

The Health Challenges and Health–Seeking Behaviors of Female Burmese Labor Migrants in Khon Kaen, Thailand: A Focus on Self–Medication and Reproductive Health Needs

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Abstract:

Objective: To identify the expressed health problems, health–seeking behaviors, conditions and products for self–medication, reproductive health needs and other expressed health needs of female Burmese labor migrants in Khon Kaen, Thailand.

Material and Methods: One hundred and twenty female Burmese labor migrants in Khon Kaen were recruited using the snowball technique. Data were collected through face–to–face interviews conducted in Burmese, using a self–developed semi–structured questionnaire. Content analysis was used for data interpretation.

Results: The most commonly reported health problems were muscle pain from work, fatigue, stress, and difficulty sleeping. Sleep issues were often linked to worries about their families in Myanmar. Despite having health insurance, participants preferred self–medication due to perceptions that their symptoms did not require medical treatment and concerns about wage deductions for hospital visits. Products used for self–treatment included analgesic balms and Yachud (a pre–packed combination of medicines) for muscle pain, inhalers, and herbal instant coffee for fatigue and stress, and meditation for sleep issues. Medicines were typically purchased from local market stands. While 96 participants used birth control pills, they were uncomfortable discussing reproductive health with strangers or in public. They found accessing healthcare and self–care medicine in Thailand easy and expressed no other health needs.

Conclusion: The use of culturally familiar medicines from Myanmar among migrant workers poses legal and health challenges. Interventions to ensure access to safe, culturally sensitive healthcare options that comply with Thai health regulations should be sought.

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Introduction

Female Burmese labor migrants constitute around 40% of the Burmese migrant workforce in Thailand¹. This disparity is partly due to the types of jobs available. Migrating from a low-income to an upper-middle-income country often leads migrants to adopt sedentary lifestyles and obesogenic diets, increasing their epidemiological risk factors². Many labor migrants, who typically have lower levels of education, may engage in risky health behaviors³. Additionally, cultural differences and language barriers can complicate healthcare access, leading many to resort to self-medication⁴ which can pose significant health risks, including incorrect diagnoses, inappropriate drug choices, drug interactions, and side effects⁵ to the migrants. Besides the general health issues mentioned, many female Burmese labor migrants are of childbearing age and may face unique reproductive health challenges, such as limited access to contraception^{6,7}.

In Thailand, provinces with labor-intensive industries are known for having significant numbers of Burmese labor migrants. Khon Kaen, a major city in the northeastern region of Thailand, is one such area, with a notable Burmese migrant worker community in the fishing net industry, often referred to as the Burmese village⁸.

Before the COVID-19 pandemic, studies on the health conditions and behaviors of Burmese migrant workers in Khon Kaen and other Thai provinces were conducted^{2,9-14}. However, these studies did not specifically focus on the health problems experienced by female migrant workers or on reproductive health. Previous research indicates that self-medication and the use of health products were prevalent among women¹⁵. This phenomenon may also occur among female Burmese labor migrants as well.

This study aimed to identify the expressed health problems, health-seeking behaviors, conditions and

products for self-medication, reproductive health needs, and other expressed health needs of female Burmese labor migrants living in the Burmese village in Khon Kaen. The study contributed to a better understanding of the unique health challenges faced by female Burmese labor migrants in Khon Kaen and to inform policy recommendations and healthcare practices that better support the health and well-being of female Burmese labor migrants in Thailand.

Material and Methods

Participants and participant recruitment

The population of this qualitative study comprised female Burmese labor migrants living in the Burmese village in Khon Kaen, Thailand. Prior to commencing the research project, the researcher identified the total study population by contacting the village leader in order to ascertain the number and age distribution of the women in the village. In 2023, it was found that there were 503 female Burmese labor migrants aged between 16 and 60 years old.

Participants were selected based on the following criteria: they could communicate in Burmese, had been residing in the village for at least 3 months, and were physically present during the data collection period. Individuals with physical illnesses that prevented them from joining the research or who declined to participate were excluded.

Given that health conditions and medication use increase with age¹⁰ and may be related to the duration of residence in Thailand, age range and length of stay in the Burmese village were considered during participant recruitment. The snowball technique was employed to recruit participants. Initially, the researcher asked the village leader to suggest a few female Burmese labor migrants who met the inclusion criteria and fell within the age ranges of 16–30, 31–45 and 46–60 years. Length of stay was categorized

as less than one year or more than one year. The initial potential informants were contacted by the researcher and asked to participate in the research project on a voluntary basis. Next, they were asked to suggest other individuals they knew who fit the study inclusion criteria. These referrals then became participants. This referral process was repeated until the point of data saturation was reached when no new significant information was being obtained.

