นิพนธ์ต้นฉบับ **Original Article**

พฤติกรรมความปกติใหม่และความกังวลต่อโรคติดเชื้อไวรัสโคโรนา 2019 ของแรงงานในอำเภอเมืองจังหวัดมหาสารคาม

"New normal" behavior and concern about Coronavirus disease 2019 of laborers in Muang district, Mahasarakham province

มารุต ตำหนักโพธิ Marut Tamnakpo
สุรสิทธิ์ ศรีวิรัตน์ Surasit Sriwirat
โรงพยาบาลมหาสารคาม *Mahasarakham hospital*

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บทคัดย่อ

ภูมิหลัง : โรคติดเชื้อไวรัสโคโรนา 2019 (COVID-19) สามารถแพร่กระจายผ่านละอองฝอยและการสัมผัสโดยตรง พฤติกรรมความปกติใหม่ซึ่งเป็นพฤติกรรมที่ป้องกันโรค เช่นการใส่หน้ากากอนามัยการล้างมือและการหลีกเลี่ยงไปในที่แออัด จึงมีความจำเป็นต่อแรงงานเพื่อเป็นการป้องกันตัวเองของแรงงาน แต่ข้อมูลส่วนนี้ในจังหวัดมหาสารคามยังไม่ชัดเจน วัตถุประสงค์ : เพื่อศึกษาการปฏิบัติพฤติกรรมความปกติใหม่และความกังวลต่อโรคติดเชื้อไวรัสโคโรนา 2019 ในแรงงานอำเภอเมืองจังหวัดมหาสารคามวิธีการ : การศึกษาภาคตัดขวางนี้มีแรงงานในอำเภอเมืองจังหวัดมหาสารคามเข้าร่วม 602 คนเก็บข้อมูลโดยแบบสอบถามแบบตอบเองซึ่งประกอบด้วย 5 ส่วน คือ ข้อมูลส่วนบุคคล ความเสี่ยงต่อการติดโรค COVID-19, ความเครียด, ความกังวลและพฤติกรรมความปกติใหม่ ปัจจัยที่เกี่ยวข้องกับพฤติกรรมความปกติใหม่ใช้สถิติ forward stepwise logistics regression ผล : จากผู้เข้าร่วมวิจัย 602 คน ได้แบบสอบถามที่สมบูรณ์จำนวน 549 ฉบับพบแรงงานปฏิบัติพฤติกรรมความปกติใหม่เป็นประจำและมากที่สุดคือสวมใส่หน้ากากคลุมจมูกและปากทุกครั้งเมื่อออกจากบ้านหรืออยู่ใกล้ชิดผู้อื่น (15.1 %) ปัจจัยที่ความสัมพันธ์อย่างมีนัยสำคัญทางสถิติต่อการสวมใส่หน้ากากเป็นประจำคือ ชั่วโมงการทำงานต่อวัน (OR_{adj}=0.7 (95% CI=0.67-0.88)), ความเสี่ยงต่อการติดโรค COVID-19 (OR_{adj}=29.3 (95% CI=15.06-57.08)), ความกังวลระดับรุนแรง(OR_{adj}=4.3(95% CI=1.13-16.70)) และความกังวลระดับปานกลาง (OR_{adj}=2.1 (95% CI=1.11-4.23)) และผู้เข้าร่วมส่วนใหญ่มีความกังวลอยู่ในระดับปานกลาง (67.0%) สรุป : แรงงานปฏิบัติพฤติกรรมความปกติใหม่เป็นประจำยังมีน้อยดังนั้นผู้มีส่วนเกี่ยวข้องควรมีมาตรการในการส่งเสริมการรับรู้ความเสี่ยงและความรุนแรงของการติดเชื้อเพื่อให้แรงงานเกิดพฤติกรรมความปกติใหม่เพิ่มขึ้น

