS; Johnathan H. Goree, MD; Samer Narouze, MD, PhD; Tina L. Doshi, MD, MHS; John A. Freeman, DO; and Amy C.S. Pearson, MD

with White patient visits.⁴ Physicians have reported preferences for White patients over Black patients and have expressed views that White patients are more medically cooperative than Black patients.⁵

When specifically looking at the outcomes of racism on pain management, we see similar results. In emergency departments, Black patients are prescribed opioids for acute pain at a lower rate than White patients with matched chief concerns.⁶ Discrepancies in prescriptions for chronic pain therapies have also been identified in Veter-

PAIN

www.elsevier.com/locate/pain



MethodS

NethOSS

- Netherlands Obstetric Surveillance System -

Quantitative: retrospective assessment of a prospective cohort of uterine ruptures in the Netherlands (NethOSS, 2016-2018) examining associations between race/ethnicity categories and language barrier, and the response time to pain and maternal/perinatal outcomes.

Qualitative: thematic analysis of semi-structured interviews with professionals about racial and

**Prospective registration
2016-2018**

N=86 Hospitals

Complete documentation

**Reference: cohort 2016
Perined**



Methodology of the subanalysis

- **Only cases where race/ethnicity was registered were included.**
- **Categories were grouped into 'Western' and 'non-Western'.**
- **Time of first complaint of pain was based on the first time abdominal pain (not being contractions) was registered in the notes of the care professional present during labor.**
- **Of the 98 cases of uterine rupture in the**

Recognizing the signs

**Adverse outcome
N=35**

**no adverse outcome
N=63**

One symptom OR 3.34, 95%CI 1.26-8.90

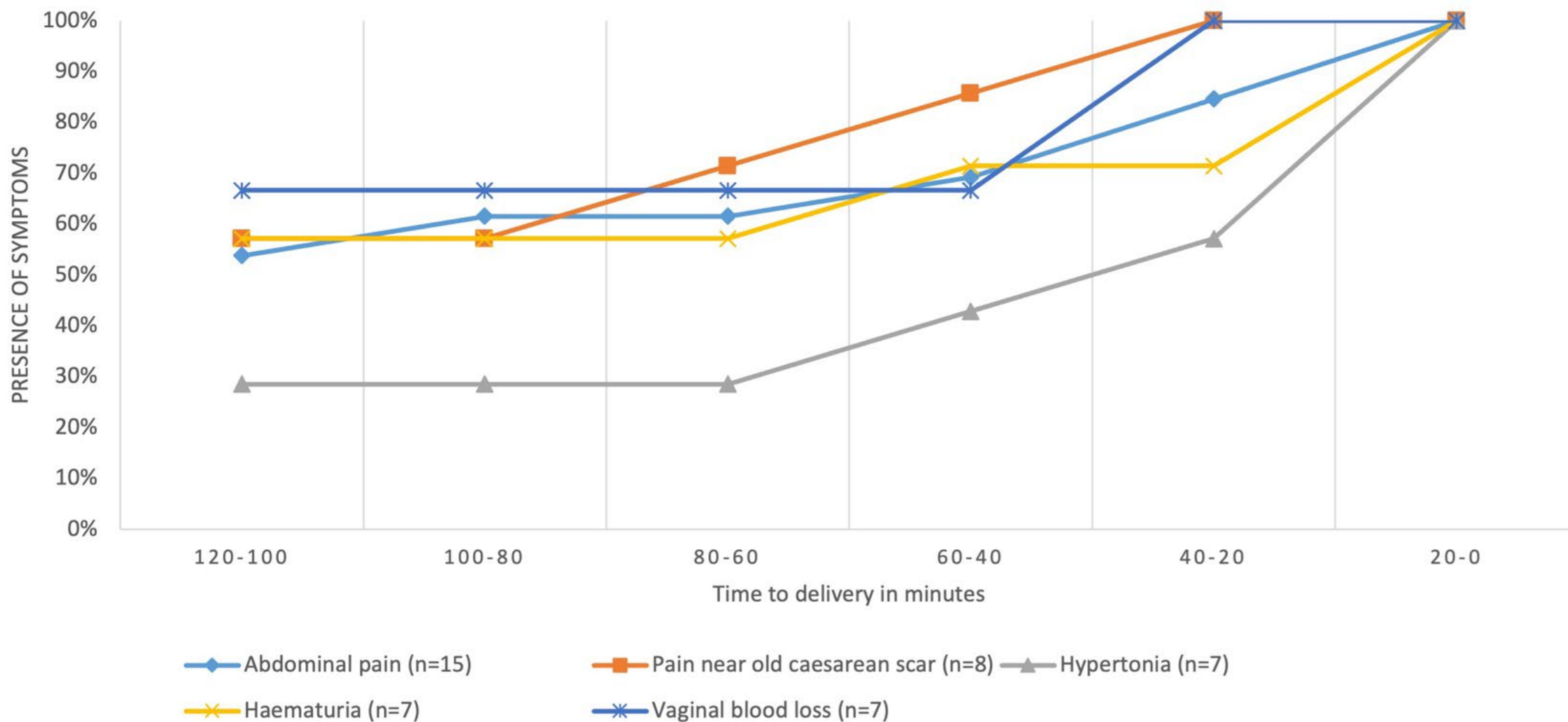
Abdominal Pain OR 5.00, 95%CI 1.85-13.48