Research tool and data collection

A self-developed semi-structured questionnaire was used to collect data. The questionnaire was initially developed in English and assessed for face validity by 3 experts, each with at least 5 years of experience in the field of community health. The questionnaire was then translated into Burmese by the first author and approved by a Burmese language lecturer at the Faculty of Humanities and Social Sciences, Khon Kaen University. The questionnaire was divided into 3 parts. Part 1 contained 7 questions covering general information, including age, income, educational attainment, marital status, proficiency in speaking and listening in Thai, proficiency in speaking and listening in English, and whether, last year, they had any illnesses or symptoms that required them to see a doctor. Part 2 was about expressed health problems and health-seeking behavior. The open-ended questions: "During the last three months, did you experience any health problems?" and "How did you manage them?" were used to identify participants' health issues and their approaches to seeking healthcare. Part 3 focused on products for self-medication and self-care. If participants indicated they self-medicated in Part 2, they were asked about the reasons for self-medication, the medicines or products they used, and where they obtained them.

Individual face-to-face interviews were conducted for data collection. To prevent misinterpretation and reduce interpersonal variation, the data were gathered by the first author, a Burmese female pharmacist with experience

working in a community pharmacy in Myanmar. She was trained in proper techniques for conducting face-to-face interviews before data collection. On the day of data collection, the researcher met with potential participants in person, explained the objectives of the study, and invited them to participate. The researcher read the information sheet to the participants, and after they agreed to participate, they were asked to sign a consent form before the interviews began. Interviews were conducted in participants' homes to ensure privacy and make them feel comfortable. Permission to audio record the interviews was also requested. Each interview lasted approximately 45 to 60 minutes. Additionally, the researcher requested to see and photograph the products participants used for self-medication or self-care for the purpose of triangulation.

Data were collected between July and November 2023, after the research protocol was approved by the Ethics Committee. However, prior to data collection, the first author had regularly visited the community and attended community activities since early 2022 in order to familiarize herself with the community, inspect the health products available in the village's grocery stores, and build rapport with its members. This strategy was intended to help participants feel comfortable expressing their true opinions during interviews.

Data analysis

Content analysis was used to identify emerging themes from the responses. The first author, who conducted the interviews, performed the verbatim translation from Burmese to English to ensure accuracy. The analysis, including theme identification, was done manually. To validate the findings, the analysis was independently reviewed by the second author, a female pharmacist with experience in conducting qualitative research. Any ambiguities were discussed and clarified. The photos of the labels of the Thai health products were reviewed by the second author, who is a pharmacist, in order to check for

active ingredients, indications, drug categories as classified by the Thai Food and Drug Administration, and the types of outlets where these products can be sold. Descriptive statistics were presented using Excel where applicable.

Results

General information

The average age of the sample group was 32±6.39 years (Range 18–50 years). Their average income per month was 13,475±1,052.95 Baht (Range 10,900–15,600 Baht). All the female labor migrants in this studied community have legally departed from Myanmar. Initially, they arrived with a 3-month work permit, accompanied by coverage under the Migrant Health Insurance Scheme (MHIS), which provides insurance for basic medical treatments for migrants in Thailand. However, once a migrant worker achieves permanent legal status, they are required to enroll in the Thailand Social Security Fund (SSF). This fund covers sickness, death, maternity, disability, child allowance, old age pension, and unemployment benefits. Currently, the health insurance contribution rate is set at 5% of the migrant workers' salaries. Almost all of them had second jobs to earn extra money, in addition to their work in the factory. These additional jobs included activities such as growing and selling vegetables, sewing, operating small grocery stores, providing money-lending services, and running hair salons. Other general information is detailed in Table 1.

Expressed health problems

All 120 participants (100%) reported experiencing fatigue and back pain from work, while 34 of them (24.3%) mentioned having difficulty falling asleep (insomnia). Those who struggled to sleep attributed their concerns to worries about the future of their families back in Myanmar.

Health seeking behavior

Although all the participants were covered by either MHIS or SSF, which cover all the expenses for doctor visits

and medications, they preferred to self-medicate. Their reasons included not perceiving their symptoms as requiring medical treatment, reluctance to have their wages deducted for being absent from work, cultural factors, and psychological factors, such as discomfort with being told that their health condition needed further investigation by doctors.

