Socioeconomic Disparity and Depression Among Internal Migrant Workers In Myanmar

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ABSTRACT

Background: Over the past few decades, Myanmar has faced mass internal migration to seek job opportunities and pursue a better life. Migration gives rise to unambiguous stress and depression. This study aimed to assess the magnitude of depression and to identify the association between socioeconomic disparity and depression among migrant workers in Myanmar. **Methods and Materials**: Cross-sectional study was done among 1,201 migrants in Yangon Region. To assess the socioeconomic status, mental health status, accessibility of health care service and Quality of Life by developing self–administered questionnaire. The Generalized Linear Mixed Model was applied to determine the association between socioeconomic disparity and depression after adjusting for other covariates. **Result**: Their average age was 31.44 ±10.31 years. Gender distribution was not much different. About one third of respondents were factory workers and had low level of education. The magnitude of depression was 38.22% (95%CI= 35.50-41.00). Regarding the socioeconomic disparity, adequacy of income (AOR= 1.79, 95%CI: 1.35-2.37, p value<0.001) and floor surface area of the houses (AOR= 1.21, 95%CI: 1.00-1.47, p value<0.001) were strongly associated with depression. Moreover, other factors that were associated with depression were stress, quality of life and burden of medical service cost. **Conclusion**: Two-fifth of internal migrant workers suffered depression. The findings highlighted to develop intervention aimed to improve mental health status among migrants. In order to achieve the sustainable development goals, it is important to make investment on mental health of the migrant workers.

KEYWORDS: stress, depression, socioeconomic disparity, migrant workers

INTRODUCTION

Rural to urban migration has contributed to the explosive growth of cities all over the world. With rising globalization and urbanization, there is an increasing need to realize mental health with several aspects of migrant health.[1] Migrants are principally vulnerable to health problems.[2]

Since 2015, mental health and well-being promotion, prevention and treatment of substance abuse were included as health priorities in Sustainable Development Agenda and in goal 3 of the 17 SDGs focuses specifically on ensuring healthy lives and promoting well-being for all. The effect of human migration on mental health is multifaceted and has multicultural differences.[3] Kirmayer *et al* identified several migration-related factors that could influence mental health.[4] Among mental health problems, depression is most common at the workplace, then chronic disability and leading to huge economic burden globally.[5] But if no action was taken to tackle the issue of depression, it can greatly worsen their quality of life.[6]

Currently, only limited data are available on the magnitude of depression and its associated factors among internal migrant workers in Myanmar. Internal migrant workers were chosen as a priority group because they were living under highly stressful situations and needed to be addressed, especially in internal migrant population which was 25 % of internal migrant people migrate to Yangon. Hence, this study aimed to explore the magnitude and associated factors of depression among internal

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migrant workers in Myanmar. The findings of the study will contribute to formulate specific measures to reduce depression among migrant workers even though they are vulnerable population.

METHODS

This cross-sectional study was conducted in 2018 at North and East Districts among four districts namely East, West, North and South of Yangon Region.

Study participants

The inclusion criteria were migrant workers with the aged between 18 to 59 years living in Yangon Region, Myanmar, could verbally communicate with the researchers and agree to participate in this study. The exclusion criteria were migrant workers who didn't give the informed consent, seasonal workers and those with severe impairment and/or having mental illness.

For identifying the associations between numerous independent variables and a dichotomous outcome of depression, multiple logistic regression was used to estimate the sample size. The estimated sample size was 600. In order to control the over-fitting, we used ρ, 0.5 and variance inflation factor (VIF) 2.00.[7] Thus, the total participant was 1201. A multistage random sampling method was used.

Firstly, Yangon was purposively selected because 25 % of internal migrant people migrate to Yangon. Then two other districts were randomly selected namely, East and North districts. After that two townships (sub-districts) from each district were randomly selected namely Hlaingtharyar and Shwepyithar from North District and Dagon East and Dagon Seikkan from East District. Therefore four townships (sub-districts) were included in the study. Finally, two communities were randomly selected from each township. Then participants were selected proportionate to the size of the study population. All participants were interviewed by trained interviewers.

