

Relationship between Emotional Distress and Workplace Influence on Depressive Symptoms among Online Motorcycle Taxi Drivers

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Abstract

Background: The rise of online motorcycle taxi services, driven by the demand for transportation and new technologies, has created a new landscape for drivers. However, despite the benefits, these drivers are not considered employees and are therefore vulnerable to psychosocial risks. This study aimed to investigate the relationship between psychosocial hazards and depressive symptoms among online motorcycle taxi drivers.

Methods: A cross-sectional study was conducted, involving 218 online motorcycle taxi drivers in Jakarta, Bogor, Depok, and Tangerang from September to December 2022. The Copenhagen Psychosocial Questionnaire version III was used to assess psychosocial hazards in the workplace and the likelihood of developing depressive symptoms. A multiple linear regression test was used, with a significance level set of $p < 0.05$.

Results: Most respondents were male (73.4%), and many had worked for over five years, with the majority working more than 8 hours a day (77.0%). Emotional burden and workplace influences were positively correlated with depressive symptoms ($p=0.017$; $\beta=0.154$; and $p=0.002$; $\beta=0.166$, respectively). In contrast, the meaning of work and clarity of roles were negatively correlated with depressive symptoms ($p=0.009$; $\beta=-0.161$; and $p=0.024$; $\beta=-0.195$, respectively).

Conclusions: This study highlights that emotional stress and workplace influence can exacerbate depressive symptoms, while a clear and meaningful work environment have a positive impact. Healthy lifestyle habits are one of the stress management solutions to improve emotional wellness.

Keywords: Depressive symptoms, online motorcycle taxi drivers, psychosocial

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Introduction

Along with the advancement of digital technology, online transportation services are on the rise, such as online motorcycle taxi drivers. These drivers do not have the status of employees but partners of the applications companies than who are required to be responsible for dealing with work-

related issues, making them susceptible to psychosocial hazards. Work-related psychosocial hazards encompass aspects of job design and management, as well as its social and organizational contexts, which can have a negative impact on workers' physical or mental well-being. These hazards often involve factors such as the work organization, processes, and work environment, as well as

team and organizational culture, in addition to balanced work and life relationships. Effective time management is crucial for mitigating these hazards.¹ In 2019, an estimated 15% of adult workers experienced mental health disorders, resulting in 12 million lost workdays each year due to depression and anxiety.²

Research on professional drivers found that psychosocial risks such as high-intensity workloads, working hours, and emotional demands were significantly associated with physical mobility, pain, energy levels, sleep, social isolation, and emotional reactions.³ Research on online drivers aged 19–45 years using two online applications found that the main factor associated with psychological distress was the total income received per month.⁴

Research in twelve industrialized countries found that most of these countries have government regulations related to workers' health, and most workers are protected. However, there are still gaps in implementation, capacity, and coverage.⁵ Mental health and psychosocial risks in the workplace remain a priority for workers' health and require attention from workplace organizations, including individual workers.⁶ However, in a slightly different study of factory workers in Selangor, Malaysia, no meaningful association was found between psychosocial hazards and mental health.⁷ Therefore, this study aimed to determine the relationship between psychosocial factors among online motorcycle taxi drivers and the impact on drivers' mental health, in this case, depressive symptoms in online motorcycle taxi drivers.

Methods

This study used an observational design with a cross-sectional approach conducted from September to December 2022. The study participants consisted of online motorcycle taxi drivers from the Jakarta metropolitan area, Indonesia, including Jakarta, Bogor, Depok, and Tangerang, who volunteered to participate and collaborate in this study.

Before starting the study, the field coordinator of the online motorcycle taxi driver community was contacted, then provided with information and explanations about this study. Furthermore, a preliminary questionnaire was distributed to the drivers, containing questions regarding inclusion and exclusion criteria. The inclusion criteria required drivers to register and utilize the online motorcycle driver application. The exclusion criterion was

having a history of psychiatric disorders.

Respondents who met the criteria were contacted again and asked to come to the research location to fill out a questionnaire. A total of 218 online motorcycle taxi drivers participated in this study. Data collection was carried out using consecutive non-random sampling techniques. All respondents filled out and signed an informed consent sheet to become study participants. This study obtained ethical approval from the Research Ethics Commission of the Faculty of Medicine, Universitas Trisakti, with the number 165/KER/FK/VIII/2022.

