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Migrant women's experience of antenatal care in an urban and rural setting in north and North-West Thailand: A cross sectional survey

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ABSTRACT

Background: Nearly 50 % of women in low- and middle-income countries fail to obtain adequate antenatal care due to barriers in reaching the health facility. A key element of the quality of care is women's perception of treatment they receive. This study aims to compare the perspectives of urban and rural migrant women from Myanmar in Thailand and the obstacles they face when trying to access care.

Methods: From October-2023 to May-2024, a survey was conducted among migrant women, 74 at Sarapee hospital in Chang Mai Province, and 148 at the clinics of Shoklo Malaria Research Unit (SMRU), Tak Province. Questions based on REPRO-Q were used for scoring satisfaction in several domains using a Likert scale ranging from dissatisfied to satisfied.

Results: The majority of women in Sarapee and SMRU reported pleasant visits, 86.5 % (64/74), 99.3 % (144/145) respectively. Disrespectful behaviour against migrant women was low and mentioned by 14.9 % (11/74) in Sarapee and 1.4 % (2/148) at SMRU. The women attending care at Sarapee reported significantly lower satisfaction 60.8 % (45/74) on being able to refuse examination or treatment compared to women attending care in SMRU 83.0 % (122/147) $P < 0.001$.

Conclusion: Both urban and rural settings had high rates of perceived pleasant visits and recommending the service to friends, although this could result from hesitancy to give negative feedback. At this critical stage of the life course both institutions can improve, to eliminate experiences of perceived disrespectful behavior.

1. Introduction

In low- and middle-income countries (LMIC) almost 50 % of women don't receive adequate antenatal care (ANC) because of barriers such as economic distress or distance to a health facility (Finlayson and Downe, 2013). ANC is essential during pregnancy for monitoring and improving maternal and fetal wellbeing by health promotion, identification of materno-fetal risks and treatment of pregnancy related diseases (World Health Organisation, 2016). The barriers for migrant and vulnerable populations to receive adequate ANC are further increased because of language barriers, no health insurance or no legal documents, and transportation difficulties especially in rural areas (Gil-Salmerón et al., 2021, Loganathan et al., 2019, Billett et al., 2022, Khanlou et al., 2017, Ludwig et al., 2020).

When able to reach the ANC an important aspect that determines the quality of care is how the women experience the received care

Abbreviations: ANC, Antenatal Care; LMIC, Low and Middle Income Countries; SMRU, Shoklo Malaria Research Unit; USD, US Dollar; WHO, World Health Organisation.

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(Campbell et al., 2000, van der Kooy et al., 2017, Scheerhagen et al., 2015). This experience influences the compliance to treatment and health services (van der Kooy et al., 2017). Discrimination of migrant women, unfortunately still reported, has a negative impact on the maternal and fetal outcome (Gil-Salmerón et al., 2021, Loganathan et al., 2019, Billett et al., 2022, Loganathan et al., 2020, Osuide et al., 2024, Konje and Konje, 2021).

The World Health Organisation (WHO) defined the concept of responsiveness to measure the service quality on a standardized way (van der Kooy et al., 2017, Valentine et al., 2003). Responsiveness is defined by how a person is treated by the health professional and health institution, which includes the environment where the person received the treatment (Valentine et al., 2003). The Responsiveness in Perinatal and Obstetric HealthCare Questionnaire (REPRO-Q), which employs the 8-domain WHO's responsiveness model, has been used to assess service quality in the Netherlands but, as far as we know, not in south-east Asia (van der Kooy et al., 2017, Scheerhagen et al., 2015, Van Der Kooy et al., 2014).

Thailand is host to 4-5 million migrants, from which the majority comes from bordering countries: Myanmar, Cambodia, and Lao People's Democratic Republic. Of these 4-5 million migrants, 1-2.5 million hold an irregular status and have no health insurance (IOM. 2024, United Nations Thematic Working Group on Migration in Thailand 2019). Barriers for undocumented Myanmar migrant women to reach antenatal care in Thailand, have been studied and a lack of health insurance, travel distance, fear of arrest and language differences were all described as contributing factors by women (Tschirhart et al., 2023). Discrimination in the healthcare is only anecdotally reported by migrants in Thailand