Research tools

A structured questionnaire was developed from reviewing literature as the research tool. The content of questionnaire was validated by 3 experts and then it was revised. For The questionnaire was

tested for using Conbach alpha among 30 participants in Thaketa township. Its Conbach alpha coefficient was 0.7. The questionnaire consisted of five parts: (1) socioeconomic (2) health behavior (3) mental health (4) accessibility to health services; and (5) quality of life.

Assessment of Depression

Burmese version of the Centre for Epidemiological Studies Depression Scale (CES-D): which is a 20-item self-report questionnaire to assess depressive symptoms using a four-point rating scale. Total score can vary between 0 and 60. A cut point of 16 or greater (=16) is defined as depression in Myanmar migrant population. In the bivariable and multivariable analysis, we dichotomized the presence or absence of depression.

Assessment of Stress

PSS (Perceived Stress Score) was used to assess the Perceived stress which contains 10 questions, each answer being scored from 0 to 4. It is not a diagnostic instrument, but intended to make comparisons of subjects' perceived stress related to current objective events. The higher the degree and longer the duration of self-perceived stress, indicated by a higher score. The scores are categorized into three groups: low stress (0-13), moderate stress (14-26), high perceived stress (27-40).

Assessment of quality of life

QOL was assessed by using (WHOQOL– BREF) of WHO Myanmar short version.[8] It consists of 26 items within the 4 domains containing physical, psychological, social relationships and environment domains. The scores are categorized into 3 groups: good level (96–130 scores), moderate level (61–95 scores) and poor level (26–60 scores).

Socio-economic status (SES) and Health service accessibility factors

Socio-economic status composed of age, gender, marital status, educational attainment, occupation, house ownership, relationship with family members, floor surface area, monthly income, monthly expenditure, adequacy of income, time to reach the health service center, burden of transportation cost

and medical service costs, support for transportation cost and medical service costs were treated as covariates in the analysis.

To minimize information bias, structured questionnaire interviewed by well-trained and standardized interviewers.

DATA ANALYSIS

Data were analyzed by STATA® (ver. 13; College Station, TX, USA: Stata Corp). The categorical data were presented as frequency and percentage whereas the continuous data were described their magnitude as mean, standard deviation, median, and range. The Generalized Linear Mix Model was operated to model the random effects and correlations inside clusters. In GLMM modeling, the residential area (community) of the participant was set as the random effect. Bivariable analysis was utilized to express the association of each independent variable with depression. The factors with $p<0.25$ in the bivariable analysis were proceed to the multivariate analysis.

The results of final model were presented the magnitude of association of independent variables and depression as adjusted odds ratio (adjusted OR) and 95% CI.

ETHICS STATEMENT

The proposal and tool of this research got approval from the University of Public Health, Yangon, Myanmar (ITERB-2018/Research/17) and Khon Kaen University Ethics Committee in Human Research (the approval number, HE 612079). A coding scheme was used in data collection and every documents relating to the participants were destroyed after completion of research. Written consent was obtained from all participants prior to participation.

RESULTS

The mean age with standard deviation of migrant workers in this study was 31.44 ± 10.31 years and gender distribution was not too much different but more than half of respondents were married. Nearly three fifth of participants were primary and secondary school education level. One third of respondents were factory workers. Only 11.24% owned their houses. Nearly 35% of the migrants lived in a house with floor area of less than 30 m^2. Among the migrants, nearly 90% were related and breathed in a house.

In this study, 71.28% of migrants responded that their monthly total family income ranged between USD 130 – USD 230 with median monthly family's income of USD 200. Nearly half of the respondents said that they had no financial problem but can't save money.

Only 14% of migrants drank alcohol but most were within moderate stressful conditions, moderate level of quality of life and no burden of medical services costs.

Table 1: Number and percentage of depression among migrants in the Yangon Region of Myanmar (n=1,201

Depression	Number	Percent	95%CI
No (CESD <16)	742	61.78	58.99-64.49
Yes (CESD ≥ 16)	459	38.22	35.50-41.00
Mean ± standard deviation	14.30 ± 8.8		
Median (Min : Max)	13 (0 : 50)		

Seeing the depression status mostly had no depression 61.76% and the rest 38.24% were highly depressive conditions.