ติดต่อผู้นิพนธ์ : มารุต ตำหนักโพธิ อีเมล : rithmz@hotmail.com

Abstract

Background: Coronavirus disease-19 (COVID-19) could transmit via droplet and direct contact, so "new normal" behaviors which are preventive behaviors such as mask wearing, hand washing and crowd

avoiding were necessary for laborers to prevent themselves. Baseline data on "new normal" behaviors and level of concern among laborers in Muang district, Mahasarakham province, however, were still unclear. Objective: To study practice of "new normal" behaviors and evaluate level of concern of laborers. Method: A cross-sectional study was conducted on 602 workers in Muang district, Mahasarakham province. All participants filled in a self-administered questionnaire which comprised of 5 parts to collect demographic data, COVID-19 infection risk, stress level, level of concern, and "new normal" behaviors. Factors related to "new normal" behaviors were evaluated by using forward stepwise logistics regression analysis. Results revealed that, of 602 participants, 549 completed questionnaires. The most "new normal" behavior was regularly wearing a mask over their nose and mouth when going out or being in close contact with others which accounted for 15.1%. Factors significantly related to regular mask wearing were work hours per day (OR_{adj}=0.7 (95% CI=0.67-0.88)), COVID-19 infection risk (OR_{adj}=29.3 (95% CI=15.06-57.08), critical level of concern (OR_{adj}=4.3 (95% CI=1.13-16.70)) and moderate level of concern (OR_{adj}=2.1 (95% CI=1.11-4.23)). The majority of participants have moderate level of concern (67.0%). Conclusion: Small portion of participants regularly practiced "new normal" behaviors, so stakeholders should have measures to increase risk and severity awareness of infection to promote "new normal" behaviors.

Correspondence: Marut Tamnakpo E-mail: rithmz@hotmail.com

คำสำคัญ
ความปกติใหม่, ความกังวล, โรคติดเชื้อไวรัสโคโรนา 2019

Keywords
New normal, Concern, COVID-19

Introduction

Coronavirus disease-19 (COVID-19) is severe acute respiratory syndrome caused by coronavirus-2 (SARS-CoV-2). While Its most common symptoms were fever, cough, and myalgia, some high-risk patients could progress to have pneumonia and die of respiratory failure[1]. SARS-CoV-2 could spread via droplet and direct contact with patient. Not only the personal recommendations for prevention of COVID-19 were announced but the Thai government had also declared of a state of emergency in all areas of the Kingdom of Thailand to prevent its spreading[2]. It led to serious consequences, particularly on economic aspect.

In the workplace, the preventive measure was very important. If there were COVID-19 infected persons in the workplace, it could result in shutdown of the workplace. Therefore, preventive behaviors, so called "new normal behaviors" such as mask wearing, hand washing, and crowd avoiding were performed in the workplace and daily life.

Mahasarakham province is located in the northeast region, approximately 400 kilometers from Bangkok, with gross domestic product (GDP) of 59,695 million baht. The provincial labor office reported that there were 680,396 workers in the first trimester of the year 2020[3]. The provincial com-

municable disease committee of Mahasarakham declared that preventive measures be implemented to limit the spreading of COVID-19[4]. These measures affected workers' daily life, so they had to practice "New normal behaviors" to prevent and reduce spreading the COVID-19 in workplace and community. Therefore, we were interested in studying to establish baseline data about the "new normal" behaviors of workers and factors related to new normal practices for stakeholders to campaign for neglected "new normal" behaviors and empower the good practice of "new normal" behaviors including stress and concern about COVID-19.

Method

This cross-sectional descriptive study was conducted in Muang district, Mahasarakham province, between June 2020 and July 2020. A total of 602 workers were selected, by using multistage random sampling stratified by business size, according to Ministry of Industry[5], to participate in the study. This was because the size of business impacted the prevention method in workplace and workers behaviors[6]. The study only included workers who worked in Muang district, Mahasarakham province. Workers without Thai language literacy, those who worked from home, and psychotic mentally impaired workers. The minimum sample size was calculated to be 385 by applying Cochran[7] formula assuming an acceptable level of precision at 5%, based on a 95% confidence interval, and due to no previous study about "new normal" behaviors the expected proportion was at 50%.

A self-administered questionnaire used for collecting data was consisted of 5 parts as follows,

1. Demographic data

2. COVID-19 infection risk was determined with following criteria 1. Traveled or transited from any countries or areas with the COVID-19 outbreak within the past 14 days 2. Physical contact with the suspected COVID-19 patient.

3. Stress was assessed by using the ST-5 questionnaire developed by the Department of mental health, Ministry of Public Health Thailand. This stress test contains 5 questions, each with 4-point rating scale ranging from "almost none=0" to "almost always=3".

