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ORIGINAL ARTICLE

Determining Mental Health, Psychosocial, and Related Factors among Informal Workers in Bangkok, Thailand

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ABSTRACT

Introduction: The informal workers in Bangkok have low income, high expenses, and inequity in health coverage, especially in Bangkok metropolitan area. Moreover, the urban lifestyle was severer than in rural area. However, their mental heaths were not directly determined. Therefore, the objective of this study was aimed to determine the relationship among mental health and related factors including demographic data, health behaviors, and coping responses. **Methods:** The research areas in Bangkok metropolitan area were included voluntarily which were Ladkrabang, Prawet, and Prapradang districts and the subjects were recruited from conventional sampling. They were interviewed by adapted questionnaire. The descriptive statistics, Chi-square, and Logistic regression were applied in data analysis. **Results:** The subjects were 94 male and 76 female informal workers. Most of them finished primary school and an average income was 9,019.68 Bahts per month. The happiness score was 31.56 (S.D.=5.06). The mental state was 11.1(S.D.=3.04), mental capacity was 6.25 (S.D.=1.49), mental quality was 6.92(S.D.=1.31) and family support was 7.28 (S.D.=1.41). **Conclusion:** The happiness and work-family balance were in the medium; the other psychosocial factors were in high level. The logistic regression analysis presented that work-family balance, medium work demands, financial status, and occupations are the potential factors that affected to the mental health status which presented by the happiness scores among the informal workers.

Keywords: informal, workers, mental health, factors, thailand

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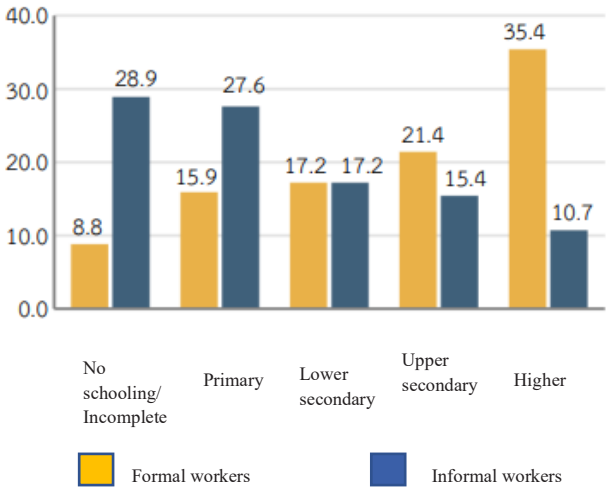
INTRODUCTION

In Thailand, the Ministry of Labor launched many regulations for improving the welfare and occupational health of the informal sectors in 2005. Due to the informal workers in Thailand, there were composed of workers in various sectors including agriculture, motorcycle taxis, vendors, and temporary workers. According to the national survey of the Ministry of Public Health (reported by the National Statistics Office, 2017, 2020, and 2021), most of their educational backgrounds were in primary school and lower as presented in Figure 1. Their educational level was the potential factor related to their incomes and also their quality of life. From 2017 to 2021, the situation of the informal workers has improved quite slowly and 1 of 3 still face with many problems such as wages or low incomes, unsafe environments, and unsafe working



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environments. Moreover, most of them (96.13%) had self-payment when they or their families 'members sicked (GSB research center, 2016).

In Thailand, the Department of Mental health has monitored the mental health status in the national level by the application of measurement of the happiness level which is generally performed as the voluntarily tool on their website. From the study of Almadani and Alwesmi (2023) there also supported that happiness is a significant indicator which can present mental health status. Moreover, the psychosocial factors such as interpersonal relationship was significantly predicted the happiness at work Charles-Leija *et al*. (2023) and the emotion of the worker was related to induce accidents (Lu *et al*., 2023). Therefore, the happiness score was applied to measure the mental health of our research subjects.

In addition, the survey research of the Mental Health Department, and the Ministry of Public Health revealed that the happiness level of the informal workers was lower than the average of the general Thai population (The National Statistics Office, 2017; The National Statistics Office, 2021). More than half of the informal workers worked in the agricultural field, however, most of the informal workers in the Bangkok metropolitan area worked in the services and trade sectors. They were faced with unsecured environments and lacked of educational opportunities. From Figure 1, the comparison of the educational level between the informal workers and formal workers showed that most of the informal workers were in no schooling/ incomplete education and in the primary level (The National Statistics Office, 2017; The National Statistics Office, 2021). Additionally, the comparison between the rural and urban regions presented that the informal workers in Bangkok metropolitan faced with more problems than the workers in rural areas such as chronic diseases, poverty from high expenses and low incomes, and life insecurity. Although, there had much research studied in informal sectors, however, the existing situation including mental health status, psychosocial work environments, and related factors among them was not directly determined.