The respondents were given a questionnaire containing information about age, education, and other work variables, such as length of employment and daily work period. Data on potential psychosocial hazards in the workplace, including job demands, work organization management, work values, work relationships, work-life balance, and depressive symptoms were obtained using the Copenhagen Psychosocial Questionnaire (COPSOQ) version III comprising eighteen psychosocial dimensions related to depressive symptoms in online motorcycle taxi drivers (Table 1).⁸ The COPSOQ was a research-based instrument to assess various dimensions of psychosocial hazards and workers' physical and mental health conditions.⁹ This instrument had undergone rigorous testing in Indonesia, and had demonstrated its validity ($r > 0.3494$) and reliability (Cronbach's alpha 0.844)¹⁰ in measuring distress and its underlying factors, making it suitable for various workplaces. To calculate the value of each psychosocial dimension, the average score obtained from the questions was taken.

Data were entered, coded, processed, and analyzed using SPSS version 26. Descriptive variables were represented by percentage, means, and standard deviations. For numerical data, multiple linear regression tests were carried out to determine the relationship between variables and the magnitude of the correlation at $p < 0.05$.

Results

Of the 218 respondents involved in this study, the majority were male (73.4%) with a mean age of 38.36 ± 8.31 years, had a senior high school education (67.4%), and did not have a job before becoming an online motorcycle taxi driver (38.5%). On average they have served customers for 4.8 ± 2.18 years, and worked > 8 hours every day (77.0%) (Table 2).

Table 1 Psychosocial Dimensions Questionnaire

Dimensions Scale	Question	Response Options
Quantitative load	Do you get behind with your work?	1
Working speed	How often do you need more time to complete all your work tasks?	1
	Do you have to work very fast?	1
Emotional demand	Do you work at a high pace throughout the day?	2
	Do you have to deal with other people’s personal problems as part of your work?	1
	Is your work emotionally demanding?	2
Influence at work	Do you have a large degree of influence on the decisions concerning your work?	1
	Can you influence the amount of work assigned to you?	1
Meaning of work	Is your work meaningful?	2
Predictability	At your place of work, are you informed well in advance concerning for example, important decisions, changes or plans for the future?	2
	Do you receive all the information you need in order to do your work well?	2
Recognition of work	Is your work recognized and appreciated by the management?	2
	Does the management at your workplace respect you?	2
Clarity of roles	Does your work have clear objectives?	2
Work conflict	Do you know what exactly is expected of you at work?	2
	Are contradictory demands placed on you at work?	2
	Do you sometimes have to do things that ought to have been done differently?	2
Coworker support	How often do you get help and support from your colleagues, if needed?	1+
	How often are your colleagues willing to listen to your problems at work, if needed?	1+
Employer support	How often is your immediate superior willing to listen to your problems at work, if needed?	1+
	How often do you get help and support from your immediate superior, if needed?	1+
Cognitive demands	Do you have to keep your eyes on lots of things while you work?	1
	Does your work demand that you are good at coming up with new ideas?	1
Demands to hide emotions	Are you required to treat everyone equally, even if you do not feel like it?	1
	Does your work require that you do not state your opinion?	1
Sense of community	Do you feel part of a community at your place of work?	1+
	Is there good co-operation between the colleagues at work?	1+
Work-life conflict	Are there times when you need to be at work and home at the same time?	1
	Do you feel that you drain so much of your energy that it has a negative effect on your private life?	2
	Do you feel that your work takes so much of your time that it has a negative effect on your private life?	2
Work engagement	Do the demands of my work interfere with my private and family life?	2
	How often do you experience at your work, you feel bursting with energy?	3
Job insecurity	How often do you experience you are enthusiastic about your job?	3
	Are you worried about becoming unemployed?	2
	Are you worried about new technology making you redundant?	2
Organizational justice	Are your worried about being transferred to another job against your will?	2
	Are conflicts resolved fairly?	2
Depressive symptoms	Is the work distributed fairly?	2
	These questions are about how you have been doing over the last 4 weeks	
	How often have you felt sad?	9
	How often have you lacked self-confidence?	9
	How often have you had a bad conscience or felt guilty?	9
	How often have you needed more interest in everyday things?	9