The following quotes illustrate the participants' reasons for practicing self-care.

“When I have the type of symptom that I used to have, I do what I used to do. This is (self-medication) what I have done since I was young.”

“I am not used to going to clinics or hospitals. I don't like the feeling I get when I hear that I have to go to a clinic or hospital.”

“Even though we have health insurance, I don't want to spend time or money traveling to the hospital. I prefer to use that time to work a second job. We also have some medicines. If we're unsure about what to take, we can quickly use social media to ask in our own language.”

Table 1 General information of participants

General information	Frequency (n=120)	Percent
Education attainment		
University level	10	8.3
High school (Grade 9–10)	49	40.8
Secondary school (Grade 5–8)	26	21.7
Primary school (Grade 1–4)	31	25.8
Below primary level	4	3.3
Marital status		
Single or divorced	87	72.5
Married	33	27.5
Speaking and listening Thai		
Poor	113	94.2
Fair	5	4.2
Good	2	1.7
Speaking and listening English		
Poor	82	68.3
Fair	10	8.3
Good	28	23.3
Illness or symptoms last year requiring a doctor's visit		
No	104	86.7
Yes	16	13.3

Conditions and products for self-medication

Participants were asked to list the health condition they had in the last 3 months prior to the survey. Following the inquiry about the conditions for self-medication, participants were also asked about the medicines or products they used and where they obtained them (Table 2). Among those who complained of difficulty sleeping, no medicine or health products were used to aid sleep; instead, meditation was employed.

Reproductive health need

Among the participants, 96 out of 120 (80%) reported using birth control contraceptive pills. When opinions regarding reproductive health needs were sought, participants felt uncomfortable discussing the issue. The following quote illustrates the participants' point of view related to reproductive health.

"It is unusual for us to talk about matters related to reproductive organs. Sometimes I am curious, but it feels inappropriate to bring it up, doesn't it?"

Other expressed health needs

The participants expressed satisfaction with the healthcare arranged by their employer. They did not perceive barriers to healthcare access, as they are covered by health insurance and their employer provides a translator to accompany them when visiting doctors at contracted hospitals. They expressed no additional health needs.

Discussion

The study reveals significant insights into the health challenges and behaviors of female Burmese labor migrants in Khon Kaen. One of the most prominent findings is

Table 2 Conditions and products for self-medication

Purpose of use/Type of product	Number of participants	Outlet/Purchase from		
		Burmese market	Convenient store	Pharmacy
To relieve back pain, muscle ache and body ache				
Burmese analgesic balm [Tun Shwe Wah [®]]	101	✓		
Burmese analgesic balm [Lingzhi [®]]	84	✓		
Burmese analgesic balm [Saya Kho [®]]	53	✓		
Thai analgesic balm [Tiger Balm [®]]	92	✓	✓	✓
Thai analgesic balm [Hong Thai [®]]	11	✓	✓	✓
Cocktail medicine –tablet and capsule (Ya-chud)	32	✓		
Relieve stress and fatigue				
Burmese inhaler [A Ba Hta [®]]	27	✓		
Thai inhaler (various brands)	40	✓	✓	
Instant coffee with herbs	16	✓	✓	
Anti-coughing				
Burmese traditional medicine – tablet [Doh Shwe [®]]	13	✓		
Maintain well-being and improve health				
Dietary supplement (various brands)	37	✓	✓	✓
For beauty purposes				
Collagens	24	✓	✓	
Instant coffee with herbs	5	✓	✓	
Birth control				
Contraceptive pills	96	✓		✓
For fever, cough, cold, flu and diarrhea				
Paracetamol	108	✓	✓	✓
Antibiotics	71	✓		
Anti-flatulence	9	✓	✓	✓

the high prevalence of fatigue and back pain among the participants, which underscores the physically demanding nature of their work. This aligns with existing literature on migrant laborers, who often engage in strenuous tasks with limited ergonomic support^{10,11,13,16,17}.