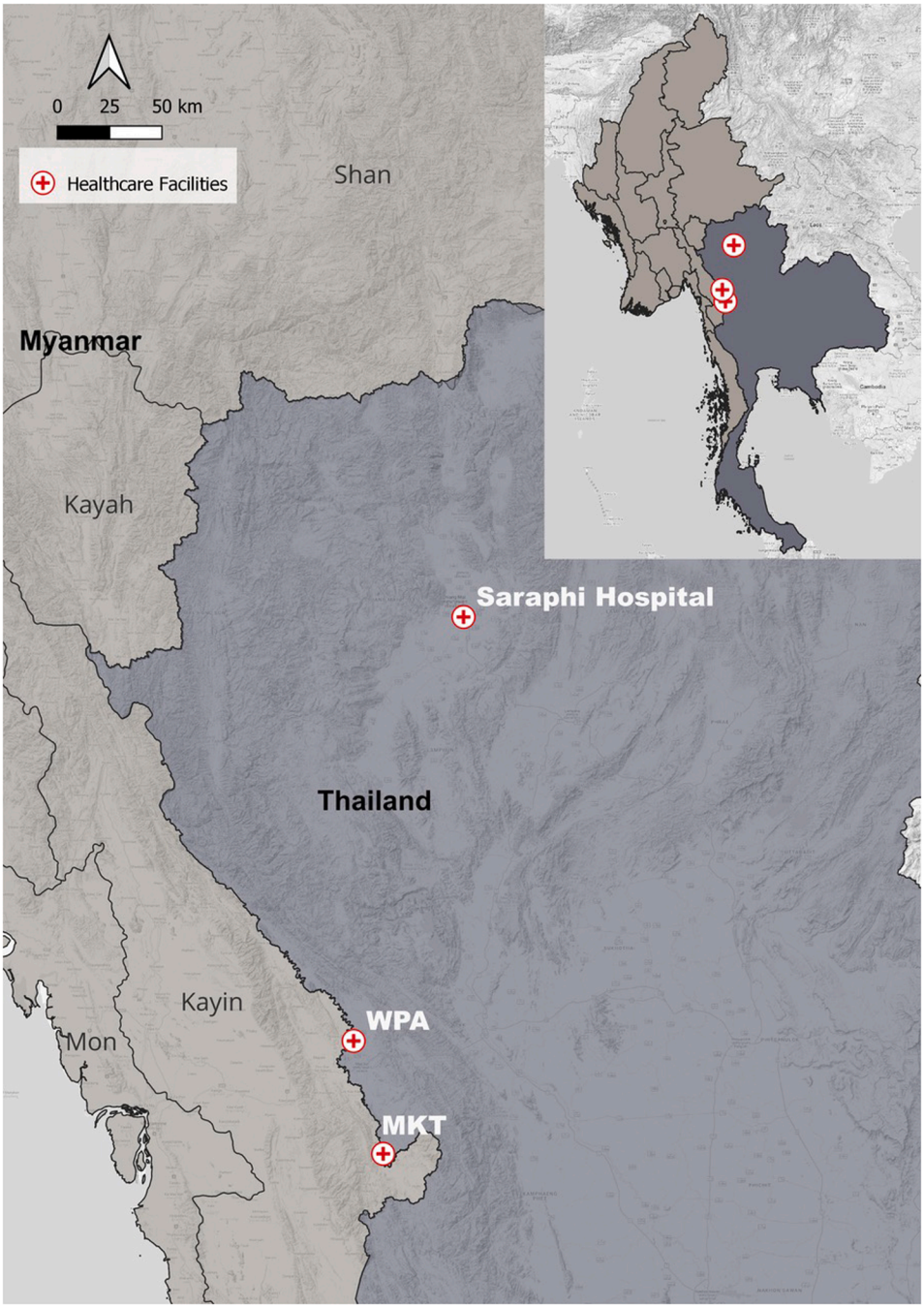

Fig. 1. Map of Thailand bordering Myanmar with the location of Sarapee hospital and clinics of the SMRU.

(Pocock et al., 2020).

The objective of this study is to describe the experience of antenatal care of migrant women from Myanmar in Thailand. The perceptions and barriers to care will be compared between two institutions: one in an urban area in north Thailand, Sarapee Hospital and the other in a rural area in north-west Thailand, the clinics of Shoklo Malaria Research Unit (SMRU) in Tak Province.

2. Methods

Ethical approval for the surveys was provided by the Chiang Mai University (FAM-2566-0154) and by the Oxford University Ethics Committee (OXTREC: 537-23) Written informed consent was obtained from all participants using patient information sheets, informed consent forms and verbal explanations in Karen, Burmese or Thai, depending on the preferred language of the participant.

2.1. Study Site and study population

The survey was carried out in Sarapee hospital and two clinics of the SMRU; Wang Pa (WPA) and Maw Ker Thai (MKT) (Fig. 1). Sarapee is a Thai government hospital located in Chaing Mai Province, and provides antenatal care and assistance related to childbirth to the population in the area, including documented migrant women and Thai Nationals. Most migrant women who attend care in Sarapee hospital speak Thai Yai (Shan) and understand and can speak Thai. Cost for health services are free or low-cost under Social Security Scheme, Health Insurance Card Scheme or private fund. The two clinics of the SMRU are situated on the north western Thailand Myanmar border, in Tak province, Thailand, and provide free antenatal care and care surrounding birth predominantly to undocumented migrant women. If needed to refer to a Thai Public Hospital MFUND, which is low cost health insurance for undocumented migrant populations, from a Non-Government Organization Dreamlopments, helps to cover the cost (MFUND 2024). For travel to health facilities migrants are depending on public transport or their boss for bringing them. The SMRU is a research organization that is paired with the Borderland Health Foundation a humanitarian organization and where locally trained midwifes who can speak the language of the migrant women, Burmese and Karen, provide care (McGready et al., 2021, Prins et al., 2024). The survey questions were asked to migrant women 20 years and older who attended antenatal care in one of the two study sites.

