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การพัฒนาแนวทางการควบคุมป้องกันโรคโควิด 19 ในชุมชนที่มีแรงงานต่างด้าวตามแนวชายแดน ไทย-พม่า

The Guideline Development for COVID-19 Control and Prevention among Burmese Migrant Workers Community at the Thai-Myanmar Border

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บทคัดย่อ

การศึกษาแบบผสมผสานครั้งนี้มีวัตถุประสงค์เพื่อศึกษาศักยภาพในการควบคุมป้องกันโรคโควิด 19 และเพื่อสร้างแนวทางการควบคุมป้องกันโรคโควิด 19 ในชุมชนที่มีแรงงานต่างด้าวชาวพม่าตามแนวชายแดนไทย-พม่า แบ่งเป็น 2 ระยะ ระยะที่ 1 ศึกษาเชิงปริมาณกับกลุ่มตัวอย่าง จำนวน 300 คน โดยการสุ่มอย่างเป็นระบบและเก็บรวบรวมข้อมูลด้วยแบบสอบถาม ระยะที่ 2 ศึกษาเชิงคุณภาพกับกลุ่มตัวอย่าง จำนวน 60 คน โดยการสุ่มแบบเจาะจง และเก็บรวบรวมข้อมูลโดยการทำเวทีประชาคม วิเคราะห์ข้อมูลด้วย Binary logistic regression และ Content analysis ผลการศึกษา พบว่า กลุ่มตัวอย่างมีศักยภาพในการควบคุมป้องกันโรคโควิด 19 อยู่ในระดับสูง ร้อยละ 59.33 ปัจจัยที่มีผลต่อศักยภาพในการควบคุมป้องกันโรคโควิด 19 ได้แก่ การเรียนหนังสือ การมีงานทำ ระยะเวลาอยู่ในชุมชน สถานที่พักอาศัย การป่วยด้วยโรคโควิด19 การตรวจหาเชื้อโควิด 19 และการรับรู้ความรุนแรงโรค ส่วนแนวทางในการควบคุมป้องกันโรคโควิด 19 ในชุมชน ได้แก่ 1) สร้างอาสาสมัครแรงงานต่างด้าวในการควบคุมป้องกันโรค 2) ส่งเสริมและสนับสนุนแรงงานต่างด้าวให้เข้าถึงอุปกรณ์ป้องกันโรค และฉีดวัคซีน 3) ตรวจคัดกรองโรค 4) พัฒนาศักยภาพการควบคุมป้องกันโรคในกลุ่มที่มีศักยภาพต่ำ 5) สร้างการรับรู้ความรุนแรงของโรค และ 6) จัดสถานที่กักตัวผู้ที่ตรวจพบการติดเชื้อ ข้อเสนอแนะ หน่วยงานที่เกี่ยวข้องควรนำแนวทางการควบคุมป้องกันโรคโควิด 19 ทั้ง 6 ขั้นตอนไปประยุกต์ใช้ในชุมชนที่มีแรงงานต่างด้าว

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Abstract

The purposes of this mixed methods research were to study the potential for COVID-19 control and prevention and to build guidelines for COVID-19 control and prevention among the Burmese migrant workers community at the Thai-Myanmar border. The study was divided into 2 phases. Phase 1 was a quantitative study that used systematic random sampling to select 300 participants and a questionnaire to collect the data. Phase 2 was a qualitative study that used purposive sampling to select 60 participants and a civil society forum to collect the data. The data were analysed by binary logistics regression and content analysis. According to the study results, the potential for COVID-19 control and prevention among Burmese migrant workers was at a high level (59.33%). The factors affecting the potential for COVID-19 control and prevention were being educated, being employed, living period in the community, accommodation, getting COVID-19 infection, getting COVID-19 testing, and perception on COVID-19 severity. Regarding the guidelines, COVID-19 control and prevention can be implemented in 6 aspects: 1) set volunteers of migrant workers for COVID-19 control and prevention, 2) promote and support migrant workers to have access to COVID-19 preventive equipment and vaccination, 3) do COVID-19 screening with all newcomers entering migrant workers community, 4) develop potential for COVID-19 control and prevention among migrant workers with low potential, 5) build perception on COVID-19 severity for migrant workers, and 6) arrange quarantine facilities for migrant workers with COVID-19 infections. This study suggested that relevant agencies should apply the six-step COVID-19 prevention and control guidelines to communities with migrant workers.