4. Screening questionnaire for concern about COVID-19 developed by the department of mental health, Ministry of Public Health Thailand[8] The questionnaire contained 6 questions with rated 3-point Likert scale ranging from "no=1" to "severe=3". The point of each question was sum and transformed to 3 levels with following criteria 1.5-6 points=mild 2.7-11 points=moderate 3.>12 points=severe

5. "New normal" behavior questionnaire was adapted from preventive measures implemented by Ministry of Public Health Thailand[9]. "New normal" behavior had 3 levels of practice, namely, not practice, practice sometimes and practice every time. Not practice means practice less than 60% of time in daily life; practice sometimes means practice 60%-90% of time in daily life; and practice every time means practice more than 90% of time in daily life. "New normal" behavior questionnaire was validated and improved by 3 experts, and tried out with 30 samples similar to our population of workers yielding Conbrach's alpha of 0.90.

Statistical Analysis

SPSS version 22 was used for data analysis. To present the best practice of participants and to determine the associated factors, we combined not

practice and practice sometimes "New normal" behavior into one group as *infrequently practice group* with the other group of practice every time as *regularly practice group.* Simple logistic regression was used to determine the association between independent factors, including demographic characteristics, COVID-19 infection risk, stress and concern about COVID-19, and "New normal" behavior and presented as crude odd ratio. To create a multivariate logistic regression model, a forward stepwise procedure was used by adding the variables with a p-value<0.25 in the model. The entry variable was considered by p-value<0.05 and the removal variable by p-value >0.1 and presented each adjusted odds ratio. A p-value<0.05 was considered to be statistically significant.

Ethical Consideration

This study was approved by the Ethical Committee of Mahasarakham Hospital No. MSKH_REC 63-01-031.

Results

From 602 participants, 549 completed the questionnaire and were included in the analysis while 53 incomplete questionnaires were excluded. Of which, 167 were from small-sized business, 181 were from medium-sized business and 201 were from large-sized business. The number of female workers was approximately twice as many that of men (373 (67.9%) vs 176 (32.1%)). The mean age was 39.5 ± 12.0 years. The majority of participants were married, had no underlying disease, finished undergraduate university education, and had mild stress level (Table 1).

Table 1 Demographic characteristics and stress level (n=549)

Variable	n (%)
Gender	
Male	176 (32.1)
Female	373 (67.9)
Age (year) mean±SD	39.5±12.0
Marital status	
Single	218 (39.7)
Married	289 (52.6)
Divorced	29 (5.3)
Widow(er)	15 (2.4)
Underlying Disease	
No	453 (82.5)
Yes	96 (17.5)
Education	
≥ Secondary	340 (61.9)
Undergraduate	184 (33.3)
Postgraduate	25 (4.6)
Work experience (year) median [IQR]	6 [2,14]
Work hour per day	8.6±2.0
Salary (Baht) median [IQR]	10,200 [8,910, 17,000]

Table 1 Demographic characteristics and stress level (n=549)

Variable	n (%)
COVID-19 risk	
No	387 (70.5)
Yes	162 (29.5)
Stress Level	
Mild	406 (74.0)
Moderate	104 (18.9)
Severe	22 (4.0)
Very severe	17 (3.1)

The study revealed that the COVID-19 concern levels were mostly at moderate (368 (67.0%)), followed by low (157 (28.6%)) and high level (24 (4.4%)) respectively. A concern about the effect of COVID-19 on their daily life was the most common one while sleep disturbance was of the least concern. (Table 2)

Table 2 Concern question and concern level (n=549)

Concern Question	No n (%)	Moderate n (%)	Severe n (%)
Do you concern or feel uncomfortable to go out?	288 (52.5)	237 (43.2)	24 (4.4)
Do you concern about preparing for COVID-19 prevention?	275 (50.1)	248 (45.2)	26 (4.7)
Do you have a sleep problem/ can't sleep because of thinking about COVID-19 infection?	430 (78.3)	115 (20.9)	4 (0.7)
Does COVID-19 affect your daily life?	133 (24.2)	278 (50.6)	133 (25.1)
Do you have a chance to infect COVID-19?	264 (48.1)	253 (46.1)	32 (5.8)
Concern level	n (%)		
Low	157 (28.6)		
Moderate	368 (67.0)		
High	24 (4.4)		