2.2. Study design

This survey (Supplementary file 1) was carried out from October 2023 till May 2024. The survey consisted of two parts of previously validated and published surveys (van der Kooy et al., 2017, Dillon et al., 2020, Essed, 1991). The survey was translated in Karen, Burmese and Thai. Each translation was independently reviewed for translation verification (separate person) to ensure the integrity of the survey. The survey was piloted in Sarapee and SMRU separately with 5 women and questions were clarified if necessary.

Part one of the questions concerned barriers to reach the health facility and the experience of the received care. It covers topics such as: language, health insurance and documents, how to travel to the clinic, the cost to reach the clinic, experience of the care and disrespectful behavior by staff.

Part two consisted of the questions of the REPRO-Q (van der Kooy et al., 2017, Scheerhagen et al., 2015, Van Der Kooy et al., 2014). This questionnaire has questions in eight domains: Autonomy, Dignity, Communication, Confidentiality, Choice and Continuity of Health Care Provider, Prompt Attention, Quality of basic amenities and Social considerations. Each domain consisted of two to four questions on which the participants had fixed responses only based on satisfaction: very dissatisfied, dissatisfied, not dissatisfied/ not satisfied, satisfied or very satisfied, on each specific topic. Minor modifications were made to the REPRO-Q to adapt to the setting by deleting two questions including "How do you rate the quality of the food?" because neither site provided food at antenatal care and "Was written information provided in such a way you could understand?" because Shan, Karen and Burmese written information is not provided. In the SMRU study sites previous studies have documented low health literacy (Gilder et al., 2019).

The survey was verbally asked by trained research staff of the SMRU and Chiang Mai University in Burmese, Karen or Thai language depending on the preference of the women. Verbal was chosen as previous attempts with written documents have failed (Ing et al., 2017). Survey staff were not involved in antenatal or birthing care offered to migrants in the area but have worked in monitoring and evaluation of projects. Convenience sampling was used with the research teams travelling to the ANC clinics and inviting women already attending ANC, to participate. A confidential area was set aside for the survey team to ask the women in private. The survey was piloted first and carried out in the SMRU as part of a larger project to identify the experience of women at ANC. The Chiang Mai University study team received training on the survey from the SMRU team to ensure consistency, and after conducting the pilot surveys (n=5) in the urban environment of Sarapee hospital it was carried out. The CROSS guidelines for reporting surveys were followed for this study (Sharma et al., 2021).

2.3. Sample size calculation

The study was done with a convenience sample which was based on the average of women visiting the ANC per health clinic. It was known that approximately 200 migrant women per year come to Sarapee hospital and around 1200-1400 women visited the SMRU clinics for ANC each year. It was thought that in four months 70-90 migrant women would visit the Sarapee hospital. For convenience the sample of SMRU was chosen to be the double size of Sarapee, as it has a higher amount of women visiting the ANC.

2.4. Variables

The cost of transport variable was divided into three categories <100 Thai Baht (approximately 3.0 US Dollar (USD)), 100-200 Baht (3.0-5.9 USD), and > 300 Baht (>5.9 USD). A legal document was defined by the participant as a Thai work permit, Myanmar passport with a visa or Thai ID card. Unofficial cards provided at a cost by local police were not considered legal. There was no verification of documents by survey staff.

Travel time to the clinic was categorized into four groups: less than 30 min, 30-60 min, 60–119 min, and 120 min or more.

Health insurance was evidenced as is routine in both study sites, if the woman could show registration to Thai insurance under the Social Security Scheme, Health Insurance Card Scheme, private insurance or MFUND.

Disrespectful behaviour was defined as positive if the woman experienced refusal of service, shouting directed to her, less attention paid to her compared to others or physical violence used against her while attending antenatal care services at SMRU or Sarapee.

The REPRO-Q answers were summarised using a Likert scale; of five (to three) answers. Very dissatisfied and dissatisfied were combined into one group: dissatisfied. Very satisfied and satisfied were also combined to one group: satisfied. This was done to overcome the cultural tendency of people to provide less extreme answers (Dolnicar and Grün, 2007) and improve readability.

2.5. Analysis

Data were analyzed using R (version 4.2.1) for Windows for descriptive analysis. Continuous data were described using the mean, standard deviation minimum, and maximum. Categorical data were summarized using frequency and proportions. Student's t-test, Chi-

squared test and Fisher's exact were used to compare variables of Sarapee and SMRU. The level as significance was set as $P < 0.05$.