Keywords: COVID-19, Control and prevention, Migrant workers, Community

Introduction

Three months after finding the first COVID-19 patient in China in December 2019, the world faced a new emerging disease of COVID-19 caused by a new coronavirus species that is infectious and may lead to pulmonary infection.[1] Nowadays, the world is suffering from a COVID-19 pandemic which has killed millions of people.[2-3] Further, the pandemic has had effects on the world population and public health systems. The World Health Organisation (WHO) has declared the spread of COVID-19 to be a pandemic[4] which is predicted to spread into wide areas effecting on economics, societies, and health, especially in countries with low and middle incomes.[5-6] Moreover, COVID-19 has high mental effects in the pandemic-stricken areas.

For implementation in communities, public health officers work hard to control and prevent the disease by implementing medical and public health activities with the participation of people in the communities, including marginal people and people with difficult access, in order to reduce health inequality.[7-10] As the health systems carrying a heavy burden in almost all areas, communities need to be self-reliant without forces and use suitable strategies with transparency as well as the participation of people based on the implementation of trust and urgent cooperation.[11-13]

Although many vaccines and medicines are being developed at present, the strongest and most effective weapon is strong prevention by people in the communities for anti-COVID-19.[14] Communities need to be strictly compliant with the basic COVID-19 preventive measures by staying at home, frequently washing their hands with water and soap, using hand sanitizers and personal protective equipment, and keeping physical and social distancing.[15-17] In addition, the perception of health promotion practitioners and community leaders as the main informants is also important for COVID-19 prevention.[18-19]

The border in Tak Province attracts a lot of migrant workers, most of them are males. Although this labour is useful and necessary, a large number of migrant workers can cause problems in controlling and preventing COVID-19. Transnational labourers living in worker camps at the border in Tak Province are at risk

of COVID-19 infection and transmission due to their crowded living conditions. Therefore, the researchers were interested in developing a model for COVID-19 control and prevention in the Burmese migrant worker camps at the Thai-Myanmar border in Tak Province.

Objectives

1) To study the potential for COVID-19 control and prevention among Burmese migrant workers at the Thai-Myanmar border

2) To build guidelines for COVID-19 control and prevention among Burmese migrant workers community at the Thai-Myanmar border

Methods

This mixed methods research undertaken to 2 phase were as follows.

Phase 1: To study the potential for COVID-19 control and prevention among the Burmese migrant workers at the Thai-Myanmar border.

The population in this study comprised Burmese migrant workers who worked legally in communities in Tak Province. The samples were Burmese migrant workers in 3 businesses: 1) construction; 2) agriculture and livestock; and 3) industrial factories and services. The sample size was calculated from 20 folds of the independent variables.[20] From 15 independent variables, the sample size was 300. Subsequently, systematic random sampling was used to select the samples from the migrant workers list at the Tak Provincial Employment Office in construction, agriculture and livestock, and industrial factories and services.

The research instrument for data collection was a questionnaire collected by Burmese interpreter covering 4 parts as follows.

Part 1: Personal information included sex, age, marital status, educational level, occupation, congenital diseases, accommodation, getting COVID-19 infection, getting COVID-19 tests, and getting COVID-19 vaccinations.

Part 2: COVID-19 knowledge was in the form of 2 options: yes or no with a value of KR20 equal to 0.75 (14 items).

Part 3: Health perception included perception levels on severity, risk, usefulness, and obstacles. This part was gauged on a rating scale with 5 levels: very low, low, moderate, high, and very high with Cronbach's alpha coefficient of 0.81 (13 items).

Part 4: Potential for COVID-19 control and prevention was in the form of 2 options: yes or never with Cronbach's alpha coefficient of 0.83 (16 items).

The statistics used for data analysis were frequency, percentage, mean, median, standard deviation and binary logistic regression with significant at 0.05 level.

Phase 2: To build guidelines for COVID-19 control and prevention among the Burmese migrant workers at the Thai-Myanmar border.

The research team used the results from the study about potential for COVID-19 control and prevention among Burmese migrant workers from Phase 1 to build the guidelines for COVID-19 control and prevention. Subsequently, the developed guidelines were presented in the civil society forum in Burmese language for getting opinions about the guidelines for COVID-19 control and prevention. In the forum, there were 60 participants selected by using purposive sampling. The participants consisted of 1) 24 representatives of Burmese migrant workers from different entrepreneurs in the industrial and agricultural sectors, 2) 6 public health officers responsible for COVID-19 control and prevention in sub-district health promoting hospitals, 3) 6 officers from local administrative organisations, 4) 12 representatives of village health volunteers, 5) 6 family members of Burmese migrant workers, 6) 6 representatives of employers and entrepreneurs

The qualitative data were analysed with content analysis.