Three most common "new normal" behaviors that participants regularly practiced were 1) wearing masks over their nose and mouth when going out or in close contact with others (15.1%), 2) covering their mouth and nose when they cough and sneeze, then washing their hands (14.9%), and 3) always washing their hands with soap or alcohols (14.8%). (Table 3)

Table 3 "New normal" behavior (n=549)

"New normal" behavior	Infrequently practice	Regularly practice
1. You go out only when it is necessary.	473 (86.2)	76 (13.8)
2. You wear mask over your nose and mouth when going out or in close contact with others.	466 (84.9)	83 (15.1)
3. You eat freshly cooked food and use serving spoon.	473 (86.2)	76 (13.8)
4. You cover your mouth and nose when you cough and sneeze, then wash your hand.	467(85.1)	82(14.9)
5. You always wash your hands with soap or alcohol.	468 (85.2)	81 (14.8)
6. You avoid contacting others or go to a crowed place.	479 (87.2)	70 (12.8)
7. You stay at least 1-2 meters from others who don't live with you.	485 (88.3)	64 (11.7)
8. You avoid sharing personal stuffs with others.	473 (86.2)	76 (13.8)
9. You take a bath immediately after arriving home.	470 (85.6)	79 (14.4)

Factors associated with regular wearing masks over nose and mouth when going out or in close contact with others were COVID-19 exposure risk (OR_{adj}=29.3 (95% CI=15.06-57.08), having high level of concern (OR_{adj}=4.3 (95% CI=1.13-16.70), having moderate level of concern (OR_{adj}=2.1 (95% CI=1.11-4.23) and working hours per days (OR_{adj} =0.7 (95% CI=0.67-0.88). Factors associated with regular covering mouth and nose when sneeze then wash hands and always wash their hands with soap or alcohols varied with education level. (Table 4)

Table 4 Factors associated with "new normal" behaviors

"new normal" behavior	Wear a mask over your nose and mouth when going out or close contact with others.		Cover your mouth and nose when you cough and sneeze, then wash your hand		Always wash your hands with soap or alcohol	
Variable						
	OR (95% CI)	OR_{adj}(95% CI)	OR (95% CI)	OR_{adj} (95% CI)	OR (95% CI)	OR (95% CI)
Age	1.04 (1.02,1.06)	-	1.05 (1.02-1.07)	1.02 (1.00-1.04)	1.04 (1.02-1.07)	1.04 (1.02-1.07)
Education						
Secondary	ref	-	Ref	-	Ref	Ref
Undergraduate	2.2 (1.38-3.72)	-	2.1 (1.30-3.49)	-	2.6 (1.61-4.43)	2.6 (1.61-4.43)
Postgraduate degree	3.9 (1.60-9.85)	-	3.1 (1.24-8.13)	-	5.4 (2.21-13.23)	5.4 (2.21-13.23)
Work experienced	1.04 (1.01-1.06)	-	1.04 (1.02-1.06)		1.04 (1.02-1.06)	1.04 (1.02-1.06)
Work hour per day	0.84 (0.74-0.96)	0.7 (0.67-0.88)	0.85 (0.75-0.96)	0.79 (0.69-0.90)	0.87 (0.76-0.98)	0.87 (0.76-0.98)

Table 4 Factors associated with "new normal" behaviors

"new normal" behavior	Wear a mask over your nose and mouth when going out or close contact with others.		Cover your mouth and nose when you cough and sneeze, then wash your hand		Always wash your hands with soap or alcohol	
Variable						
	OR (95% CI)	OR_{adj} (95% CI)	OR (95% CI)	OR_{adj} (95% CI)	OR (95% CI)	OR (95% CI)
COVID-19						
Exposure risk						
No	ref	Ref	ref	ref	ref	ref
Yes	21.8 (11.60-41.27)	29.3 (15.06-57.08)	23.7 (12.3-45.7)	27.7 (13.90-55.30)	20.8 (11.03-39.26)	20.8 (11.03-39.26)
Concern level						
Low	Ref	Ref	Ref	Ref	Ref	Ref
Moderate	1.4 (0.82-2.54)	2.1 (1.11-4.23)	1.3 (0.74-2.2)	1.9 (1.01-3.85)	1.3 (0.78-2.44)	1.3 (0.78-2.44)
High	3.1 (1.16-8.72)	4.3 (1.13-16.70)	2.9 (1.09-8.14)	4.1 (1.02-16.57)	3.1 (1.16-8.71)	3.1 (1.16-8.71)