Confirmatory factor analysis (CFA) was performed to test the validity of the structure of the Repro-Q questionnaire with its 8 dimensions in this population. Several indices were used to test a good model fit for the construct, they include: the root mean square error of approximation (RMSEA) <0.06, standardized root mean square residual (SRMR) <0.08, comparative fit index (CFI) > 0.95, Tucker Lewis Index (TLI) > 0.95 (Finlayson and Downe, 2013). To test reliability Cronbach's alpha was calculated, 0.7 and above was considered acceptable.

3. Results

Between October 2023 and the end of May 2024, 222 surveys were conducted in migrant women; 74 in Sarapee hospital and 148 (47 in WPA, 101 in MKT) in the clinics of the SMRU.

The mean age (years) of the women attending care at Sarapee was 28.6 compared to 27.4 at the SMRU (Table 1). Most women, 91.9 % (68/74) spoke Thai Yan (Shan) at Sarapee compared to women at SMRU who spoke Karen or Burmese language, 82.4 % (122/148). At Sarapee 4.1 % (3/74) of the women did not have any legal documents, compared to 92.6 % (137/148) of the women at SMRU, $P < 0.001$. The proportion of women with health insurance was not significantly different between Sarapee, 81.1 % (60/74) and SMRU, 86.7 % (124/143), P=0.370; although the type differed, Thai health insurance (98.3 %, 59/60) at Sarapee and MFUND (98.4 %, 122/124) at SMRU. Most women at both study sites would recommend the clinic to their friends: Sarapee 94.6 % (70/74) and SMRU 97.2 % (140/144).

Table 1
Characteristics of the women.

Variables		Sarapee	SMRU	P-value*
Number; N	Responses	74	148	
Age; mean (SD) [min-max]		28.6 (5.5) [20-43], , ,	27.4 (6.2) [20-43]	0.138
Gravida median (25th, 75th), [range]		2 (1-2) [1-3]	2 (1-3) [1-7]	NA
Primigravida		32.4 (24/74)	35.1 (52/148)	0.803
Preferred Language	Burmese	1.4 (1/74)	82.4 (122/148)	<0.001
	Karen	0 (0/74)	16.9 (25/148)	
	Thai	0 (0/74)	0.7 (1/148)	
	Shan (Thai Yai)	91.9 (68/74)	0 (0/148)	
	Other	6.8 (5/74)	0 (0/148)	
What do you do for work?	Farm work	4.9 (3/61)	58.1 (86/148)	<0.001
	Home duties	36.1 (22/61)	29.1 (43/148)	
	Constructor	23.0 (14/61)	0 (0/148)	
	Shop	14.8 (9/61)	3.4 (5/148)	
	Other	21.3 (13/61)	8.8 (13/148)	
Do you have any legal documents?	Yes	95.9 (71/74)	7.4 (11/148)	<0.001
	No	4.1 (3/74)	92.6 (137/148)	
Do you have health insurance?	Yes	81.1 (60/74)	86.7 (124/143)	0.370
	No	18.9 (14/74)	13.3 (19/143)	
Do you plan homebirth?	Yes	0 (0/74)	0 (0/148)	NA
	No	100 (74/74)	100 (148/148)	

Data are % (n/N) unless otherwise specified.
*P-value of comparison between Sarapee and SMRU.

3.1. Travel

More than half of the women could reach the health facility within 30 min; 67.6 % (50/74) women at Sarapee and 54.7 % (81/148) at SMRU (Table 2). Nonetheless, a variation in the 'concern' (worry) for security to access the clinic was noted, with 28.8 % (21/73) in Sarapee and nearly half of the women at SMRU 46.9 % (68/145); P=0.015. The main reasons for not feeling secure were: fear of the police for possible arrest or fighting (conflict) in the area, on the way to the clinic. A third of the women at Sarapee, 33.3 % (15/45) believed they would receive the help of their boss if they had to go to the clinic for childbirth, compared to half of the women 52.2 % (57/109), attending the SMRU, P=0.001. If the boss would not help the women they would go by themselves to the health facility.

3.2. Experience of the care

At both Sarapee and SMRU a very high proportion of women said their care expectations on the day of the survey had been met; 98.6 % (73/74) and 97.2 % (141/145) respectively (Table 3). Of the women in Sarapee 86.5 % (64/74) reported their visit had been pleasant compared to 99.3 % (144/145) at SMRU; $P < 0.001$. Disrespectful behaviour

Table 2
Traveling to clinic.

