



Delivering Safety and Hygiene: Online Food Delivery during Crisis

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Abstract

The COVID-19 outbreak is a clinical syndrome and may cause severe acute respiratory disorder. Coronavirus was proclaimed as a pandemic by the World Health Association (WHO) on March 11, 2020. In Malaysia, the government has implemented the Movement Control Order (MCO) which suggests all non-essential sectors be closed temporarily as to prevent the spreading of COVID-19 virus. This has caused many restaurants to become prohibited for dine-in and people are advised to have takeouts instead. Therefore, food delivery service became consumer's choice during the MCO period. The government advised all food handlers to implement a complete and proper food management system so that food safety and hygiene can be assured since many people are afraid of the potential of COVID-19 being transmitted on food surfaces or packages although it is not a typical foodborne disease. This COVID-19 crisis also affected the progress achieving the Sustainable Development Goals (SDGs) by 2030 especially on the effort of achieving SDG 1 (no poverty), SDG 2 (zero hunger), SDG 8 (decent work and economic growth), SDG 14 (life below water) and SDG 15 (life on land). This paper discusses the approach on online food delivery (OFD) during COVID-19 pandemic, the government measures to ensure food safety and hygiene as well as how approach in OFD affects and helps in achieving the SDGs.

Keywords: COVID-19, crisis, online food delivery, food safety and hygiene, SDGs

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INTRODUCTION

Food delivery service changed the manner in which we enjoy our daily meals. The effectiveness, speed and comfort offered by the business have attracted numerous potential clients (Sarah *et al.*, 2020). Food delivery services have begun since 1995 which delivered on-request and ready-to-eat meals. Generally, the food delivery service starts with the clients picking the menu and request through the food delivery platform by their smartphone, payment or affirmation of the order, preparation of the food ordered, riders for delivery services pick-up the ordered food and delivered to the clients. The COVID-19 disease outbreak in November 2019 from Wuhan, China is a deathly virus that may cause severe acute respiratory disorder COVID-19 (SARS-CoV-2) to people who are exposed to it. Coronavirus was proclaimed as a pandemic by the World Health Association (WHO) on March 11, 2020. Recently, the government announced the Movement Control Order, suggesting for all non-essential sectors to temporarily close down to prevent the spreading of COVID-19 virus. Restaurants, either local or fast food, are prohibited for dine-in and only allowed for the takeout service. Therefore, food delivery service become consumer's choice during lockdown period as following the government order from getting out and practicing social distancing (Sarah *et al.*, 2020). However, as we know, COVID-19 is an airborne disease in which the coronavirus from an infected person is transmitted through respiratory droplets or

by touching the infected objects. This situation has frightened the public as food delivery services have potential for spreading this COVID-19 virus and different kinds of food-borne diseases (Nguyen and Vu, 2020). Nonetheless, it is questionable whether the food delivery service may have represented such a risk to its clients since this pandemic is still new and there is less research that has been done related to the food safety issues during this COVID-19 era.

Issues regarding to food safety are any biological, chemical or physical agents present in the food and exposed the consumers to any food-borne diseases, called as food safety hazard (Sarah *et al.*, 2020). Food safety hazard has been categorized as biological or chemical which are portrayed as food contamination by microorganisms that are found noticeable in air, food, water, raw materials and in the human body, and also physical agents which happened when any foreign matter coincidentally introduced in food or a naturally occurring object which can cause illness or harm to the consumers. The foreign materials are related with unsanitary conditions during production, storage and distribution of food (Singh *et al.*, 2019). These two hazards control points are determined start at the receiving stage of the ordered food via online platform, preparation of food, packaging and delivery to consumers (storage conditions and duration of transport by riders). It is undeniable that many Malaysians would gain profit from online food delivery services that is currently leading the online marketplace. It increases customer preference and comfort by enhancing food choices

include the household food vendors, market stalls and others. However, according to Mahmoud (2019), food safety issues and vulnerabilities may arise from online food delivery platform even though it provides great chances in entrepreneurship and job opportunities.

Best practice in maintaining the safety and hygiene on the Online Food Delivery (OFD) service during COVID-19 pandemic

The COVID-19 cases have been continuously rising and the Government of Malaysia has taken several precautions such as Movement Control Order (MCO) starting from 18 March 2020 to prevent the virus transmission. Despite difficulties faced by food shoppers to go out buying food and the fear of going outside during a pandemic increases the demand for online food delivery (OFD) service in Malaysia which provides many job opportunities in the food delivery sector especially in urban areas. The OFD services such as Grabfood and Foodpanda have experienced increased growth in sales during lockdown, Foodpanda increase 7.5% in new riders and with increase in rider application 37% (Razak, 2020). However, the working condition of individuals who deliver food is concerned, potential health risk they might be exposed during the process of delivering food and they also need to cater to high workload due to high demands of ordered foods (Papakostopoulos and Nathanael, 2020).

The risk of COVID-19 transmission can possibly happen in our normal daily activities such as shaking hands with other people. This is because the person that we shake our hands with might be an asymptomatic infected person if they will not show any symptoms of being infected. Other than that, people tend to touch many things other than their face during normal daily activities. So, there is a possibility that all surfaces around us have already been contaminated by an infected person carrying the virus. When this happens, the virus can be easily transmitted or transferred to the fingers of other individuals touching the contaminated surfaces (McIntosh, 2020). According to a study done by Adhikari *et al.* (2020), the human-to-human COVID-19 virus is transmitted through three main routes. The three routes are direct or indirect contact transmission, short range transmission by droplets and long-range transmission by aerosol.