Pain at scar OR 0.92, 95%CI 0.34-2.45

Vaginal Bloodloss OR 3.08, 95%CI 0.89-10.66

Hypertonia OR 2.12, 95%CI 0.67-69.70

Figure 3: maternal symptoms present in women with uterine rupture with adverse outcomes in the two hours prior to birth



TIME from first documented SIGN of

DEMENTIA (MIN)



Table 2 Outcome characteristics of the study population uterine rupture cases (n, %, OR) for the period April 1st 2016 – May 31st 2018

	Racial/ethnic category		OR (95%CI)	Language barrier category		OR (95%CI)
	Western (n = 26)	Non-western (n = 28)	Non-western vs. western	No (n = 42)	Yes (n = 10)	Language barrier vs. non-language barrier
Care processes						
Augmentation of labour	13 (50)	11 (39.3)	0.45 (0.22–1.91)	19 (45.2)	5 (50)	1.21 (0.30–4.81)
Missing	*	*		*	*	
Induction of labour	6 (23.1)	7 (25.0)	1.11 (0.32–3.88)	11 (26.2)	2 (20)	0.71 (1.30–3.84)
Missing	*	*		*	*	
Pain relief epidural	14 (53.8)	12 (42.9)	0.64 (0.22–1.88)	25 (54.8)	1 (10)	0.08 (0.01–0.65)
Remifentanyl	1 (3.8)	4 (14.3)	4.17 (0.43–40.00)	1 (2.4)	4 (40)	27.33 (2.60–287.41)
None	11 (42.3)	12 (42.9)	1.02 (0.35–3.01)	16 (42.8)	5 (50)	1.63 (0.41–6.51)
Missing	*	*		*	*	
Complaints of pain	10 (38.5)	15 (53.6)	1.73 (0.58–5.16)	18 (42.9)	5 (50)	1.28 (0.32–5.10)
Missing	1	*		1	*	
Time to caesarean section						
<i>Time between 1st complaint & decision for caesarean section</i>						
<30 min	7 (63.6)	3 (27.3)	0.21 (0.04–1.31)	8 (50)	2 (33.3)	0.50 (0.07–3.55)
30–90 min	2 (18.2)	*	–	2 (12.5)	*	–
90–180 min	*	3 (27.3)	–	2 (12.5)	1 (16.7)	1.40 (0.10–19.01)
180+ mins	2 (18.2)	5 (45.4)	3.75 (0.54–26.05)	4 (25)	3 (50)	3.00 (0.42–21.30)
Missing	6	6		9	1	
<i>Time between 1st complaint & decision for caesarean section</i>						
<30 min	2 (16.7)	3 (20)	1.25 (0.17–9.02)	4 (19)	1 (16.7)	0.85 (0.08–9.44)
30–90 min	6 (50)	2 (13.3)	0.15 (0.02–1.00)	7 (33.4)	1 (16.7)	0.40 (0.04–4.12)
90–180 min	3 (25)	2 (13.3)	0.462 (0.06–3.35)	4 (19.1)	1 (16.7)	0.85 (0.08–9.44)
180+ mins	1 (8.3)	8 (53.3)	12.57 (1.28–123.48)	6 (28.6)	3 (50.0)	3.13 (0.55–17.84)
Missing	5	2		4	1	
Maternal outcomes						
MOH > 1000 mL	6 (23.1)	7 (25.0)	1.11 (0.32–3.88)	8 (19.5)	4 (40)	2.05 (0.51–8.10)
Missing	*	1		1	*	
Uterine rupture	7 (26.9)	11 (39.3)	1.76 (0.56–5.56)	12 (28.6)	5 (50)	2.50 (0.61–10.23)
Missing	*	*		*	*	
Perinatal outcomes						
Perinatal mortality	1 (4)	3 (10.7)	2.88 (0.28–29.64)	2 (4.9)	2 (20)	4.88 (0.60–39.91)
Missing	1	*		1	*	
Neonatal asphyxia	5 (19.2)	9 (32.1)	1.90 (0.54–6.68)	10 (23.8)	3 (33.3)	1.37 (0.30–6.32)
Missing	1	*		*	*	
Admission to neonatology	3 (11.5)	5 (17.9)	1.67 (0.36–7.80)	6 (13.4)	1 (10)	0.67 (0.71–6.26)
NICU	1 (3.8)	2 (7.1)	1.92 (0.16–22.56)	3 (7.1)	*	–
Missing	*	*		*	*	