Variables		Sarapee	SMRU	P-value*
Number; N	Responses	74	148	
Time to travel to clinic?	<30 min	67.6(50/74)	54.7 (81/148)	0.137
	30-60 min	27.0(20/74)	31.8 (47/148)	
	60-119 min	5.4 (4/74)	10.1 (15/148)	
	≥ 120 min	0 (0/74)	3.4 (5/148)	
Cost of traveling	<$ 3.00	86.5 (64/74)	88.5 (131/148)	0.133
	$ 3.00-5.90	10.8 (8/74)	11.5 (17/148)	
	> $ 5.90	2.7 (2/74)	0 (0/148)	
Is this place easy to reach?	Yes	100 (73/73)	94.6 (139/147)	0.099
	No	0 (0/0)	5.4 (8/147)	
Do you worry about your security to reach clinic/ hospital for childbirth	Yes	28.8 (21/73)	46.9 (68/145)	0.015
	No	71.2 (53/73)	53.1 (77/145)	
Would your boss help you reach the delivery room ?	Not helpful	2.2 (1/45)	4.6 (5/109)	0.001
	Probably not helpful	4.4 (2/45)	5.5 (6/109)	
	Don't know	37.8 (17/45)	9.2 (10/109)	
	Probably helpful	22.2 (10/45)	28.4 (31/109)	
	Very helpful	33.3 (15/45)	52.2 (57/109)	

Data are % (n/N).
*P-value of comparison between Sarapee and SMRU.

Table 3
Experience of the care.

Variables		Sarapee	SMRU	P-value*
Number; N	Responses	74	148	
What do you expect today?	Pregnancy care	97.3 (72/74)	88.4 (129/146)	NA
	Other	2.7 (2/74)	4.1 (6/146)	
	Medical Problem	0 (0/74)	6.8 (11/146)	
	Other			
Did we meet your expectations?	Yes	98.6 (73/74)	97.2 (141/145)	0.856
	No	1.4 (1/74)	2.8 (4/145)	
Would you recommend this clinic to your friends?	Yes	94.6 (70/74)	97.2 (140/144)	0.551
	No	5.4 (4/74)	2.8 (4/144)	
How pleasant was your visit today?	Very unpleasant	0 (0/74)	0 (0/145)	<0.001
	Unpleasant	0 (0/74)	0 (0/145)	
	Not good/ not bad	13.5 (10/74)	0.7 (1/145)	
	Pleasant	55.4 (41/74)	9.0 (13/145)	
	Very pleasant	31.1 (23/74)	90.3 (131/145)	
How often has someone in this clinic been disrespectful e.g refused you service, paid less attention to you compared with others, shouted, rude language to you, slap you?	Never	85.1 (63/74)	98.6 (146/148)	<0.001
	Often	5.4 (4/74)	0 (0/148)	
	Sometimes	9.5 (7/74)	1.4 (2/148)	

Data are % (n/N).
*P-value of comparison between Sarapee and SMRU.

against women was low and mentioned more frequently at Sarapee, 14.9 % (11/74) compared to 1.4 % (2/148) at SMRU; P < 0.001. Disrespectful behaviour was perceived in relation to: language used, ethnicity and lack of sympathy towards the woman for being pregnant.

3.3. Experience of care per domain (REPRO-Q)

The overall validity of this model was low and the dimensions in the model did not fit well: CFI 0.298, TLI 0.205 and SRMR of 0.146, only the RMSA was 0.033. (S1 table). Only one domain had an acceptable Cronbach's Alpha: Confidentiality (0.95). (S2 table) The overall reliability in the second scale was below acceptable with a Cronbach's alpha of 0.67 (S3 table). Because of the poor fit of this model, only separate questions will be presented.

The women attending care at Sarapee reported significantly lower satisfaction 60.8 % (45/74) on being able to refuse examination or treatment compared to women attending care in SMRU 83.0 % (122/147) P < 0.001 (Table 4). The reported percentage of satisfaction was lower for being able to refuse examination or treatment in women attending at Sarapee 60.8 % (45/74) compared to women attending SMRU 83.0 % (122/147) P < 0.001. A similar trend was observed for choosing a health care provider, in which the women attending Sarapee 67.6 % (50/74) reported a lower satisfaction than women attending care at SMRU 93.2 % (137/147) P < 0.001. One of the largest differences was on the question of accessibility by phone, with satisfaction higher in women attending care at Sarapee, 93.2 % (69/74) compared to women attending at SMRU, 57.8 % (85/147) P < 0.001. The reason for this was not explored.

Table 4
Experiences of the care REPRO-Q questions.