After doing the bivariate analysis that floor surface area of their houses, monthly family income and adequacy of income were strongly associated with depression. Also, gender, education, house ownership, relationship of family members, stress, time to reach the health service center, burden of transportation cost and medical service costs were also associated with depression.

Multivariable analysis for associated factors of depression, GLMM was performed to control the clustering effect of the sampling method in selecting the participants. The associations between multiple independent variables and depression was determine by using multivariate analysis to control the effect of covariates.

Table 2: Crude odds ratio obtained from performing bivariate analysis of each factor and Depression (n=1,201)

Characteristics	Number	% of Depression	OR	95% CI	P value
1.Age (yr)					0.92
≤35	808	61.66	1		
>35	393	61.98	1.01	0.79-1.31	
2. Gender					0.043
Male	547	35.63	1		
Female	654	41.32	1.27	1.01-1.60	
3. Marital Status					0.157
Married	685	36.50	1		
Unmarried(Single Separate/ Divorced)	516	40.50	1.18	0.94-1.50	
4. Education					<0.001
Low	415	34.05	1		
High	786	41.48	1.50	1.17-1.93	
5. Occupation					0.064
Regular income job	606	35.64	1		
Irregular income job	595	40.84	1.25	0.99-1.53	
6. House ownership					0.001
Rent from others/Live in informal setters and relatives' houses	1066	36.59	1		
House owner	135	51.11	1.81	1.26-2.60	
7. Floor area of the house (m^2)					<0.001
>100	392	28.32	1		
≤100	809	43.02	1.91	1.47-2.48	
8. Related					0.04
No	138	30.43	1		
Yes	1063	39.23	1.47	1.01-2.16	
9. Family monthly income (MMKs)					0.19
High income >350000 (>USD 230)	345	35.36	1		
Low income≤ 350000(≤USD 230)	856	39.37	1.18	0.92-1.54	
10. Family monthly expenditure (MMKs)					0.137
Low <200000 (<USD 130)	381	35.17	1		
High ≥ 200000 (≥USD 130)	820	39.63	1.21	0.94-1.59	
11. Adequacy of income					0.047
Enough with or without saving	1040	37.12	1		
Not Enough with or without debt	161	45.34	1.4	1.01-1.96	
12. Alcohol Drinking					0.19
No	1,035	37.49	1		
Yes	166	42.77	1.25	0.89-1.74	
13. Stress					<0.001
Low stress	125	20.80	1		
High stress/ moderate	1,076	40.24	2.56	1.63-4.02	
14. QOL					<0.001
High	322	24.22	1		
Low/ mode	879	43.34	2.39	1.79-3.19	
15.Time to reach health services (min)					<0.001
≤15	837	34.53	1		
>15	364	46.54	1.6	1.28-2.12	
16.Travelling cost make a burden					<0.001
Not a burden	1010	34.85	1		
burden	191	56.08	2.39	1.74-3.27	
17. Burden of Medical Service costs					<0.001
Not a burden	905	33.59	1		
burden	296	52.22	2.16	1.65-2.82	

Table 3: Multivariate analysis for factors associated with Depression using GLMM (n = 1,201)

Characteristics	No	% of Dep	Crude OR	Adjusted OR	95%CI	p-value
1. Floor area of the house (m^2)						<0.001
>100	392	28.32	1	1		
≤100	809	43.02	1.91	1.21	1.00-1.47	
2. Adequacy of Income						<0.001
Adequate with or without Saving	257	28.40	1	1		
Inadequate with or without debt	944	40.89	1.74	1.79	1.35-2.37	
3. Stress						<0.001
Mild stress	125	20.80	1	1		
Moderate and severe stress	1076	40.24	2.56	2.35	1.34-4.13	
4. Quality of Life						<0.001
Good QOL	322	24.22	1	1		
Poor QOL	879	43.34	3.39	2.18	1.36-3.51	
5.Burden of medical services costs						<0.001
Not a burden	908	33.59	1	1		
Some what & Very burden	293	52.22	2.16	1.82	1.18-2.8	