This study aimed to determine the situation of Thai informal workers especially their mental health, presented by happiness score, and related factors i.e. demographic data, financial balance, genetic/ chronic diseases, health status, psychosocial work environments, health behaviors, and coping responses among the informal workers in 3 districts of Bangkok. The mental health status was focused in mental state, mental capacity, mental quality, and family support, and the association between the mental health status and related factors was also determined. The control variable was the social welfare and universal coverage because all of them had similar supports.

The study was performed as the preliminary study in order to determine the existing situation and would be the baseline information for the Department of Mental Health. Our study was supported by the Thai Health Promotion Fund and the Department of Mental Health, the Ministry of Public Health, Thailand.

METHODS

Study Populations Group and Design

This study was conducted in Bangkok metropolitan including Latkrabang, Prawet, and Prapadang. The population, the registered informal workers in three areas, were about 40,000 people but more than 40 percents were migrant workers. Therefore, subjects were selected by the inclusion criteria: the Thai informal workers who were registered in the database of the informal coordination center in three areas, had reading and speaking abilities in the Thai language, were willing to participate in this project and were convenient to come to the informal coordination center. Then the 170 Thai informal workers were recruited to be the research subjects.

Research Equipment

For the happiness monitoring tools, the Thai Mental Health Index was developed by the study of Apichai Mongkol and his colleagues since 2001. This instrument was created in 2 versions: the short version for mental health screening, and the long version for the research and the deep content of mental health monitoring. There are posted and suggested on the website of the Department of Mental Health, the Ministry of Public Health, and are available to access via online in the Thai version. There are cited in citations in many Thai research. The content validity and reliability of this instrument is generally higher than 0.93 and appropriate to the data collection in Thai people. Therefore, it was applied to be the research instrument in our study.

However, many researchers try to develop happiness monitoring tools such as Happiness indicators (Veenhoven *et al*., 2019) which was designed as a self-monitoring tool. Many research supported that happiness could be measured by subjective monitoring, community, or in the national level. There were related to many factors.

Moreover, in the World Happiness Report, there are composed of survey information in many fields including economics, psychology, survey analysis, and national statistics in order to be representative of the happiness and well-being of the population in many countries (Helliwell, Layard and Sachs, 2018). Their issues are related to happiness, including mental illness, the objective benefits of happiness, the importance of ethics, policy implications, and an approach to measuring subjective well-being. In conclusion, the researcher should be recognized and selected the research instrument which should be appropriate to their research design and their research subjects as well.

The Content Validity and Reliability

The adapted questionnaire from The Thai Psychosocial Work Environment questionnaire and the Thai Happiness indicator was used for collecting data. The content validity (IOC) was 0.9 and the reliability of all domains, presented by the Cronbach Alpha coefficient, were higher than 0.7. Moreover, the conventional sampling was applied in data collection and all subjects were interviewed by the self-reported questionnaire. It was composed of 4 parts including demographic data, Psychosocial Work Environments, Health status and problem-solving, and Mental Health status, presented in terms of Happiness level and composed of mental state, mental capacity, mental quality, and family support. The data collection was performed in April-November, 2014 before the COVID-19 pandemic.

Statistical Analysis

The descriptive statistics including amount, percentage, Mean, and standard deviation were applied in presenting demographic data, Psychosocial Work Environments, Health status and problem-solving, and mental health status. The Chi-square was applied in comparison of the mean difference of the mental health status, presented by the happiness score. In addition, the Logistic regression was applied to determine the important factors related to happiness level.

Ethical Consideration

This research protocol was approved by the Ethical Committee of Huachiew Chalermprakiet University (institutional review board) by following the World Medical Association Declaration of Helsinki. The approval certificate is 228/2557. We obtained the informed consents from all research subjects after they had been explained in our research protocol, had clear understanding, and were willing to participate in this research. There was no conflicts of interest or limitations in this research.