MOH = major obstetric haemorrhage

* = no cases in this group

Bold = P value < 0.05

**Realizing ethnic bias
exists**

OBSTETRIC RACISM



DIAGNOSTIC LAPSE

When a clinician's uninterrogated belief that Blackness is pathological leads them to de-emphasize or exaggerate or ignore a patient's symptoms resulting in an inappropriate or lapsed diagnosis.

NEGLECT, DISMISSIVENESS, OR DISRESPECT

When medical professionals ignore or dismiss a person's expressed need for reproductive help or care and/or treats them with disdain.

INTENTIONALLY CAUSING PAIN

When medical professionals fail to appropriately manage pain, which may be rooted in racialized beliefs about pain immunity and as well as the absence of empathy for Black people's physical suffering, leading to lack of internal motivation to alleviate or reduce Black suffering.

COERCION

When medical professionals perform procedures without consent and/or intimidate patients to make decisions.

CEREMONIES OF DEGRADATION

The ritualistic ways in which patients are humiliated or shamed and includes a sense of being sized up to determine the worthiness of the patient or their support person(s) who may be viewed as a threat. In response, medical staff may deploy security, police, social services or psychiatry to ensure compliance or to remove the "threatening" person.

MEDICAL ABUSE

Can occur when medical professionals engage in experimentation and/or (repetitive) behavior that is motivated not by concern for the patient but serves to validate the clinician's self-worth and upholds their domination over the patient.

RACIAL RECONNAISSANCE

Describes the Herculean effort made by Black women to avoid or mitigate racist encounters including being hypervigilant about procedures and finding

Obstetric violence due to: Gender-based violence and medical racism

Conscious and unconscious
Deep-rooted structures of historical inequality

13 semi-structured interviews
Gynecologists, midwives, medical residents, nurses

Thematic analysis
deductive & inductive

The seven dimensions of obstetric racism
(Davis et al., 2021)