DISCUSSION

The study showed that incidence of depression was 38.22% among rural to urban migrants in Yangon Region, Myanmar. This finding was lower than a study by Hiott and Qiu who showed that the incidence of depression were 41.6%[9] and 54.1%[10] among migrant farm workers and rural Chinese women, respectively. But this incidence was higher than another four studies of 10.8%[3], 17.1%[11], 16.3%[12] and 23.7%.[13] All these studies were measured by C-ESD. Mental disorders commonly occurred and were often serious in many countries throughout the world. Treatment cost could be expensive for the employer and also the affected people.[14]

The majority of low- and middle-income countries which are facing internal migrations with a large need of mental health due to demographic and population changes, warrant exploration of the relationship between migration and depressive episodes.[11] There is conflicting proof of the healthy migrant effect with respect to mental health.[12]

Migrant populations were susceptible to emotional distress and the expression of depressive disorders while instantaneously suffering from disparities in health and access to care.[11] Migrants with inadequate income with or without debt were 1.79 (95%CI: 1.35-2.37) times more likely to suffer from depression than those who received adequate income with or without saving. A profound association was found between having adequate income and depression. Participants who were poor with inadequate income faced various social and financial problems. Having sufficient income is important to avoid depression. Adequate regular income could reduce stress and depression.

Participants living in their houses with floor surface area, smaller than 100 m^2 were more likely with 1.21 (95%CI: 1.00-1.47) times more chance to get depression than those lived more than 100m^2. Migrants living in substandard and unsafe housing may contribute to poor health status including mental health because shelter is the basic physiological need for human.[15]

The study pointed out that participants with moderate and severe stress were 2.35(95%CI: 1.34-4.13) times higher odds of having depression. This finding was similar to a study done in China, where migrant workers experienced more stress that resulted in depression (OR 2.75, 95%CI 1.47-5.14)[16].

A study done in United States among farmworkers, showed that stressful working conditions were associated with depression (ß = .325 P = 0.000).[9] A possible explanation for this finding could be unemployment or underemployment, loss of social status, loss of family and community social supports in newly migrate area.[4] The process of familiarizing to transformed situation in life, environment and culture is too stressful.[17] Many previous studies have showed that migration caused accumulative stress that gradually lead to depression.

Concerning accessibility to health services, this study revealed that migrants with burden of medical service cost were 1.82 (95%CI: 1.18-2.8) times higher odds of having depression. Access to health services have powerful effect on each aspect of the mental health. This finding was similar to the studies done in Myanmar; burden of medical services costs among PLWHA was strongly associated with depression (AOR 2.24, 95% CI = 1.29-3.88)[18] and (AOR 2.04, 95% CI =1.65 to 2.53).[19] Affordability is not only on the direct medical service cost but also on the indirect cost such as transportation costs. Expenditures on food and lodging are now reflected as significant factors for access to healthcare and are directly associated with dimensions of poverty.[20] In Myanmar, there is no health insurance system until now, thus out-of-pocket payments for the healthcare provision was 62%.[21]

As migration flows increase worldwide, there are at least one billion migrants across the world.[22] Immigrants are a vulnerable population at high possibility of poor physical and mental health consequences and inadequate health care.[23]

CONCLUSION

About two in five of the migrant workers suffered depression. This study concluded that socioeconomic disparities such as adequacy of income and living space were strongly associated with depression. Poor quality of life and burden of medical services costs were also associated with depression. Thus, to fulfill the sustainable development goals, it is important to make investment on mental health of the migrant workers. This finding could be applied for healthy public policy makers as a baseline in developing appropriate strategies to address migrants' health

including mental health by promoting the social networking among internal migrant population and relevant sector both public and private sectors.

LIMITATION OF THE STUDY

This cross sectional study design does not allow the cause and effect relationships between the various factors and depression. This study was conducted among migrant workers between 18 and 59 years of aged living in Yangon Region and could not be generalized to all the migrant workers in Myanmar.

SOURCE OF FUNDING

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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