The findings of this study regarding the use of a pre-packed combination of medicines, commonly referred to as Yachud, poly-medicine or cocktail medicines: The pack often contains NSAIDs and steroids¹⁷⁻¹⁹, which is consistent with several previous studies that have observed similar patterns among migrant laborers and Thai laborers^{13,18,20}. These cocktail medicines are often used for the quick relief of pain and inflammation, making them appealing to individuals engaged in physically demanding work. However, the chronic use of such combinations poses significant health risks, including gastrointestinal problems, cardiovascular issues, and the potential for steroid dependence and side effects^{13,21}. The participants' reliance on these medicines underscores a broader issue within labor-intensive populations. The immediate need for pain relief often outweighs considerations of the long-term health impacts. Although in several situations, the use of cocktail medicines is exacerbated by limited access to healthcare services, within this studied group the use is likely due to a lack of awareness about the dangers of the prolonged use of NSAIDs and steroids, as all of them have health insurance^{12,20}. Some of the interventions that have been shown to be successful in reducing the use of cocktail medicine¹⁸⁻²¹ should be tried with these participants.

The use of medicines and health products sourced from the Burmese market among the participants raises significant legal and safety concerns. In Thailand, the following 3 groups of medicines and health products can be sold in places other than pharmacies, such as convenience stores: medicines listed as "household remedies" (basic medicines commonly kept at home for minor ailments and first aid)²², herbal products listed as

"commercially available herbal products" (herbal products widely sold and accessible to the general public)²³, and dietary supplements²⁴. Medicines not listed as household remedies can only be sold in pharmacies or hospitals. It should also be noted that all medicines and health products sold in Thailand must be approved by the Thai Food and Drug Administration (TFDA). Imported products must have Thai labels that comply with TFDA regulations. Given these conditions, Burmese analgesic balms or inhalers that have not been approved by the TFDA are considered illegal products. The practice of self-medication with Burmese medicine, though culturally acceptable and perhaps convenient for the participants, potentially exposes them to unregulated and possibly unsafe medications, such as incorrect dosing, drug interactions, and contamination²⁵. The widespread use of such products highlights the need for better regulatory enforcement and community education about the risks associated with unapproved medicines²⁰. Additionally, the preference for Burmese health products indicates a reliance on familiar and culturally specific remedies, suggesting that health interventions integrating culturally acceptable alternatives should be considered. However, these interventions must ensure that the products meet safety and efficacy standards in order to protect the health of the migrant population.

The notable incidence of insomnia, attributed to worries about their families in Myanmar, highlights the intersection of mental health and social stressors in this population. This finding is crucial as it suggests that mental health interventions, including counseling and support networks, might be necessary in order to address the underlying anxieties contributing to sleep disturbances²⁶. Moreover, the participants' use of meditation to address insomnia without resorting to medication reflects an opportunity to promote non-pharmacological interventions for managing health conditions²⁷. This practice aligns with a broader trend toward holistic health approaches and

can be supported through the provision of mental health resources and stress management programs²⁵⁻²⁷. Moreover, even though the participants perceived that access to healthcare was easy, they still did not seek healthcare services. This finding is consistent with previous studies in Sabah, Malaysia, and Singapore²⁸⁻³¹. In addition, the Thai government has an agreement with neighboring countries regarding migrant labor-intensive workers, especially from Cambodia, Lao PDR, and Myanmar, making them eligible to use healthcare services under the universal coverage scheme (UC), just like the Thai population³². The perception that seeing a doctor would interfere with their second job was also reported in a previous study in Singapore²⁸.

The participants' reluctance to seek formal medical care despite being covered by health insurance plans like MHIS and SSF points to a complex interplay of cultural, psychological, and socioeconomic factors. One of the significant concerns highlighted by the study is the fear of losing wages due to absences from work when visiting a healthcare facility. This concern is particularly pressing for labor migrants who often prioritize earning extra money to support their families back in Myanmar. Addressing economic concerns and providing more accessible and flexible healthcare options may encourage labor migrants to seek formal medical care when needed. This approach not only improves individual health outcomes but also contributes to the overall well-being and productivity of the migrant community.

The study reveals a high usage of contraceptive pills among the participants, with 96 out of 120 (80%) reporting the use of these methods. This indicates a significant awareness and proactive approach towards reproductive health management within this community. However, the discomfort and cultural taboo surrounding the discussion of reproductive health in public are evident from the participants' responses. The reluctance to openly discuss reproductive health issues is rooted in cultural norms that view such

topics as private or inappropriate for public discourse. This cultural barrier can hinder effective communication and education about reproductive health, potentially leading to misinformation or a lack of comprehensive understanding among the community members.