This research was approved by the committee for ethics in human research at Naresuan University (approval No. COA No.027/2022 IRB.P3-0182/2564).

Results

The samples were mostly females (56.0%). Most of them were younger than 50 years old (68.00%), married (60.33%), educated (76.33%), employed (83.00%), has lived in the community for longer than 25 years (54.67%), had no congenital diseases (74.33%), lived in houses (92.33%), had COVID-19 infections

(9.33%), had 2 COVID-19 vaccinations or more (89.00%) as shown in Table 1.

Table 1 Personal information of the Myanmar migrant workers (n = 300)

Personal Information	n	%
Sex		
Male	132	44.00
Female	168	56.00
Age		
Younger than 50 years	204	68.00
50 years or older	96	32.00
Mean ± SD	42.07 ± 12.64	
Median (max - min)	53 (17-70)	
Marital status		
Single/widowed/divorced/ separated	119	39.67
Married	181	60.33
Educational level		
Uneducated	71	23.67
Educated	229	76.33
Job		
Unemployed	51	17.00
Employed	249	83.00
Congenital diseases		
No	223	74.33
Yes	77	25.67
Accommodation		
Worker camps	23	7.67
House	277	92.33
Getting COVID-19 infection		
Yes	28	9.33
Never	272	90.67
Getting COVID-19 tests		
Yes	203	67.67
Never	97	32.33
Getting COVID-19 vaccinations		
2 vaccinations or more	267	89.00
Never	33	11.00

Most samples had knowledge about COVID-19 at a high level (71.00%), perception level on COVID-19 severity at a high level (76.67%), perception level on COVID-19 risk at a high level (71.67%), perception level on COVID-19 usefulness at a high level (75.00%) and perception level on COVID-19 obstacle at a low level (63.00%). The potential for COVID-19 control and prevention among the samples was at a high level (59.33%) as shown in Table 2.

Table 2 Level of Knowledge, health perception and potential for COVID-19 control and prevention (n = 300)

Levels	n	%
Knowledge		
High (10-14 points)	213	71.00
Low (0-9 points)	87	29.00
Health Perception		
Perception of severity		
High (11-15 points)	230	76.67
Low (3-10 points)	70	23.33
Perception of risk		
High (15-20 points)	215	71.67
Low (4-14 points)	85	28.33
Perception of usefulness		
High (11-15 points)	225	75.00
Low (3-10 points)	75	25.00
Perception of obstacles		
High (11-15 points)	111	37.00
Low (3-10 points)	189	63.00
Potential for COVID-19 Control and Prevention		
High (12-16 points)	178	59.33
Low (0-11 points)	122	40.67

The factors affecting the potential for COVID-19 control and prevention were being educated (OR = 2.40, 95%CI = 0.19-0.86), employed (OR = 2.01, 95%CI = 0.96-4.21), living period in the community (OR = 2.5, 95%CI = 1.41-4.52), accommodation (OR = 15.26, 95%CI = 2.96-78.94), getting COVID-19 infection (OR = 4.71, 95%CI = 1.80-12.32), getting COVID-19 testing (OR = 3.52, 95%CI = 1.82-6.82) and perception on COVID-19 severity (OR = 5.27, 95%CI = 2.64-10.53) as shown in Table 3

Table 3. Analysis results for the factors effecting on potential for COVID-19 control and prevention among the Burmese migrant workers