Variables	Responses	Sarapee (n=74)	SMRU (n=148)	P-value*
1.Autonomy				
Were you involved in making decisions about examination/treatments?	-Satisfied	91.9 (68/74)	99.3 (146/147)	0.011
	-Not satisfied/ not unsatisfied	5.4 (4/74)	0.7 (1/147)	
	-Unsatisfied	2.7 (2/74)	0 (0/147)	
Were you able to refuse examinations or treatments?	-Satisfied	60.8 (45/74)	83.0 (122/147)	<0.001
	-Not satisfied/ not unsatisfied	1.4 (1/74)	14.3 (21/147)	
	-Unsatisfied	37.8 (28/74)	2.7 (4/147)	
Were you asked permission before testing or starting treatment?	-Satisfied	98.6 (73/74)	98.6 (145/147)	0.688
	-Not satisfied/ not unsatisfied	1.4 (1/74)	0.7 (1/147)	
	-Unsatisfied	0 (0/0)	0.7 (1/147)	
2.Dignity				
Were examinations and treatments done respectful of your privacy?	-Satisfied	97.3 (72/74)	100 (147/147)	0.211
	-Not satisfied/ not unsatisfied	2.7 (2/74)	0 (0/0)	
	-Unsatisfied	0 (0/74)	0 (0/0)	
Did the examination rooms ensure your privacy?	-Satisfied	95.9 (71/74)	99.3 (146/147)	0.215
	-Not satisfied/ not unsatisfied	4.1 (3/74)	0.7 (1/147)	
	-Unsatisfied	0 (0/74)	0 (0/147)	
Were you treated with respect by your health care provider?	-Satisfied	98.6 (73/74)	99.3 (146/147)	0.288
	-Not satisfied/ not unsatisfied	1.4 (1/74)	0 (0/147)	
	-Unsatisfied	0 (0/74)	0.7 (1/147)	
3.Communication				
Were things **explained** by your *thramu* / nurse in a way you could understand?	-Satisfied	97.3 (72/74)	99.3 (146/147)	0.542
	-Not satisfied/ not unsatisfied	2.7 (2/74)	0.7 (1/147)	
	-Unsatisfied	0 (0/74)	0 (0/147)	
Were you **encouraged** to ask questions about your health/ treatment?	-Satisfied	100 (74/74)	98.0 (144/147)	0.465
	-Not satisfied/ not unsatisfied	0 (0/74)	0.7 (1/147)	
	-Unsatisfied	0 (0/74)	1.4 (2/147)	
Was there **enough time** to ask questions about your health/treatment?	-Satisfied	95.9 (71/74)	95.9 (141/147)	0.060
	-Not satisfied/ not unsatisfied	0 (0/74)	3.4 (5/147)	
	-Unsatisfied	4.1 (3/74)	0.7 (1/147)	
Was information on the health service's contact, location and parking information clear to you?	-Satisfied	100 (74/74)	97.3 (143/147)	0.359
	-Not satisfied/ not unsatisfied	0 (0/74)	1.4 (2/147)	
	-Unsatisfied	0 (0/74)	1.4 (2/147)	
4.Confidentiality				

(*continued on next page*)

Table 4 (*continued*)

Variables	Responses	Sarapee (n=74)	SMRU (n=148)	P-value*
Was your healthcare done in a way to protect your confidentiality?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	82.4 (61/74) 0 (0/74) 17.6 (13/74)	86.4 (127/147) 12.2 (18/147) 1.4 (2/147)	<0.001
Was confidentiality kept on the information provided by you?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	82.4 (61/74) 0 (0/74) 17.6 (13/74)	89.8 (132/147) 9.5 (14/147) 0.7 (1/147)	<0.001
Was your medical record kept confidential?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	82.4 (61/74) 0 (0/74) 17.6 (13/74)	94.6 (139/147) 5.4 (8/147) 0 (0/147)	<0.001
CLIENT ORIENTATION	Responses	Sarapee (n=74)	SMRU (n=148)	P-value*
5.Choice and Continuity of Health Care Provider				
Were you able to choose your own health care provider?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	67.6 (50/74) 4.1 (3/74) 28.4 (21/74)	93.2 (137/147) 5.4 (8/147) 1.4 (2/147)	<0.001
Were you able to use other health care services, other than usual one?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	85.1 (63/74) 1.4 (1/74) 13.5 (10/74)	92.5 (136/147) 6.8 (10/147) 6.8 (1/147)	<0.001
How well was the continuity of care by one health care provider?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	100 (74/74) 0 (0/74) 0 (0/74)	100 (146/146) 0 (0/146) 0 (0/146)	NA
Were you able to choose your own place of delivery?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	100 (74/74) 0 (0/74) 0 (0/74)	96.6 (141/146) 2.1 (3/146) 1.4 (2/146)	NA
6.Prompt Attention				
How well did you receive prompt attention at your health service?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	94.6 (70/74) 1.4 (1/74) 4.1 (3/74)	97.9 (143/146) 2.1 (3/146) 0 (0/146)	0.047
How did you experience the waiting time after you asked for help?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	94.6 (70/74) 1.4 (1/74) 4.1 (3/74)	92.5 (136/147) 6.8 (10/147) 0.7 (1/147)	0.048
How well was the accessibility by phone?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	93.2 (69/74) 0 (0/74) 6.8 (5/74)	57.8 (85/147) 40.8 (60/147) 1.4 (2/147)	<0.01
How do you rate the travel time to your health service?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	97.3 (72/74) 2.7 (2/74) 0 (0/74)	90.5 (133/147) 3.4 (5/147) 6.1 (9/147)	0.088
7.Quality of basic amenities				
How do you rate the quality of the hygiene of the toilets?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	81.1 (60/74) 12.2 (9/74) 6.8 (5/74)	94.5 (138/146) 3.4 (5/146) 2.1 (3/146)	<0.007
How do you rate the overall quality of the surroundings e.g. clean, seats?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	94.6 (70/74) 5.4 (4/74) 0 (0/74)	97.9 (143/146) 0.7 (1/146) 1.4 (2/146)	0.053
8.Social Consideration				
Did the health care provider facilitate the support of relatives/ friends?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	93.2 (69/74) 0 (0/74) 6.8 (5/74)	97.3 (143/147) 2.7 (4/147) 0 (0/147)	<0.002
Was the home situation considered when planning an appointment?	-Satisfied -Not satisfied/ not unsatisfied -Unsatisfied	98.6 (73/74) 0 (0/74) 1.4 (1/74)	91.8 (135/147) 8.2 (12/147) 0 (0/147)	<0.016