In qualitative research ensuring the credibility of the study is imperative. Validity refers to the accuracy of the researcher's interpretations³³, while reliability relates to the consistency of the research outcomes³⁴. In qualitative studies, credibility encompasses both validity and reliability³⁵. This study employed several strategies to maximize credibility, as described in the methods section. However, some limitations remain. First, regarding data saturation: this study included 120 participants, a larger number than in many qualitative studies, because both key informants and general informants were included. This inclusion was necessary as the community leader did not clearly identify key informants, leading to a longer time to achieve data saturation. Additionally, efforts were made to verify the accuracy of the findings through methods such as cross-checking responses about health products with photographs. However, not all products were photographed, as some had already been consumed and were unavailable during the interview. Finally, the accuracy of the interview translations was not independently verified. To address potential concerns about credibility, the first author received training in qualitative research techniques prior to beginning the study.

Conclusion

In summary, while the use of medicines and products from Myanmar may be culturally acceptable to the participants, it presents legal and health challenges that must be addressed. Ensuring that migrant workers have access to safe, approved, and culturally sensitive healthcare options is crucial for their well-being and compliance with Thai health regulations.

Ethics approval

The study was granted approval by the Ethics Committee in Human Research, Khon Kaen University (ECKKU).

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Conflict of interest

The authors declare no conflict of interest.

References

- Chairattana S, Khanawiwat T. The report on the route of migration from Myanmar and Cambodia to Thailand 2019. Thailand: Plan International Thailand; 2020.
- Delavari M, Sønderlund AL, Swinburn B, Mellor D, Renzaho A. Acculturation and obesity among migrant populations in high income countries – a systematic review. *BMC Public Health*. 2013;13:458–68.
- Sohel MdS, Sifullah MdK, Hossain B, Sarker MdFH, Zaman NT, Obaidullah Md. Exploring risky health behaviors and vulnerability to sexually transmitted diseases among transnational undocumented labor migrants from Bangladesh: a qualitative study. *BMC Public Health* 2024;24:1261–72.
- Meuter RFI, Gallois C, Segalowitz NS, Ryder AG, Hocking J. Overcoming language barriers in healthcare: A protocol for investigating safe and effective communication when patients or clinicians use a second language. *BMC Health Serv Res* 2015;15:371–6.
- Al Shamsi H, Almutairi AG, Al Mashrafi S, Al Kalbani T. Implications of language barriers for healthcare: a systematic review. *Oman Med J* 2020;35:e122.
- Immigrant women's perspectives on contraceptive counselling provided by midwives in Sweden—a qualitative study [homepage on the Internet]. 2022 [cited 2024 May 29]. Available from: <https://www.tandfonline.com/doi/full/10.1080/26410397.2022.2111796>
- Women's Wellness: Empowering Gynecology for Optimal Reproductive Health [homepage on the Internet]. Berlin: Women's Wellness; 2023 [cited 2024 May 29]. Available from: https://www.researchgate.net/publication/372548614_Women's_Wellness_Empowering_Gynecology_for_Optimal_Reproductive_Health
- Barry HE, Hughes CM. An Update on Medication Use in Older Adults: a Narrative Review. *Curr Epidemiol Rep* 2021;8:108–15.
- Aung T, Pongpanich S, Robson MG. Health seeking behaviours among Myanmar migrant workers in ranong province, Thailand. *J Health Res* 2009;23(Suppl):S5–9.
- Win N, Laohasiriwong W, San AA. Health seeking behavior among Myanmar migrant workers in Khon Kaen province, Thailand. *Int J Public Health Asia Pac* 2023;2:27–38.
- Kyaw PP, Geater AF. Healthcare seeking preferences of Myanmar migrant seafarers in the deep south of Thailand. *Int Marit Health* 2021;72:1–9.
- Sornlorm K, Thi WM. Health literacy and high blood pressure among Myanmar migrant workers in Northeastern Thailand. *PLOS ONE* 2024;19:e0302057.
- Khirkokkong N, Asarath S, Munruchairakun M, Blay N, Waitthira N, Cheah PY, et al. Fever and health-seeking behaviour among migrants living along the Thai-Myanmar border: a mixed-methods study. *BMC Infect Dis* 2023;23:501–15.
- Gonah L, Corwin A, January J, Shamu S, Jokomo ZN, Putten MVD. Barriers to healthcare access and coping mechanisms among sub-Saharan African migrants living in Bangkok, Thailand: a qualitative study. *Med J Zambia* 2016;43:238–46.
- Karimy M, Rezaee-Momtaz M, Tavousi M, Montazeri A, Araban M. Risk factors associated with self-medication among women in Iran. *BMC Public Health* 2019;19:1033–40.
- Aung TNN, Shirayama Y, Moolphate S, Aung MN, Lorga T, Yuasa M. Health risk behaviors, musculoskeletal disorders and associated cultural adaptation, depression: a survey among Myanmar migrant workers in Chiangmai, Northern Thailand. *Int J Gen Med* 2019;12:283–92.
- Naing T, Geater A, Punggrassami P. Migrant workers' occupation and healthcare-seeking preferences for TB-suspicious symptoms and other health problems: a survey among immigrant workers in Songkhla province, southern Thailand. *BMC Int Health Hum Rights* 2012;12:22–34.