Note: *Values for the scale- each scale was scored in the directions indicated by the scale
 1= Always (100); Often (75); Sometimes (50); Seldom (25); Never/hardly ever (0).
 2= To a very large extent (100); To a large extent (75); Somewhat (50); To a small extent (25); To a very small extent (0).
 += Including the response option, if deemed necessary: “ I do not have colleagues (coded as missing).
 3= Never (0); Seldom (25); Sometimes (50); Often (75); Always (100)
 9= All the time (100); A large part of the time (75); Part of the time (50); A small part of the time (25); Not at all (0).

Table 2 Characteristics of Respondents (n=218)

Variable	n (%)	Mean±SD
Gender		
Male	160 (73.4)	
Female	58 (26.6)	
Age (years)		38.36±8.31
Education		
Elementary school	10 (4.6)	
Junior high school	42 (19.3)	
Senior high school	147 (67.4)	
Diploma/bachelor	19 (8.7)	
Other jobs besides online motorcycle taxi driver		
Laborer	7 (3.2)	
Housewives	22 (10.1)	
College student	5 (2.3)	
Past employees	6 (2.8)	
Private sector	30 (13.8)	
Entrepreneurial	64 (29.4)	
None	84 (38.5)	
Period of service (years)		4.8±2.18
Duration of a day's work		
1-4 hours	6 (2.8)	
5-8 hours	44 (20.2)	
>8 hours	168 (77.0)	

From the results of the COPSOQ version III questionnaire, it was found that there were four specific dimensions were highly associated with workers' depressive complaints, namely emotional demand, workplace influence, job meaning, and role clarity. Emotional demand and workplace influence had a positive effect on the occurrence of depressive symptoms ($p=0.017$; $\beta=0.154$; and $p=0.002$; $\beta=0.166$, respectively). If emotional burden and workplace influence increased, the incidence of symptoms in online motorcycle taxi drivers also increased. On the other hand, the dimensions of job meaning and role clarity had a negative effect on depressive symptoms ($p=0.009$; $\beta=-0.161$; $p=0.024$; $\beta=-0.195$, respectively) (Table 3).

Discussion

In this study, respondents were predominantly male online motorcycle taxi drivers, and a positive association was found between increased emotional distress and workplace influence with depressive symptoms. In carrying out their duties as online motorcycle taxi drivers, they often encounter various situations and personal relationships with consumers that affect their emotions.⁶ Male

have a higher susceptibility to the impact of each component of emotional demands. Another study has also found that the prevalence of emotional burden is high in service workers and informal workers compared to workers who earn fixed wages, where those who are more frequently exposed to emotional workload have a higher risk of depression.¹¹ Jobs with high emotional demands have an increased risk of hospitalization for depression by 1.19 to 1.32 times.¹² This may explain why online motorcycle taxi drivers work in public services. They can control their working hours and do not receive a fixed monthly wage. When they faced piled-up emotional burdens, they have a higher risk of depression. Working with people outside the workplace requires workers to empathize with their clients, who may be in difficult or distressing situations. If this situation is sustained, it can trigger distress and potentially increase the risk of depression.¹³ Moreover, during the pandemic, the income of drivers in the areas of Bekasi, Tangerang, and Serang generally decreased, some even decreased by fifty percent due to difficulties in getting orders. In fact, they have to work 10 to 15 hours a day to reach the target points to make ends meet.¹⁴ The phenomenon of excessive working hours also occurs in

Table 3 Psychosocial Dimensions and Depressive Symptoms of Workers (n= 218)