RESULTS

The Demographic Data

The subjects were 170 informal workers, composed of 95 motorcycle taxi (55.9%), 41 sewers (24.1%), 10 Thai massagers (5.9%) and 24 vendors (14.1%). There were 76 female and 94 male workers. Most of them (96 persons; 56.5%) were married. An average age was 44.63 years old and the average of their working experience was 8.42 years. About half of the subjects (48.2%) graduated from elementary school. Their incomes were about 9,019.68 Bahts a month, their incomes were slightly low, unstable incomes, and appropriate for their expenses but there were not enough for money saving. There were 102 healthy workers (60%), some of them were 49 drinking workers (28.8%) and 43 smokers (30.9%).

The Mental Health Status

The mental health status which presented by happiness scores. An average happiness score, was 31.56 (S.D.=5.06) and less than the happiness score of the general Thai population (mean=33.16) in 2014 which was the last measurement of happiness level among the Thai informal workers in national level. From the results, there were 50 persons (29.4%), presented their happiness scores in high level, 73 persons (42.9%) in the medium, and 47 persons (27.6%) in low level.

The Happiness and the Relationship between Mental Health Status

The happiness and the relationship between mental health status which presented in terms of happiness level, the demographic data, and the psychosocial work environments, were analyzed by Chi-square. The results presented as in Table 1.

Table 1. The Relationship Between Mental Health Status with Happiness Level, The Demographic Data, and The Psychosocial Work Environments

Factors	No. (person)	%	Happiness score	p-value
Occupations				0.06
Motorcycle taxi	95	55.9	30.87	
Sewers	41	24.1	31.71	
Thai massagers	10	5.9	31.60	
Vendors	24	14.1	34.00	
Marital status				0.64
Single	39	22.9	30.69	
Married	96	56.5	31.99	
Divorced/	25	14.7	31.52	
Others	10	5.9	30.90	
Financial status				0.12
Inappropriate & have dept	33	19.4	29.88	
Inappropriate & no dept	69	40.6	32.36	
Appropriated, but no money saving	18	10.6	32.67	
Appropriated & have money saving	47	27.6	31.32	
Not specified	3	1.8	28.67	
Record the financial balance of the family				0.99
No	112	65.9	31.57	
Yes, in the past	42	24.7	31.55	
Yes, and continue to record	16	9.4	31.50	
Getting the information of social welfare and universal coverage				0.11
No	101	59.4	31.04	
Yes	69	40.6	32.31	
Having genetic/chronic diseases				0.32
No	102	60.0	31.08	
Yes	64	37.6	32.27	
Not specified	4	2.4	32.50	
Frequently use painkillers or other medicine in last year				0.93
No	87	51.2	31.45	
Frequently	80	47.0	31.65	
Sometimes	3	1.8	32.33	
Alcohol consumption				0.83
No	120	70.6	31.64	
Yes	49	28.8	31.31	
Not specified	1	0.6	34.00	

Advance Table 1. The Relationship Between Mental Health Status with Happiness Level, The Demographic Data, and The Psychosocial Work Environments

Factors	No. (person)	%	Happiness score	p-value
Energy drink				0.87
No	91	53.5	31.92	
Yes	72	42.4	31.08	
Not specified	7	4.1	31.71	
Smoking				0.60
No	113	66.4	31.89	
Yes	52	3.6	30.78	
Not specified	5	3.0	32.20	
Work demand				0.10
High	110	64.7	30.93	
Medium	57	33.5	32.98	
Low	3	1.8	27.67	
Interpersonal relationship				0.09
High	163	95.9	31.64	
Medium	6	3.5	30.00	
Low	1	0.6	27.88	
Value of work				0.3
High	111	65.3	31.97	
Medium	53	31.2	31.21	
Low	2	1.2	29.00	
Work-family conflict				0.05*
High	49	28.8	31.67	
Medium	99	58.2	30.78	
Low	19	11.2	35.26	
No answer	3	1.8	32.00	

The Happiness Scores

The happiness scores of the informal workers and the interview. From Table 1, the highest group of happiness score in each domain occurred in vendors, married workers, the worker who has financial status in inappropriate incomes and no dept. In the opposite, the motorcycle taxi and single workers were the lowest group of happiness scores. The research findings also supported that a group of getting the information of social welfare and universal coverage (40.6 %) had higher happiness scores than the other group (59.4%).

Besides, the happiness score was classified into the happiness level. The results are presented as in Figure 2. The happiness level of the subjects was classified into 3 levels and the results presented

those 73 workers (43%) in Normal/medium level, 50 workers (29%) in High level, and 47 workers (28%) in Low level, respectively.