4 main themes

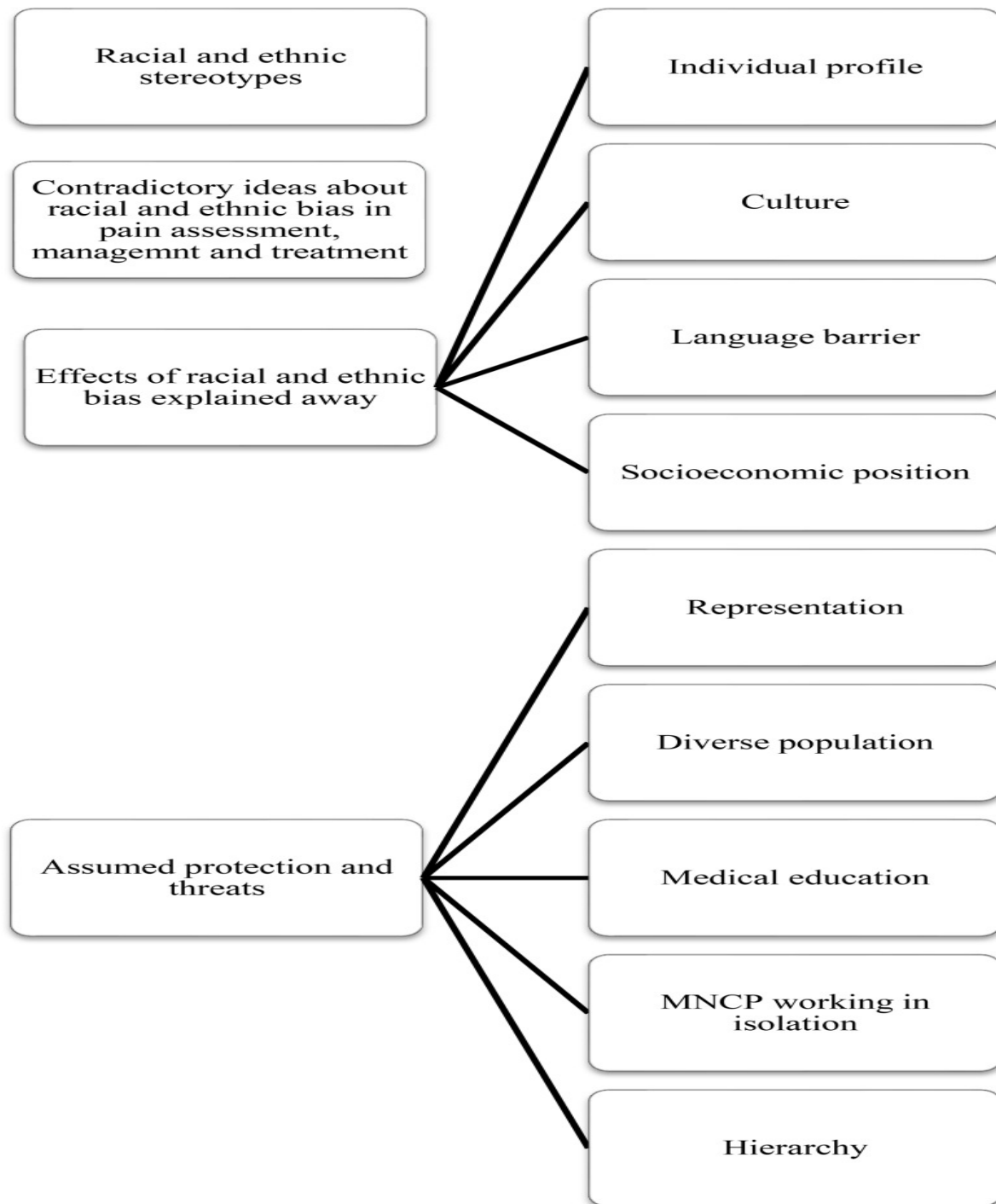
**Racial & Ethnic
Stereotypes**

**Effects of
racial en ethnic
bias explained
away**

**Contradictory
ideas (about bias
in pain perception,
management &**

**Assumed
protection and
threats**

Thematic structure



Raciale & Ethnic Stereotypes

*“mediterranean fever” or
“mediterranean presentation”:
“They really exaggerate or over
present their pain in order to get
attention from doctors. (P6) women
sometimes, healthcare
professionals we say like ‘she’s
like this strong African woman,
she can take it, she can handle it”*

(P8)

Contradictory ideas

“[...] We have 24/7 access to pain medication. We counsel everybody with the same text and same tools.” (P1)