Factors	n (%)	Potential Level, n (%)		OR (95%CI)	p-value
		Low	High		
Sex					0.003
Female	168 (56.00)	77 (45.83)	91 (54.17)	1	
Male	132 (44.00)	45 (34.09)	87 (65.91)	2.48(1.36-4.52)	
Education					0.019
Educated	229 (76.33)	91 (39.73)	138 (60.27)	1	
Uneducated	71(23.67)	31 (43.67)	40 (56.33)	2.40(0.19-0.86)	
Occupation					0.015
Employed	249 (83.00)	95 (38.15)	154 (61.85)	1	
Unemployed	51 (17.00)	27 (52.94)	24 (47.06)	2.01(0.96-4.21)	
Living period in the community					0.002
More than 10 years	164 (54.67)	52 (29.89)	122 (70.11)	1	
Less than 10 years	136 (45.33)	70 (51.47)	66 (48.53)	2.53(1.41-4.52)	
Accommodation					0.001
Houses	277 (92.33)	101 (36.46)	176 (63.54)	1	
Worker camps	23 (7.67)	21 (91.30)	2 (8.70)	15.26(2.96-78.94)	
Getting COVID-19 infection					0.002
Never	272 (90.67)	106 (38.97)	166 (61.03)	1	
Yes	28 (9.33)	16 (57.14)	12 (42.86)	4.71(1.80-12.32)	
Getting COVID-19 tests					<0.001
Yes	203 (67.67)	67 (33.00)	136 (67.00)	1	
Never	97 (32.33)	55 (56.70)	42 (43.30)	3.52(1.82-6.82)	
Perception level on severity					<0.001
High	230 (76.67)	69 (30.00)	161 (70.00)	1	
Low	70 (23.33)	53 (75.71)	17 (24.29)	5.27(2.64-10.53)	

The Results on Building Guidelines for COVID-19 Control and Prevention in the Burmese Migrant Worker Community

As shown in Figure 1 The guidelines built for COVID-19 control and prevention in the Burmese migrant worker community include. As indicated in the guideline about the registration, it might be included or may need to be explained at first

1) Set volunteers of the Burmese migrant workers for COVID-19 control and prevention. The volunteers take roles in coordinating with Thai health volunteers, community leaders, employers, and government agencies.

2) Promote and support the Burmese migrant workers to have access to COVID-19 preventive equipment, i.e. masks and hand sanitizers, by requesting support from employers. All migrant workers should be promoted and supported to get vaccinations.

3) Do COVID-19 screening for all newcomers entering the Burmese migrant workers community.

4) Develop potential for COVID-19 control and prevention among the Burmese migrant workers assessed as low potential by arranging after-work training in the Burmese language.

5) Build perception on COVID-19 control and prevention among the Burmese migrant workers

assessed as low perception level on COVID-19 severity by arranging after-work training in the Burmese language.

6) Arrange quarantine facilities for the Burmese migrant workers with COVID-19 infection. The Burmese worker volunteers need to be assigned to coordinate with the village volunteers worked for sub-district health promoting hospitals for referring patients to get appropriate COVID-19 treatments.