Data are % (n/N).
*P-value of comparison between Sarapee and SMRU.

4. Discussion

This study reports that the majority of migrant women reported having a pleasant experience at the health facility and would recommend the service to a friend, despite half the women at SMRU not receiving prompt care. However migrant women in a public hospital experienced less satisfaction in choosing a healthcare provider and being able to refuse care or treatment and reported experiencing more disrespectful behaviour compared to a health facility where care is provided by health staff with the same language and cultural background. The majority of pregnant migrants from Myanmar in Thailand, have health insurance and can reach the health facility within one hour. This analysis revealed concerns about safety when accessing the health facility and challenges in contacting the health facility by phone.

This study reports that most of the documented migrants at Sarapee have a Thai health insurance and most of the undocumented migrants at SMRU have MFUND insurance. Thailand aims to cover health insurance for all migrants with the Social Security Scheme and Health Insurance Card Scheme (HCIS), the latter of which is applicable for undocumented migrants (Kunpeuk et al., 2020, McMichael and Healy, 2017). It is theoretically possible in Thailand for migrants to receive the same care as the residents, which is unique compared to other countries (McMichael and Healy, 2017, Sanchez et al., 2023). However in practice barriers for undocumented migrants to apply for HCIS remain: again fear of arrest when registering for the insurance, the financial cost and the voluntary aspect of it, and the issue of proliferation of brokers (Kunpeuk et al., 2020, Pudpong et al., 2019, Tschirhart et al., 2021). MFUND tries

to reduce the barriers to apply for health insurance by being a low cost insurance without the need for being registered in Thailand with the possibility to apply for the insurance close to the place where migrants live, and with the possibility for the insurance to apply in hospitals in Thailand and in some hospitals in western Myanmar (König et al., 2024).

Amongst undocumented migrant pregnant women almost half reported they were worried about their security to reach the health facility. Stress is associated with adverse pregnancy outcomes and can compound the already negative effects of marginal socioeconomic status of migrants on pregnancy (Han et al., 2022). Being worried about security is an important barrier to positive action towards accessing health care and applying for health insurance (Kunpeuk et al., 2020, Tschirhart et al., 2021). In addition during pregnancy every woman is expected to make multiple antenatal care visits and if each visit is associated with fear, this can lead to chronic ongoing stress again compounding adverse mental health consequence (Stevenson et al., 2024). Bosses, law enforcement and the military remain outside the control of public health but avoiding chronic stress among migrants is beneficial to Thailand's agricultural and construction sectors which employ migrants. This difference in perception of worry can also provide some explanation for the difference in other domains reported by documented and undocumented migrant women in the clinics of the SMRU and Sarapee hospital. Documented migrant women can attend the Thai health public hospital system such as Sarapee freely, without needing support from a boss. Undocumented migrant women can access dedicated migrant health services in Thailand such as SMRU which attempt to reduce barriers to access: free care, irrespective of legal status and close to the place they live although this is difficult for agricultural, migrant clusters, dispersed in rural areas without regular public transportation. It implies that there is a need for Thailand to reduce barriers for undocumented migrants. Funding for humanitarian work and non-government organisations supporting migrant health in Thailand is fragile and there is no guarantee of sustainability (Tschirhart et al., 2021). In the near future, collaborations between Thai public health and humanitarian organisations to strengthen sustainable migrant health care can aid in bridging these gaps. Rural migrant women may be better cared for by an outreach program for antenatal care to lower the barriers to access (Genovese et al., 2023). SMRU started in 2022 with an outreach program to lower the access for migrant population on the Thailand Myanmar border.