“I think with South Asians, [. . .] I try to get more clarification or specification to is it really pain or is it something different? I don't want to over-treat them, and I do that more with South Asians than with other people from other backgrounds.” (P2)

Contradictory Ideas

Heuristics & Unconscious

"We are constantly [...] facing decisions [...] then we may need to have some sort of internal shortcut to make these decisions based on.. prejudices or based on experience" (P6)
"If he or she had already guided some people from India, or some other ethnicities and they [would always] ask for pain relief [the professional] would maybe easily say like 'OK, just go for it' or actively promote pain relief because maybe in their back of

Effects of racial en ethnic bias

Culture

“ [...] There are cultures where it's very common to scream a lot when you're having pain or to express yourself a lot when you're having pain. And there are cultures where it's much more common to withhold it in yourself and to keep it small, to not show how you are in pain. It's just their culture.” (P5)

“It's not be curious to what is really going on, what care do we provide? How is the quality of care? How's our health system working? It's such it can be such a lame excuse to not talk about all those more complex issues” (P1)

Effects of racial en ethnic bi

Socioeconomic Position

“have a lot of support, then they might need less pain medication because they have the support system, but if they are all alone, then they might need some pain medication earlier.” (P7)
being at that appointment and knowing what to ask or understanding what you're being told, understanding instructions, or having the ability of people around you that can help you whenever you need to take a rest” (P8)

Assumed protection and threats

Representation & Diversity

“[...] Because we have such a large amount of people from all over the world, I think we're more used to that. [...] So I think my opinion is different and maybe milder, more outgoing or more welcoming to other ethnicities” (P2)

Assumed protection and threats

Medical Education & Hierarchy Bet

"[...] It's difficult from bottom up to speak up to the medical hierarchy. So, we can really work to making it a flat structure. [. . .] It's more difficult to talk to your supervisor, you feel like, 'can I say everything or not?' [. . .] [Sometimes because] of education or sometimes [because] of different roles in being a nurse [or a] midwife, so it might also be that if you're a supervisor you do not hear everything from the other professional roles that [are] there. It can be more difficult for people to speak up." (P1)

conclusiONS

-Caesarean section was significantly more frequently performed >180 minutes after the first pain complaint in the non-Western category compared to the Western category (8/15 (53.3%)) vs (1/12 (8.3%))) (OR 12.57, 95% CI 1.28- 123.48).

-Professionals expressed implicit racial and ethnic bias and stereotypes about pain experience and expression, while mostly perceiving their own practice as unbiased.

Racial thinking and notions of ethnic differences in pain assessment, management and treatment were largely

References

E. M. Overtoom, T. N. Huynh, A. N. Rosman, J. J. Zwart, T. P. Schaap, T. E. Vogelvang, T. van den Akker & K. W. M. Bloemenkamp (2024) Predicting the risks and recognizing the signs: a two-year prospective population-based study on pregnant women with uterine rupture in The Netherlands, The Journal of Maternal-Fetal & Neonatal Medicine, 37:1,

Overtoom E, Goodarzi B, Kanu S, Helberg-Proctor A, de Jonge A, Bloemenkamp K. "You think, like, you're neutral but you're not": a mixed-methods study of racial/ethnic



Additional slides

Methodology of the subanalysis

- **Only cases where race/ethnicity was registered were included.**
- **Categories were grouped into 'Western' and 'non-Western'.**
- **Time of first complaint of pain was based on the first time abdominal pain was registered in the notes of the care professional present during labor.**
- **Of the 98 cases of uterine rupture in the**

Risk Indicators

41 women experienced complete uterine rupture

→ Incidence: **2.5 per 10,000 births**

35 women experienced uterine rupture with an adverse outcome

→ Incidence: **0.9 per 10,000 births**

No adverse outcomes occurred among women with **incomplete uterine rupture**

Risk indicators for adverse outcome:

Previous cesarean section

Higher maternal age

Gestational age **<37 weeks**

Augmentation of labor

Migration background from **Sub-Saharan Africa or Asia**



Women with adverse outcomes more often presented with warning signs during labor:

