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Literature Review

COVID-19 IMPACT ON AGRICULTURAL FARMER'S SOCIAL LIFE, PHYSICAL, AND MENTAL HEALTH: A LITERATURE REVIEW

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ABSTRACT

Introduction: COVID-19 pandemic disrupted in many business sectors and negatively affected the agricultural sector. The aims of this study is to determine the impact of COVID-19 in the social life, physical and agricultural farmer's mental health.
Method: This study was a literature review which the population was farmers. The process of review was; identification of literature; screening questions; eligibility using inclusion criteria; and assessment of the quality of the studies. This review was conducted by identify the relevant literature from database such as Science Direct, PubMed, Scopus and Google Scholar. The searching keywords were: "Covid-19" OR "Pandemic" combined with "farmer" "farmworker" "agricultural worker". After the articles found then articles be charted and analyzed.
Results: This review found 10 articles. The finding of this review showed that COVID 19 has impacted directly on the farmer's life both on social life, physical and mental health.
Conclusions: This finding showed that farmers problems should be addressed to prevent long-term negative consequences that impair the food system and enlarge current inequalities. Additionally, it should be developed and implemented the appropriate community-based mental health programs targeting farmers who impacted by pandemic and who are at risk to develop adverse mental health outcomes.

Keyword: COVID-19; agriculture; farmers; mental health; social life; social interaction; physical health

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1. INTRODUCTION

Agricultural development remains considered the most important of the overall economic development in Indonesia. The agricultural sector is the savior of the Indonesia economy nationally because of its growth increase (Salahuddin et al., 2021). The novel Coronavirus Disease (COVID-19) had spread rapidly worldwide, causing the deaths of many people (The World Health Organization, 2019). With the spread of COVID-19, the world economy was disrupted in many business sectors and negatively affected [4]. The Covid-19 pandemic continuing impacted on the entire world at different scales. Each individual has been impacted by the pandemic depending on their living condition. The agricultural work which is generally conducted on lands or area that away from houses sometimes requires travel to different places. In some regions, COVID-19 pandemic has also negatively affected the agricultural sector and the well-being of farmers including : the sequence of crop production, agricultural products supply, livestock production, farmers' income and employment, economic crop development, agricultural products sales model, leisure agriculture development, and agricultural products trade (Omer, S. A., & Hassen, 2020; Pan et al., 2020; Poudel, P.B., M.R. Poudel, A. Gautam, S. Phuyal, C.K. Tiwari, N. Bashyal, 2020). But the impact of COVID-19 in the social life, physical and agricultural farmer's mental health still need to be explored.

During the COVID-19, the agricultural sector in Indonesia encounters deficiency of stocks and rising commodity prices, while consumer demand is high. The marketing system was also restricted due to government order not to travel in distant and a limited transportation system. This condition causes destruction on the agricultural commodities quality (Abid & Jie, 2021; Aday & Aday, 2020; Pulubuhu et al., 2020). Prior study found that the number of agricultural workers with COVID-19, particularly hired and migrant workers, are at greater risk for COVID-19, findings which suggest these groups are at heightened risk from COVID-19 (Lusk & Chandra, 2021).

Different geographical conditions, population, and policies on agriculture in each country in the world will have different impacts on farmer outcomes, especially during COVID-19 pandemic. Government role is important such as policy development on agricultural financial support funds to the recovery of production, providing assistance to poor farmers to reduce poverty (Pan et al., 2020), stimulus for allied sector of agriculture (Singh, 2021). Different policy and different agricultural sector condition will affect farmers differently.

The agricultural area exposed to higher risks than other branches (climatic conditions, natural disasters, labor, etc.) compared to other sectors, even in pre-pandemic times. Therefore, farmers are experiencing heavy economic consequences of the pandemic period. COVID-19 and the restrictive measures towards containing the spread of its infections have seriously affected the agricultural workforce and jeopardized food security. The policy during COVID-19 that had been implemented to especially agricultural sector needs to be explored about the effect towards farmers outcome. This literature review is important to find the further recommendation for farmers life based on the prior study result on farmers' life. The objectives of this review are to determine the impact of COVID-19 in the social life, physical and mental health of agricultural farmer.

2. METHODS

This review followed the standard Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), namely: (1) identification of literature; (2) screening questions; (3) eligibility using inclusion criteria; and (4) assessment of the quality of the studies, which are discussed in the following sections.

2.1 Identification

We searched the literature published until between May 2019 to November 2021 to identify relevant literature, in electronic databases Science Direct, PubMed, Scopus and Google Scholar using the following keywords: "Covid-19" OR "Pandemic" combined with "farmer" "farmworker" "agricultural worker".

2.2 Screening questions

The electronic database search obtained Scopus 3,561 which then screened for open access obtained 2,542 articles, and after screening the title and abstract, 183 studies were included in the review. Then from the selected articles were screened with the following questions:

1. Were farmers included as a general study population? (y/n)
2. Were any kind of social, physical and mental health problems part of the study? (y/n)

Based on the results of the screening questions, 183 studies were first included in the review. Studies were excluded because of limited relevance to farmers' social, physical and mental health issues (e.g., those focused on agricultural system only or included rural communities as a whole).

2.3 Eligibility using inclusion criteria

The following inclusion criteria were then applied: does the study detail the direction on farmers' social, physical and mental health problems (+/−/0)? Among the identified articles, 173 failed to meet the eligibility criteria, hence 10 articles were included in the review.