Discussion

The three most common "new normal" behaviors practiced were wearing a mask over a nose and a mouth when going out or in close contact with others, covering mouth and nose when cough and sneeze, then wash hands, and always washing hands with soap or alcohols were similar to study conducted among health care personnel working in southern border provinces' medical centers by Phakkhanat W. et al[10]. Public information about "New normal" behaviors for prevention of COVID-19 was communicated via various media, mostly on television with emphasis on wearing a mask, cover mouth and nose when sneeze and wash hands with soap or alcohol[11]. Thai people more likely gained such information and knowledge from television than other media[12-13]. Moreover the prevention and control measures at the workplace suggested that employees wear mask while working, companies provide alcohols gel for workers, and measure body temperature before entering the workplace[14]. This study found that wearing mask over nose and mouth when going out or in close contact with others was the most common "New normal" behavior practiced.

The workers' level of concern was mostly at the medium level. It was different from that of study conducted by Ingard A. et al[15]. which showed workers with undergraduate education had the severe level of concern and the most common concern was about financial status. This study revealed that concern about COVID-19 affecting daily life was the most common. This was because participants were still employed and received salary, therefore, they did not concern much about financial status but rather on how COVID-19 affected their daily life. Their change in daily life was consistent with study by Sangsawangwatthana T. et al[16]. which found that workers had to change the new lifestyle such as order food delivery, work from home, and social distancing. Mahasarakham province launched COVID-19 prevention and control

measures promptly to close pubs, bars, and game café; prohibit arrangement of concerts, conduct surveillance of people who came from the high risk area, and workplace must follow the prevention and control guidelines. Early implementation of prevention and control measures could help relieve stress and concern.

Multiple logistic regression showed COVID-19 exposure risk was associated with regularly practiced "New normal" behaviors (wearing mask (OR_{adj}=29.3 (95% CI=15.06-57.08)), Covering nose and mouth when sneezing (OR_{adj}=27.7 (95% CI=13.90-55.30)), Wash hand with soap or alcohol (OR_{adj}=23.7 (95% CI=12.13-46.32)) which was similar to Singweratham N, et al[17]. Study about risk perception associated with preventive behaviors. High-risk workers had to prevent themselves more than low-risk workers because they can spread COVID-19 to family members. If family members were sick, workers had to stop working to look after sick members. Not only will workers lose income but the workplace also lose productivity. The finding that concern level was related to "New normal" behavior can be explained by the same reason as risk perception. The more working hour per day they do, the more loosened "New normal" behaviors they practice. The possible cause was fatigue from work and "New normal" behaviors were not the habituation, therefore, fatigue can loosen them. This study focused the analysis on three most common "New normal" behaviors practice because they were essential to prevent the spreading of COVID-19 and intensify them were necessary.

Limitation of study

1. Due to cross-sectional study design, the temporal relationship between regularly practiced "New normal" behavior and associated factors could not be determined because the exposures and outcome were simultaneously assessed.

2. This study did not observe workers' behaviors directly, and the percentage of practice "New normal" behaviors practiced by participants in daily life based on their responses in questionnaire may be inaccurate.

3. The data was collected by self-administrated questionnaire so it was unavoidable having recall bias.

Conclusion

Few workers practiced "New normal" behaviors every time. The most common behavior practiced was wearing mask over nose and mouth when going out or close contact with others and associated factors were work hours per day (OR_{adj}=0.7 (95% CI=0.67-0.88)), COVID-19 infection risk (OR_{adj}=29.3 (95% CI=15.06-57.08), severe concern level (OR_{adj}=4.3 (95% CI=1.13-16.70)) and moderate concern level (OR_{adj}=2.1 (95% CI=1.11-4.23)). Workers mostly experienced mild stress level (74.0%) and moderate concern level (67.0%). The stakeholder should promote the "New normal" behaviors in the workplace and decrease the work hours for workers.

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