Additionally, from the interview, all subjects who were the informal workers in the Bangkok Metropolitan area, they generally used social welfare and universal coverage or "Golden card" when they sicked. Therefore, they had to pay extra expenses for more severity of disease symptoms. They were worried when they got accidents or sickness.

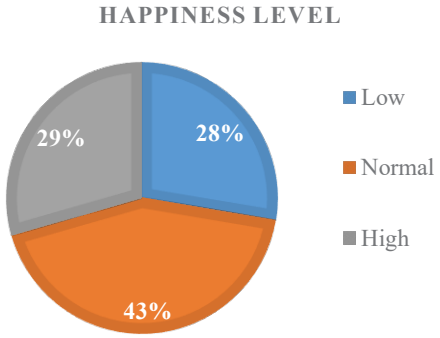

Figure 2. The Happiness Level of the Informal Workers in Bangkok Metropolitan Area

Table 2. The Important Domains of Mental Health Status

	No. (Person)	Min	Max	Mean	S.D
Mental state	170	0	18	11.11	3.04
Positive Effect	170	0	9	6.46	1.62
Negative Effect	170	0	9	4.65	2.43
Mental capacity	170	2	9	6.25	1.49
Mental quality	170	3	9	6.92	1.31
Family support	170	3	9	7.28	1.41

The Components of Mental Health Status

The Happiness Indicator questionnaire which was applied in this questionnaire, presented that the happiness or mental health status is composed of 4 domains including mental state, mental capacity, mental quality, and family support. The total scores of mental health indicators are presented as the happiness scores of the research subjects. All 4 important domains were presented as in Table 2. The results, arranged by an average score, showed that the important domains affected to happiness were mental state, family support, mental quality, and mental capacity, respectively.

The Relationship between the Happiness Level and the Related Factors

Chi-square was applied to determine the relationship between happiness level and the demographic variables (occupations, marital status, financial status, record the financial balance of the family, record the financial balance of family, getting the information of social welfare and universal coverage, having genetic/chronic diseases, use pain killer or medicine, alcohol consumption, energy drink, and smoking), and psychosocial factors (Work demand, Interpersonal relationship, Value of work, Work-family conflict). The results presented that the demographic variables were not presented a significant association with happiness scores or mental health.

Table 3. The Logistic Regression Analysis of the Association Between the Happiness Level and the Related Factors

Variable	Estimate	S. E.	Wald	df	p-value
Low Work-Family balance	1.16	0.58	4.04	1	0.04
Medium Work-Family balance	-0.18	0.36	0.24	1	0.63
Medium Work Demand	0.90	0.35	6.75	1	0.01
Motorcycle Taxi	-1.59	0.50	9.89	1	<0.01
Sewers	-1.91	0.56	11.70	1	<0.01
Thai massagers	-1.04	0.83	1.56	1	0.21
Improper income & no dept	18.12	0.38	2,256.31	1	<0.01
Proper income, but no money saving	17.47	0.55	1,015.20	1	<0.01
Never visit a psychologist/	1.02	0.60	2.85	1	0.09
Treatment	1.02	0.60	2.85	1	0.09

Furthermore, the results revealed that the work-family conflict was the only one psychosocial factor which presented a significant association with happiness scores (p-value = 0.05). The results presented that the high level of work-family conflict had average happiness score equal to 31.67, the medium level of work-family conflict had average happiness score equal to 30.78, and the low level of work-family conflict, were the highest group who had average happiness score equal to 35.26, respectively.

Additionally, Logistic regression analysis was applied to determine the association between the happiness scores and related factors, and the results were presented in Table 3. The research findings showed the significant factors, related to happiness level which were low work-family balance (p-value = 0.04), medium work demand (p-value= 0.01), occupations including motorcycle taxi and sewers (p-value<0.01), and financial status (p-value<0.01), at the significant level equal to 0.05. The model can predict the low happiness level (p-value< 0.01) and medium happiness level (p-value< 0.01) with the predictive value of the model, psudo-R2 (Nagellkerke) is .243.

From the results in Table 3, we could summarize that the potential variables including low work-family conflicts, medium work demand, occupation, and financial status are the important factors in the happiness or mental health status prediction.