The perceived experience of care was different between the two health facilities; disrespectful behavior while low overall, was more often mentioned in Sarapee hospital together with a lower satisfaction in choosing a healthcare provider and being able to refuse care or treatment, compared to clinics of the SMRU. This may result from the difference in healthcare providers and culturally acceptable care. The care in SMRU is provided by Karen and Burmese staff who are from a similar cultural background and speak the same language and care options are limited. The care in Sarapee is provided mainly by Thai health care professionals who have a different cultural background and different language from the migrant women. Language and cultural barriers in health care for migrants are described in many countries (Barrio-Ruiz et al., 2024). To overcome this disparity there is a need for cultural sensitivity and if possible translation services to facilitate less fluent Thai speakers, and while Myanmar and Thailand are neighbours, Thai belongs to the Tai-Kadai language family while Burmese belongs to Sino-Tibetan, sharing little in common (Gil-Salmerón et al., 2021). Cultural differences can unknowingly result in cultural insensitivities when giving advice to patients (König et al., 2024, Han et al., 2022). Some hospitals in Thailand have Burmese healthcare interpreters to facilitate care for migrant women, with a reportedly positive influence (Phanwichatkul et al., 2018). Migrant health volunteers and workers are trained to be translators and cultural mediators in hospital and villages, however co-ordination and sustainability remains problematic (Kosiyaporn et al., 2020).

As reported undocumented migrant women reported less satisfaction to be able to reach the clinic by phone. In this area on the Thailand Myanmar border women have less possibility to buy a phone, have short term sim cards and the network is less reliable in rural areas, which creates an extra barrier to communicating health care by phone in this population. Face-to-face care instead of technical replacement remains important in vulnerable populations (Myo et al., 2016).

Respectful care or respectful maternity care implies the involvement of the person who is seeking care; shared decision making is important to improve the outcome of care (Miller et al., 2016, Puthussery et al., 2023). Limited staffing diminishes patience and time available for the nuanced care necessary to address cultural and language differences, thereby understandably complicating shared decision-making in healthcare. However, the objective must be to implement pragmatic and realistic respectful care, with the SDG 3 aim of 'good health and well-being for all' as a baseline (Gavine et al., 2019).

An important limitation of this study is that the survey was in migrant women who attended antenatal care, thereby creating a bias which could underestimate the barriers to access healthcare in the critical and unpredictable 24 h of childbirth. The number of women interviewed is low and could be a reason for not showing significant difference between undocumented and documented migrants, alternatively there is no difference. The goal of this study was however to understand the experience of care and barriers and perceptions of women attending antenatal care, with a view to improving services, such as implementing changes to reduce the long waiting time reported for migrants at SMRU. This study shows a low validity and reliability of the REPRO-Q questionnaire and its dimensions in these populations. The cultural tendency to answer with moderate answers (Dolnicar and Grün, 2007) or to give the answers people think they need to give instead of what they really think, could underestimate the amount of disrespectful behaviour or negative experiences in the health facilities of both SMRU and Sarapee hospital. It is also not understood if Burmese, Karen and Shan have intercultural differences in their perceptions of care or willingness to speak out. Another potential limitation is availability of a Shan translator – Burmese or Thai sufficed and Shan women expressed negative experience more so than women attending SMRU. Therefore, the results of this study should be used only as an indicator of current circumstance and not for any exact value. An additional factor may be that migrant women have limited access to healthcare and thus are reluctant to provide a negative response that could threaten their already constrained access. The experience of Thai women at Sarapee was not sought and could be considered a limitation but the team study aimed to hear the voices from migrant women from Myanmar in Thailand.

5. Conclusion

The strength of this study is the unique insight it provides on the experience of antenatal care of marginalized populations of Karen, Burmese and Shan migrant women in different health facilities in North and North West Thailand. It demonstrates Thailand's public health efforts to support care of pregnant migrants within government public hospitals and to facilitate humanitarian efforts towards services for migrants. A careful interpretation is needed regarding perceived pleasant visits and recommending the service to friends at both institutions since restricted access to any migrant-friendly healthcare could stem hesitance to give negative feedback that could jeopardize their already limited access. Most women had health insurance and efforts to ensure continuing affordable access supports both migrants and organisations providing healthcare at this crucial stage of the life course. Both institutions can work to eliminate experiences of perceived disrespectful behavior and at SMRU long waiting times.

Competing interest

The authors declare that they have no competing interests.

Ethical approval

Ethical approval for the surveys was provided by the Chiang Mai University (FAM-2566-0154) and by the Oxford University Ethics Committee (OXTREC: 537-23).

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Consent for publication

Not applicable.

CRediT authorship contribution statement

Taco Jan Prins: Writing – review & editing, Writing – original draft, Supervision, Methodology, Formal analysis, Data curation, Conceptualization. **Nunnapus Rueanprasert:** Writing – review & editing, Methodology, Investigation, Conceptualization. **Prapatsorn Misa:** Writing – review & editing. **Anchayarat Puttanusegsan:** Writing – review & editing, Investigation. **Jasper Ko Ko Aung:** Writing – review & editing, Investigation. **Natasha Herber:** Writing – review & editing, Investigation. **Myo Myo:** Writing – review & editing, Investigation. **Marcus J Rijken:** Writing – review & editing, Supervision. **Michele van Vugt:** Writing – review & editing, Supervision. **Chaisiri Angkurawaranon:** Writing – review & editing, Supervision, Conceptualization. **Rose McGready:** Writing – review & editing, Supervision, Methodology, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary materials

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