Abdominal pain: OR 3.34 (95% CI 1.26–8.90)

CTG abnormalities: OR 9.94 (95% CI 2.17–45.65)

Warning signs occurred most often **20–60 minutes before birth**

Conclusion

Uterine rupture is a **rare but serious condition**

Maternal symptoms and CTG abnormalities are associated with adverse outcomes

Recognition of these **time-dependent warning signs** may help expedite delivery

Further analysis is needed to guide **timely clinical intervention**



Areas to be discussed	Example questions
Introduction / Explanation of research / Demographic questions.	What is the hospital you work in? How many years of experience do you have in obstetrics?
Introductory questions	Can you tell me about your professional role? Can you tell me about the hospital that you work in? Can you tell me a bit about the ethnic & cultural makeup of the city, and more specifically of your hospital's patients?
Discussion of past research on ethnic bias in pain assessment - Here I will present findings from the Hoffman (2016) study which found differences in pain assessment and treatment based on ethnicity in the U.S..	Can you tell me your initial reactions to hearing the results of this research? Why do you think this result (disparate treatments in pain assessment between ethnic categories) is a reality in the U.S.? Is this topic something that is discussed among people in your profession? And in your hospital?
The context of the Netherlands.	If this research were to be repeated in the Netherlands, what results do you think would be found? Follow-up: Why? Do you think that a patient's ethnicity might impact a clinician's assessment of their pain in the Netherlands? Follow-up: Why?



Abstract

Background Studies indicate racial and ethnic inequities in pain assessment, management and treatment in maternal and newborn care. Namely, racially and ethnically marginalised women are less likely to receive pain relief in labour and the post-partum period, and are more likely to experience severe perinatal outcomes such as uterine rupture. This inequity may be explained by racial/ethnic bias in maternal and newborn care professionals' pain assessment, management and treatment. The aim of this study was to investigate the role of racial/ethnic bias in the assessment, management and treatment of pain among maternal and newborn care professionals in the Netherlands by researching the association between race/ethnicity, language barrier, and response time to pain, and exploring racial thinking and notions of ethnic differences in pain assessment, management, and treatment.

Methods This is a mixed methods study. The quantitative part of this study was a prospective, nationwide population-based cohort study in which cases of uterine rupture were collected through the Netherlands Obstetric Surveillance System (NethOSS), retrospectively investigating the association between categories of race/ethnicity, language barrier, the difference in the response time to pain, and maternal and perinatal outcomes up to 28 days post-partum. The qualitative part was an explorative study to investigate racial and ethnic bias in pain assessment, management and treatment among maternal and newborn care professionals using semi-structured interviews and thematic analysis.

Results The quantitative results indicated that caesarean section was significantly more frequently performed in more than 180 min after the first complaint of pain in the non-Western category compared to the Western category.

Referenties

E. M. Overtoom, T. N. Huynh, A. N. Rosman, J. J. Zwart, T. P. Schaap, T. E. Vogelvang, T. van den Akker & K. W. M. Bloemenkamp (2024) Predicting the risks and recognizing the signs: a two-year prospective population-based study on pregnant women with uterine rupture in The Netherlands, *The Journal of Maternal-Fetal & Neonatal Medicine*, 37:1, 2311083, DOI: 10.1080/14767058.2024.2311083

Overtoom E, Goodarzi B, Kanu S, Helberg-Proctor A, de Jonge A, Bloemenkamp K. "You think, like, you're neutral but you're not": a mixed- methods study of racial/ethnic bias in pain assessment, management and treatment in maternal and newborn care in the Netherlands. *Int J Equity Health*. 2025 Dec 8;25(1):9. doi: 10.1186/s12939-025-02714-w. PMID: 41361276; PMCID: PMC12797568.



Methodology of the subanalysis

- Only cases where race/ethnicity was registered were included.
- Categories were grouped into 'Western' and 'non-Western'.
- Time of first complaint of pain was based on the first time abdominal pain was registered in the notes of the care professional present during labor.
- Of the 98 cases of uterine rupture in the NethOSS database, race/ethnicity was registered in 54 cases.