Coping and Problem-Solving Skills

The coping and problem-solving skills was the potential factor that might be affected to the variation of the happiness level. Therefore, the coping skills and problem-solving of the subjects when they faced with problems or stressful conditions were monitored in this study as well. The results showed that most of them performed both emotional-focused coping and problem-focused coping. In the initial stage when they were faced with problems, they usually performed emotion-focused coping such as watching T.V. or listening to songs (53 persons, 31.21%), practicing meditation and mindfulness training (43 persons, 25.3 %), and doing physical activity (18 persons, 10.6%), respectively. However, they combined both types of coping skills for problem-solving, the problem-focused coping skills were generally applied after they released their stress.

DISCUSSION

From the demographic data and Logistics regression analysis of the informal workers in Bangkok metropolitan area, they were motorcycle taxis, vendors, sewers, and Thai massagers. According to our findings, work-family conflicts, work demand, occupation, and financial status were the significant factors to predict happiness level or mental health status.

The Demographic Data

The Results and Interview Supported that Occupation Associated to the Happiness Level.

Our research finding revealed that the group of motorcycle taxi was the lowest happiness scores among the informal groups. They mentioned that their occupation was insecure, unsafe conditions, and had higher risks of getting into accidents than other occupations. In the contrary, the working condition of sewers was better. The sewers came to work together and enjoy sharing and talking together. Their average happiness score, which represented their mental health status, was higher than the group of motorcycle taxi. The interviews of research subjects also supported these results.

This research results were similar to the study of Firouzbakht *et al*. (2018) which revealed that Iranian workers with low individual social capital and low aggregated workplace social capital were associated with higher psychological distress. Their workplace social capitals were including occupational stress, working hours, and job insecurity which have been shown the potential influence on employee mental health. Besides, the subjects in this study had low incomes and unstable employment which directly affected to their daily lives. They said that they got more stress from this problem frequently. Their average income was lower than the average income of the formal workers and the general workers in Thailand. Due to the study of Green (2020), he reviewed and mentioned that job insecurity presented a strong association with poor health status. Furthermore, the interviews of the motorcycle taxi who had the lowest happiness scores also supported that they had higher chances of getting near misses when they were unhappy or faced with mental health problems. They mentioned that the risk of their occupation was an important factor to

reduce their happiness in daily life. The study of Lu *et al*. (2023) also supported our research findings that emotion was the influent factor inducing the incidents.

According to the results, there indicate that the informal worker was faced with improper financial status and worked hard for getting more income. The study of Teeranupattana (2020) also supported these results, she collected the data in 200 residents of a community and compared with 200 Thai rotary members club in Bangkok. Her study indicated that the positive factors affecting to happiness are quality of household economy and quality of health which were including mental health.

Lack of Appropriate Information of Social Welfare and Universal Coverage

These research findings show that most of the subjects still lack of appropriate information of social welfare and universal coverage, which was directly affected to their health status and work-related injuries. The survey Poonsab, Vanek and Carré (2019) presented that the informal workers in Bangkok had work-related injuries higher than urban Thailand, and Thailand group workers. Therefore, the poverty or improper social welfare and universal coverage might be affected to them when they sick and require necessary health support.

The Mental Health Status

Their average happiness score was in medium level and less than the general Thai population. Although our findings revealed that work-family conflicts, work demand, occupation, and financial status were the significant factors to predict happiness level or mental health status, however, there still have other important factors which was mentioned in Helliwell, Layard and Sachs (2018); Helliwell *et al*. (2023) to represent the happiness such as healthy life expectancy, freedom of make life choice, perceptions of corruptions, and the impacts of COVID-19 Pandemic. Additionally, the comparison of mental health or happiness in the international level revealed that the happiness index of the general Thai population was lower than in many countries. From 2014 until 2020, the happiness scores of the informal workers are still the lowest group in Thailand (The National Statistics Office, 2020). Meanwhile, the results showed that their happiness scores were lower than the general Thai population and other occupations.

The Happiness and the Relationship between Mental Health Status

The result of Logistics regression analysis showed that work demand and work-family conflicts were the important factors, related to the mental health of the informal workers. Additionally, our subjects encountered with work-family conflict when they spent longer working period. Our research findings indicated that the psychosocial work environments are the important factors of mental health as the previous study, which mentioned that the psychosocial work environments were related to workers' well-being and were the meaningful factors for the measurement of subjective well-being.