3. RESULTS

Research into farmer mental health has been conducted in several countries, but mostly in developed countries (table 1). There was 6 countries namely India, Turkey, United States, Morocco, Canada, and China.

Impact of COVID-19 to social life Farmers

This review found that farmers difficult on accessing agricultural schemes, institutional credit, agricultural inputs, and markets; in mobilising labour; and in getting a fair remunerative price for their produce. The pandemic induced lockdown further exposed these vulnerabilities (Kulkarni et al., 2021), The barriers faced were difficulty in harvest, sell the crop, decrease in income and dietary diversity (Jaacks et al., 2021), Structural low wages and new challenges to finding work. Difficulties in benefitting from governmental support programs (Bossenbroek & Ftouhi, 2021), toward lower incomes, greater job insecurity, and more perilous immigration and legal status than the general population, which suggest additional relative financial risks resulting from the burden of medical costs or lost time away from work (Lusk & Chandra, 2021), Substandard living conditions and the spread of the SARS-CoV-2 virus, Barriers to healthcare access, and Barriers to exercising labour rights (Landry et al., 2021).

Impact of COVID-19 to physical health Farmers

This review found that farmers experienced headaches, and the other common health-related issue was back pain (Nandan et al., 2021).

Impact of COVID-19 to mental health Farmers

The review found that farmers face a mental health problems such as anxiety (Bossenbroek & Ftouhi, 2021; Cevher et al., 2021; Fang et al., 2021), Fear, worry (Quandt et al., 2021), depression (Fang et al., 2021) stress (Shafi et al., 2021), substance use disorders (Landry et al., 2021).

4. DISCUSSION

The finding of this review showed that COVID 19 has impacted directly on the farmer's life. Problems in the production and sale of agricultural products have an impact on the condition of farmers both in terms of finance, family and health. The results of other studies also found that farmers experienced many challenges due to the COVID-19 pandemic and did not get optimal support from the government (Nchanjia & Lutomia, 2021; Wegerif, 2021). Five studies (Bossenbroek & Ftouhi, 2021; Jaacks et al., 2021; Kulkarni et al., 2021; Landry et al., 2021; Lusk & Chandra, 2021) described about farmers difficulties on their social life from the production process (inputs, harvest and sell), accessing incentives, finding workers and lower income with high risk of disease. All study highlighted the farmers' difficulties in cultivating the land to selling the crops. Restrictions on mobilization by government prevent agricultural land owners from finding workers on the farm, especially if the farm land is far from the farmer's house. Economic hardships during the pandemic have also reduced the cost of income provided to workers on farms. This problem should be addressed to prevent long-term negative consequences that impair the food system and enlarge current inequalities. Furthermore, small-scale farmers are vulnerable groups living in remote areas that might not receive the social support declared by the governments. The social protection programs should therefore focus on ensuring that it reaches the eligible and vulnerable groups and expands to the groups most vulnerable to COVID-19 specific impacts. The agriculture sector workers, especially for essential workers should be provided travel arrangements and could be allowed for easy and on-farm delivery of work permits so the regulation could allow movement for agriculture workers in times of travel restrictions and lockdowns.

This review found that one study described the effect of pandemic on physical health in farmers such as headaches and back pain (Nandan et al., 2021). Perceived stress and impact of the social situations related to COVID-19 pandemic that may be determined by various other factors enhance the physical disorder risk such as headaches and back pain. Other study found that there was increase in physical symptoms, such as messy sleep cycle, tiredness and exhaustion, lower back pain and shoulder pain, headaches and migraines, stomach aches and indigestion among the employees during the COVID-19 epidemic (Rožman & Tominc, 2021). This finding should be the focus for further recommendation on protecting the employees' immunity and health especially farmers against COVID-19 and at the same time without sacrificing their productivity.

This review found that six articles (Bossenbroek & Ftouhi, 2021; Cevher et al., 2021; Fang et al., 2021; Landry et al., 2021; Quandt et al., 2021; Shafi et al., 2021) described the effect of pandemic on mental health in farmers such as anxiety, fear, worry, depression, stress and substance use disorders. Psychological problems during COVID-19 can be directed by the impact of the disease, restriction that lead to limited access to social support facilities and uncertainty and stress resulting from loss jobs and livelihoods (Semo & Frissa, 2020). The risk-population group are at higher risk to suffer negative psychological effect of COVID-19 pandemic (Rodríguez-Rey1 et al., 2020) such as farmers. Other study found that the farmer population experiences various kinds of psychological disorders caused by various things including aspects of working as a farmer and personal problems related to family and society (BUDIMAN, 2021; Paul et al., 2020). In developing countries, the majority of the people depend on their daily income and the COVID-19 pandemic has threatened their subsistence. The absence of livelihood means, fear of getting infected by coronavirus, and insufficient government's assistance has made their livelihood vulnerable and life stressful. Considering the findings, there is urgent need to develop and implement appropriate community-based mental health programs targeting farmers who impacted by pandemic and who are prone to develop adverse mental health outcomes. This study has limitation that this literature reviews are simply descriptive summaries of research conducted between certain years without deeper analysis and also because of the limited number articles of the topic.

5. CONCLUSSION

This review found that COVID 19 pandemic impacted on social life, physical and pshychological of farmers. Farmers still did not get optimal support from the government. The social protection programs should therefore focus on ensuring that it reaches the eligible and vulnerable groups and expands to the groups most vulnerable to COVID-19 specific impacts. Farmers'immunity and mental health protection during COVID-19 should be developed by community-based mental health programs.

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