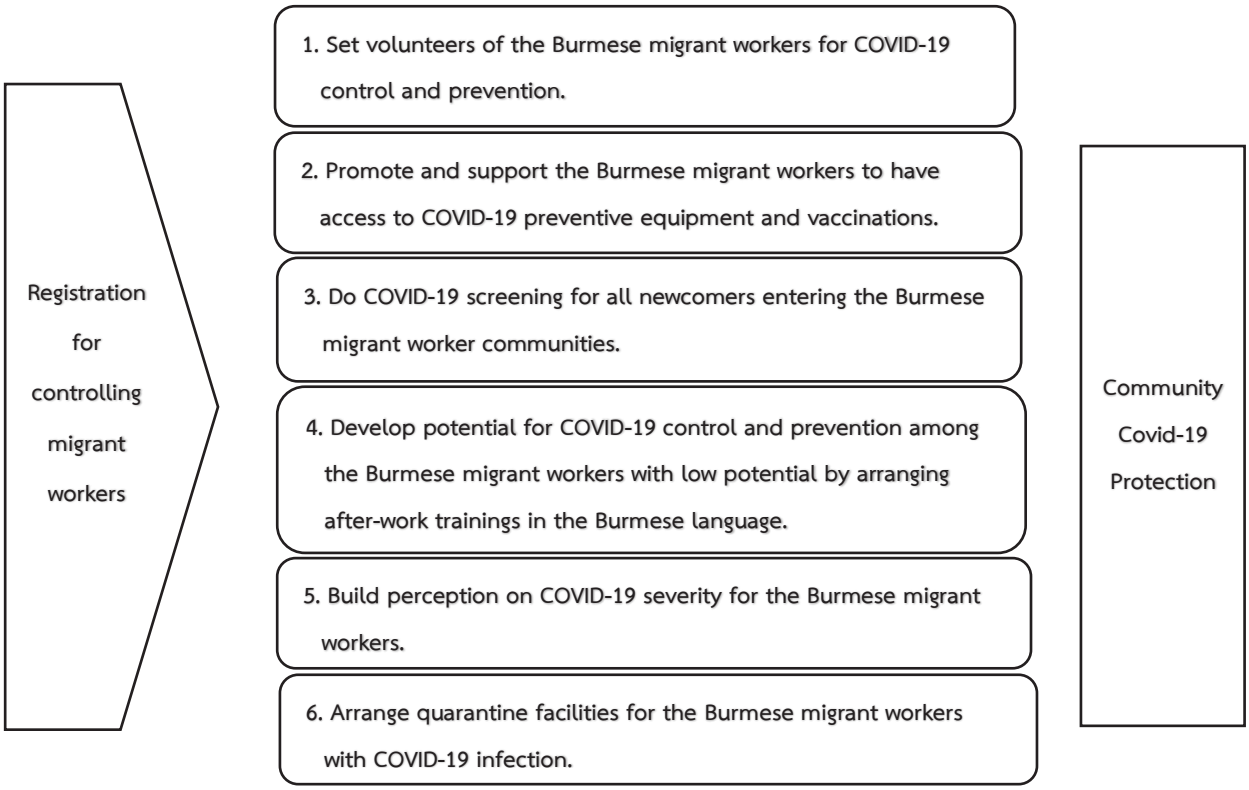

Figure 1 Guidelines built for COVID-19 control and prevention in the Burmese migrant worker community

Discussion

According to the study results, the potential for COVID-19 control and prevention among the Burmese migrant workers was found at a high level (59.3%). This indicates that these workers have their thoughts, beliefs, feelings, perceptions and understanding about the chance to get COVID-19 infections. They understand the risk and preventive behaviours, therefore they are well aware of avoidance of risk behaviours and conduction of preventive behaviours. In addition, the participants with a high perception level on severity have higher potential on COVID-19 control and prevention than the participants with low perception level on severity by 5.27 folds (OR = 5.27, 95%CI = 2.64-10.53). This may be because communities in Thailand are informed comprehensively about COVID-19, and public health officers and village health volunteers educate people thoroughly according to the policy of the Ministry of Public Health. Accordingly, migrant workers have a perception level on severity at a high level, leading to high potential for COVID-19 control and prevention.

These results conform to the results of the study conducted by Waehayi[21] on perception of severity and COVID-19 preventive behaviours among teenagers in Sateng Nok Sub-district, Mueang District, Yala Province. The study found that teenagers had perception level on COVID-19 severity at a high level (87.1%); their frequency of COVID-19 preventive behaviours was at a high level (91.4%), and perception on severity of diseases had a positive relationship with preventive behaviours at the statistical significance level of 0.01.

Regarding the guidelines for COVID-19 control and prevention among the Burmese migrant workers, these

workers should be promoted and supported to have access to COVID-19 preventive equipment such as masks and hand sanitizers by requesting support from employers. This is consistent with the study of Mackworth et al.[22] which states that the study highlighted the urgent need for sufficient personal protective equipment and adequate hand hygiene facilities in Zimbabwe to protect healthcare workers from the elevated risk of infection and death.

The World Health Organisation recommends four items for those in contact with patients: gloves, face masks, gowns or aprons, and eye protection. In addition, perception on COVID-19 severity should be built for migrant workers assessed as low perception of COVID-19 severity by arranging after-work training in the Burmese language. This is consistent with the study of Panyathorn et al.[23] on Community Participation in COVID-19 Prevention at Nongsawan Village in Chiangpin Sub-district, Mueang District, Udonthani Province. According to that study, educating about COVID-19 enhances the perception of COVID-19 risk and severity. When the average score for perception on risk and severity increases, the average score for preventive behaviours increases as well. Similarly, Saud, Alsulaiman, and Rentner[24] studied health beliefs and preventive measures: a study explored by the Ministry of Public Health about coronavirus in Saudi Arabia. They found that the perception of virus infection severity had a positive relationship with self-preventive behaviours, i.e. washing hands frequently and eating healthy food.

Conclusions

Regarding the result found that, the factors affecting the potential for COVID-19 control and prevention were being educated, employed, living period in the community, accommodation, getting COVID-19 infection, getting COVID-19 testing and perception on COVID-19 severity. Regarding the guidelines, COVID-19 control and prevention can be implemented in 6 aspects, the Burmese migrant can be considered the strategic planning moves in reaching the target of control and prevention COVID-19 by relevant agencies and healthcare workers at all levels.

Recommendation and suggestion for further research

1) Relevant agencies should apply the six-step COVID-19 prevention and control guidelines to communities with migrant workers.

2) Further research should focus on target groups and areas with similar characteristics.

Acknowledgments

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