Our research findings presented that the psychosocial factors were the potential factors affected to the happiness level among the informal workers. Moreover, the study of Tangsathapornphanich, Senasu and Sakworawich (2017) also supported this study that the psychosocial factors including work-family balance related to the mental health of the informal workers. The study of Thanapop, Thanapop and Keam-Kan (2021) studied in the southern part of Thailand also supported the results of these interviews that income, work practices, and occupational hazards such as job insecurity and poor working conditions were the potential factors related to their health status and mental health. Our results showed that the subjects in the group of low work-family balance had lower happiness scores than other groups.

According to the Helliwell, Layard and Sachs (2018); Helliwell *et al*. (2023), there also supported our study that the psychosocial factors among the Thai people are still important and affect to mental health. Additionally, this report also suggested developing economic support and financial management affected directly to their life and quality of life.

Coping and Problem-Solving Skills

Our research also determined the coping skills Skinner and Zimmer-Gembeck (2016) among the informal workers when they faced with the problems. They were interviewed during the data collection process. The coping skills were separated into 2 types including emotional-focused coping skill and problem-focused, separated by Lazarus and Folkman's Psychological Stress and Coping Theory (Cooper and Quick, 2017).

The results presented that they performed the emotional-focus coping by avoiding to solve their problem directly at the initial stage. Some workers are separated from the problems and avoid making any conflicts. They tried to release their stress by playing sports, sleeping, or praying. After they relax or felt better, some of them started to review, criticize the major cause of the problem and the related factors, and perform problem-focused coping for problem-solving. Furthermore, the results of coping responses presented that most of them usually decided to do the emotional-focused coping including watching T.V., listening songs, meditation practice or mindfulness training in order to reduce negative emotions.

According to the stress or the problems in their life which were similar to the theories in stress appraisal, and coping and the study of Susanto and Arsyad (2020), in Indonesia. They collected the data among the informal sector workers of the micro-enterprises. Their subjects decided to perform emotional-focused coping more than problem-focused coping. In this study, the coping responses of the Thai informal workers were similar to the informal workers in Indonesia. Their study presented no significant differences of coping responses including problem-focused coping, emotion-focused coping, and avoidance when they faced with stressful conditions. The coping abilities among the Thai informal workers were quite similar to the Iranian informal workers who had poor mental health status and faced with (Firouzbakht *et al*., 2018). Moreover, the study of Tangsathapornphanich, Senasu and Sakworawich (2017) analyzed the secondary data among the Thai workforce and the results mentioned and supported this study that Socioeconomic status, Mental Health including coping ability, and Family satisfaction presented high correlations with the happiness of their subjects.

Hence, the improvement of problem-focused coping skills should be practiced among the subjects who usually do the emotional-focused coping and the countermeasures for the avoidance of stress.

However, during the COVID-19 pandemic, the UN Thailand expressed that the informal workers are the most affected by the COVID-19 crisis because most of them generally lack of their basic socio-economic support (United Nation Thailand, 2022). Therefore, mental health and other factors are set as the second priority in their life. Additionally, there have few research, performed and studied in mental health among the informal workers in Thailand during the COVID-19 pandemic.

Due to these research findings, there are affected to the project of the Thai Health Promotion Fund (Thai Health Promotion Foundation, 2021). They will provide the financial support to study and develop the Happiness model in order to increase happiness and reduce suffering among the informal workers in advance.

he suggestions for further study, the mental capacity, the work-family balance, the external environments, and other related factors such as job insecurity, and health effects need to be determined in the significant association with mental health status. Moreover, the improvement method of mental health status, mental capacity, and work-family balance should be studied for the informal workers and also be applied in various occupations, in order to increase their happiness, quality of life, and reduce their suffering and stressful conditions, especially during the COVID-19 pandemic when they have to face with more serious situations than in general daily life.

For the policymakers, the development of the job security, occupational health monitoring, health and mental health surveillance should be concerned and developed for the improvement of the quality of life among the informal workers in the national level.

CONCLUSION

According to research results, the informal workers in Bangkok metropolitan in 3 areas including Latkrabang, Prawet, and Prapadang had happiness scores less than the happiness of the general Thai population. The happiness and work-family balance among the informal workers in Bangkok metropolitan were in medium level; and the other related psychosocial factors including work demands, values of work, and interpersonal relationships were at high level. The statistical analysis presented that low work-family balance, medium work demands, financial status, and occupations are the potential factors affecting to the mental health status of the informal workers.

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