Psychosocial Dimension	Mean ± SD	Depressive Symptoms	
		p	β
Quantitative load	24.94 ± 23.77	0.189	-0.075
Working speed	54.12 ± 26.99	0.831	0.012
Emotional demand	26.37 ± 24.70	0.017*	0.154
Influence at work	49.36 ± 31.48	0.002*	0.166
Meaning of work	87.61 ± 26.31	0.009*	-0.161
Predictability	68.52 ± 30.07	0.569	-0.033
Recognition of work	61.12 ± 30.91	0.174	0.111
Clarity of roles	64.22 ± 27.67	0.024*	-0.195
Work conflict	43.80 ± 27.60	0.386	0.054
Co-worker support	69.26 ± 20.11	0.458	0.055
Employer support	37.95 ± 32.01	0.697	0.019
Cognitive demands	50.22 ± 31.10	0.941	0.004
Demands to hide emotions	45.64 ± 27.98	0.385	0.048
Sense of community	45.87 ± 21.33	0.975	0.002
Work-life conflict	51.98 ± 18.25	0.440	0.067
Work engagement	49.85 ± 20.36	0.479	-0.054
Job insecurity	52.17 ± 27.51	0.160	0.077
Organizational justice	54.54 ± 27.79	0.259	-0.063

Note: *Multiple linear regression test, significant at p < 0.05

package delivery couriers, which is indirectly related to the incidence of depression due to work stress.¹⁵

Lack of influence at work also has a positive relationship with the occurrence of depression in this study. Lack of workplace influence that causes a sense of helplessness and powerlessness is one of the important factors for workers' mental health.¹⁶ How workers prioritize and complete their work tasks and time, and decide the order of work are important dimensions of workplace influence. Workers with the opportunity to participate in on-the-job decision-making enhance their capacity for high-quality performance.^{17,18} Depression in the workplace is a factor that will reduce individual well-being and productivity and cause workers to become a burden to employers. Depression impairs cognitive resources, which is reflected in reduced performance in the context of the individual's work. The group context can compensate for this impairment if the depression is not severe and cognitive resources provide resilience to cope with the task.¹⁹ Causes of work stress comprise the moral imperative of being a

good employee and performing tasks without disappointing colleagues, concerns about excessive workload, burnout, and disruption of personal life due to work, causing workers to have difficulty expressing themselves authentically and experience a lack of support or even rejection for expressing their true feelings.²⁰

In this study, an inverse relationship was found between job meaningfulness and role clarity with the incidence of depression. Meaningful work generally refers to significant work that facilitates personal career development and also contributes significantly to the workplace.²¹ A previous study has found that meaningful work is negatively correlated with depression when workers can control job satisfaction; therefore, employers and workers may need to target job meaningfulness and job satisfaction to address mental health issues.²² Individuals' assessment of co-worker support and autonomy can shape their commitment to work and subsequently reduce their stress. Individuals' perceptions of occupational factors, such as social support and how tasks are managed, can influence their commitment

to their work.²³

Lack of role clarity, such as overlapping work responsibilities between two workers, unclear workflows and responsibilities, changing work instructions, lack of sufficient information about work tasks, and the absence of a priority scale in completing work tasks, can be potential psychosocial hazards that must be identified, assessed, and controlled so as not to cause psychological and physical problems, such as depression and fatigue.²⁴ Online motorcycle taxi drivers are mostly migrants who are vulnerable to the risk of psychological distress, which can lead to mental health problems later on if not managed properly.²⁵

Employers need to educate workers and managers about mental health conditions, including depression, and make it easier for workers to avoid being exposed to taboos and be ashamed to seek help when needed. In addition, to increase awareness of depression at work, information should be provided about early symptoms of depression, such as feeling very sad, losing interest in work and social activities, difficulty concentrating, slow thinking, sleep disturbances or sleeping too much, feelings of loss of energy or fatigue, irritability, anger, and changes in weight or appetite. When workers experience depression, the stigma associated with their mental health conditions must be reduced.^{2,22} It is essential to improve working conditions, especially in the transportation sector in developing countries, by implementing employment policies regarding workload, work duration, adequate rest periods, and access to health services.²⁶ Organizations and workers need to manage work tasks and roles so as not to interfere with workers' mental health.

Limitations of this study include the fact that it has not assessed stressors from outside the workplace. The COPSOQ III instrument is intended to assess and prevent psychosocial hazards in the workplace and depressive symptoms, so a mental health assessment may be necessary to diagnose depression.

In conclusions, increasing emotional burdens and work influences will lead to increased complaints of depression in online motorcycle taxi workers. On the other hand, if the work is felt to be meaningful and the tasks given are clear, then this will reduce complaints of depression. This may be achieved, for example, by providing training and social support, implementing measures to facilitate a healthy work-life balance, and improving the drivers' mental and physical well-being.

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