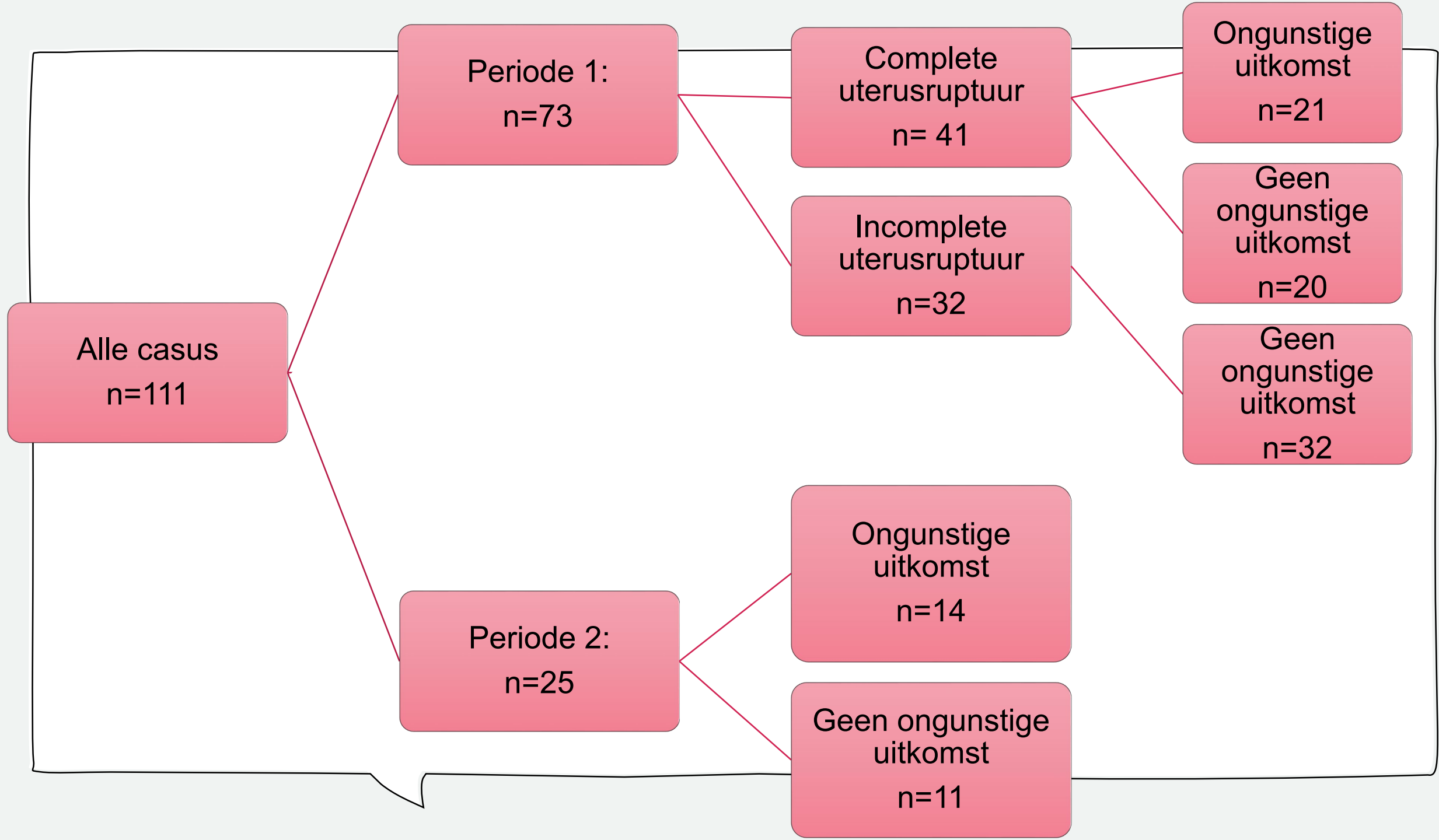


Table 1 Demographic characteristics of the population of uterine rupture cases with recorded race/ethnicity in the Netherlands (n, %) for the period April 1st 2016 – May 31st 2018