18. Tezcan-Güntekin H, Bird R, Özer-Erdogdu I. Polypharmacy and drug misuse in elderly migrants: care practice and interprofessional collaboration. *Eur J Public Health* 2020;30(Suppl5):v822.
19. Rambhade S, Chakarborty A, Shrivastava A, Patil UK, Rambhade A. A survey on polypharmacy and use of inappropriate medications. *Toxicol Int* 2012;19:68–73.
20. Barrett ME, de Palo MP. Community-based intervention to reduce demand for drugs in Northern Thai tribal villages. *Subst Use Misuse* 1999;34:1837–79.
21. Lynnerup C, Rossing C, Sodemann M, Ryg J, Pottegård A, Nielsen D. Health care professionals' perspectives on medication safety among older migrants with cognitive impairment exposed to polypharmacy—a qualitative explorative study. *Explor Res Clin Soc Pharm* 2022;5:100128. doi: 10.1016/j.rcsop.2022.100128.
22. Thai Drug Act, B.E. 2510 (1967). Bangkok: Government of Thailand; 1967.
23. Herbal Product Act, B.E. 2562 (2019). Bangkok: Government of Thailand; 2019.
24. Food Act, B.E. 2522 (1979). Bangkok: Government of Thailand; 1979.
25. Khai TS, Asaduzzaman M. 'I doubt myself and am losing everything i have since COVID came'—a case study of mental health and coping strategies among undocumented Myanmar migrant workers in thailand. *Int J Environ Res Public Health* 2022;19:15022–38.
26. Richter K, Baumgärtner L, Niklewski G, Peter L, Köck M, Kellner S, et al. Sleep disorders in migrants and refugees: a systematic review with implications for personalized medical approach. *EPMA J* 2020;11:251–60.
27. Shaha D. Insomnia management: a review and update. *J Fam Pract* 2023;72(Suppl):S31–6.
28. Lian WM, Chen DM. Healthcare seeking behaviour of migrant workers in Singapore. [monograph on the Internet]. Singapore: National University of Singapore; 2012 [cited 2024 May 29]. Available from: https://www.healthserve.org.sg/wp-content/uploads/2020/09/HealthcareSeekingBehaviour.NUS_Apr2013.pdf
29. Lasimbang H, Tong WT, Low WY. Migrant workers in Sabah, East Malaysia: The importance of legislation and policy to upheld equity on sexual and reproductive health and rights (SRHR). *Best Pract Res Clin Obstet Gynaecol* 2015;10:1016–30.
30. Nguyen CT, Nguyen HT, Boyer L, Auquier P, Fond G, Do KN, et al. Prevalence and impacts of self-medication in a disadvantaged setting: the importance of multi-dimensional health interventions. *Front Public Health* 2023;11:1176730. doi: 10.3389/fpubh.2023.1176730.
31. Aung TNN, Shirayama Y, Moolphate S, Lorga T, Yuasa M, Nyein Aung M. Acculturation and its effects on health risk behaviors among Myanmar migrant workers: a cross-sectional survey in Chiang Mai, northern Thailand. *Int J Environ Res Public Health* 2020;17:5108–20.
32. Kunpeuk W, Julchoo S, Phaiyarom M, Sinam P, Pudpong N, Loganathan T, et al. Access to healthcare and social protection among migrant workers in Thailand before and during COVID-19 era: a qualitative study. *Int J Environ Res Public Health* 2022;19:3083–99.
33. McMillan JH. Educational research: fundamentals for the consumer. 2 ed. New York: HarperCollins College Publishers; 1996.
34. Pope C, Ziebland S, Mays N. Analysing qualitative data. *BMJ* 2000;320:114–6.
35. Golafshani N. Understanding reliability and validity in qualitative research. *Qual Rep* 2003;8:597–606.