	Population	
	n	%
Maternal characteristics		
<i>Race/Ethnic category</i>		
Western	26	48.1
Non-western	28	51.9
<i>Age (years)</i>		
< 35	36	66.7
≥ 35	14	25.9
Missing	4	7.4
<i>BMi</i>		
< 30	35	64.8
≥ 30	1	11.1
Missing	13	24.1
<i>Language barrier</i>		
Yes	10	18.5
No	42	77.8
Missing	2	3.7
Obstetric characteristics		
<i>Parity</i>		
1	40	74.1
≥ 2	14	25.9
<i>Previous CS</i>		
1	45	83.3
≥ 2	9	14.8
<i>Vaginal birth after caesarean section</i>		
Previous	3	5.6
Current	43	79.6
<i>Uterine rupture (UR) or dehiscence</i>		
UR	17	38.6
Dehiscence	27	61.4
<i>Pain relief during labour</i>		
Epidural	26	48.1
Remifentanyl	7	13.0
None	21	38.9
<i>Onset of labour</i>		
Spontaneous	39	72.2
Induction	13	24.1
Missing	2	3.7
<i>Augmentation of labour (oxytocin)</i>		
Yes	24	44.4
No	30	55.6
<i>Gestational age</i>		
< 37	53	98.1
≥ 37	1	1.9

2016-2017:
anatomisch
Compleet
Incompleet

2017-2018: Klinisch
Maternale morbiditeit of
mortaliteit
Foetale morbiditeit of
mortaliteit



Adverse maternal outcomes were total blood loss, hospital and/or intensive care unit (ICU) admission, medical and/or surgical therapies, and complete or incomplete uterine rupture. Complete uterine rupture was defined as uterine rupture of both the myometrium and the visceral peritoneum and incomplete uterine rupture as uterine rupture of only the myometrium with an intact visceral peritoneum.

Adverse perinatal outcomes were neonatal asphyxia, admission to a neonatal intensive care unit (NICU) or neonatology ward due to convulsions, hypotonia, ischemia with ultrasonic abnormalities, hypoxic ischemic encephalopathy and/or multiple organ failure, and perinatal mortality up to 28 days post-partum. Neonatal asphyxia was defined as arterial umbilical cord pH < 7.0, base deficit > 16mmol/l, Apgar scores (AS) ≤ 5 at 5 min, resuscitation, or artificial ventilation for > 10 min afterbirth, Thompson score > 7 or Sarnat score > 1. Maternal symptoms of pain were abdominal pain or pain in the area of the CS scar, in which abdominal pain was distinguished from uterine contractions by the

Ongunstige uitkomst:

Periode 1:

2,9 per 1.000

TOLACs

Periode 2:

2,1 per

1.000 TOLACs

**Complete
rupturen:**

5,7 per 1.000

TOLACs

- **Riskfactors for uterine rupture with unfavourable outcome:**
 - **Preterm birth**
 - **augmentation**
 - **Non western background**
- **Important symptom = abdominal pain**
- **Simultaneous presence and unawareness of racial and ethnic stereotypes and assumptions,**
- **These stereotypes and assumptions affect decision-making about pain assessment, management and treatment.**

NethOSS

- Netherlands Obstetric Surveillance System -

Uterine Rupture

Predicting the
risks

Recognizing
the signs

Realizing

ethnic bias

a mixed method study on
uterine rupture within

Predicting the risks

**Uterine rupture with an
adverse outcome
N=35**

**All pregnant women in the
Netherlands in 2016
N= 166.694**

Augmentation

OR 6.63 95%CI
3.34-13.16

Gestational Age

16+0-36+6 OR
3.32, 95%CI 1.45-7.60

37-40+6 OR
0.42, 95%CI 0.22-0.82

>41 OR 1.36,
95%CI 0.62-2.99

Country of origin

Europe OR 0.17
95%CI 0.06-0.44

Afrika OR 7.84
95%CI 2.25-27.29

Azië OR 8.27
95%CI 2.92-23.55