According to Abdullah (Personal interview, June 11, 2021), all food riders must have a sense of responsibility while performing their duty in delivering the ordered food especially during this COVID-19 pandemic by complying with the standard operation procedure (SOP) that has been set by the government. Each of the individuals should practice self-hygiene such as washing their hands or cutting their nails short before delivering the food. Some of the SOP that should be practiced during the process of taking the ordered food from the restaurant is sanitizing their hands, checking their body temperature and maintaining social distancing from food sellers or other customers. According to another interview that was done, food riders should also prioritize their self-hygiene before they start to deliver food every day. This means that they should always take a clean bath, wear clean clothing and make sure that their transportation is clean as well (Mohd Hafiz, Personal interview, June 9, 2021).

Other than that, food riders must implement the SOP practice after picking up the food from the restaurant's counter. This can be done by keeping the ordered food inside a clean bag and making sure that the food packaging is fully covered, sealed or has no opening that can cause air to enter which might contaminate the foods. Food sellers on the other hand should place the ordered food on a designated table or area so that no contact with the food rider is made when they collect the food (Abdullah, Personal interview, June 11, 2021).

It is safe to avoid direct contact with customers upon delivering the ordered food to their home as well. Customers should choose the safer payment method which requires no direct contact with the food rider such as using the online payment. Besides that, customers should set up or prepare a specific basket so that food riders can place the food inside it. With this, there will be no direct contact between the food riders and customers as the food can just be placed in front of the door.

Even if they manage to avoid direct face-to-face contact along the process, the food sellers, food riders and customers should still always wear a protective face mask. Wearing a protective face mask is recommended in many countries as one of the important preventive measures because when the air from our nose or mouth is exhaled it will mix with the air in the breathing zone of another person who stands nearby us (Adhikari *et al.*, 2020). Hence, one should not rely fully on the face mask alone because wearing a face mask probably does not prevent the COVID-19 virus, but it can limit the spreading. Therefore, it is also important for each individual to practice a safe distancing of 1.5 metre from another individual (Adhikari *et al.*, 2020).

Measures taken by the government in ensuring the food safety and hygiene during COVID-19 pandemic

Food safety refers to handling food, planning, and packaging material and activities from production to consumption that help to avoid disease and foodborne illnesses (Aprilianti and Amanta, 2020). According to the Global Food Security Index 2020, Malaysia is considered poor in food safety which ranks at 43rd out of 113 countries in terms of food quality and safety. Food safety and health researchers have determined that millions of foodborne illness reports are confirmed per year, the exact figures are tainted with confusion because most cases go unprosecuted (Uçar, Yılmaz, & Çakıroğlu, 2016). Many ministries and agencies are involved in the process since food safety must be ensured from production to consumption. In Malaysia, Food Act 1983 is the principle of law governing food safety, came into force in October 1985 with the accompanying Food Regulations for ensuring food safety.

This pandemic could potentially affect the OFD services especially health issues of individual food riders who deliver food and also the safety of food being delivered. According to the World Health Organization (WHO) there is no evidence that COVID-19 virus could be transmitted through the contact of food or food packaging. However COVID-19 is an airborne disease that can spread the virus easily through respiratory droplets and touching items that had contact with an infected person (Mehroliya and Alagarsamy, 2021). Besides that, many food services that offer OFD are not practicing food safety handling for example some food products are not properly packed which could end up being a health issue (Limon, 2021).

COVID-19 is not a typical foodborne disease, however, people around can be infected with it if they are handling food without proper hygiene and precautions (Duda-Chodak *et al.*, 2020). According to Abdullah (Personal interview, June 11, 2020), the government has advised all food sellers, food riders and customers to have less human-to-human contact in order to prevent the spread of COVID-19 virus. Other than that, the government also advised all food handlers to wear the personal protective equipment (PPE) such as masks and gloves as it is effective in reducing the spread of viruses.

In addition to wearing PPE, the government has also introduced physical or social distancing within the food industry. Another way to maintain the food safety and hygiene during this pandemic is by making sure that all food handlers follow good hygiene practices when they are handling and preparing foods (Ong *et al.*, 2020). This includes washing hands meticulously. Foods can be directly contaminated during the preparation and handling by individual with hands that have not been sanitized either in restaurants or at their own home. So, the infected hands of food handlers could be a potential source of the COVID-19 transmission. It has been highlighted everywhere that the COVID-19 virus is an enveloped virus. Therefore, the sufficient amount of time for washing hands by using soap will inactivate the virus, and it takes around approximately 30 seconds (Adhikari *et al.*, 2020).

Other than that, all food sellers must ensure that foods such as meat are fully and thoroughly cooked. Other than that, they must ensure that the kitchen has separate utensils to prepare and cook food in order to avoid the potential cross-contamination between cooked and uncooked

foods (Abdullah, Personal interview, June 11, 2021). According to Adhikari *et al.* (2020), food sellers should consider packing the food beforehand such as what is done in bakery product retail stores. This could help in protecting the food and minimising the risk of contamination.

In a study done by Ong *et al.* (2020), there are several actions that can be taken to reduce the possibility of COVID-19 transmission through food. First is by practicing proper hygiene. Food sellers must always clean and disinfect all potentially contaminated surfaces in their restaurants or homes, especially the area where they prepare the food. Other than that, food safety procedures such as washing and disinfecting hands, surfaces and all utensils that will be used during food preparation. One of the common ways that can be applied to disinfect all utensils is by appropriate processing temperatures to it. The procedures mentioned are the basic action and have already become well known within the food and healthcare industry to prevent pathogen contamination. It is also one of several ways to prevent viral contamination to the food or the packaging of the food (Ong *et al.*, 2020).

Second, food handlers should make sure that they are healthy and have tested for COVID-19 virus beforehand. This is because pre-symptomatic and asymptomatic people can spread the virus to other people and also to the surfaces. Ong *et al.* (2020) also stated that it is important for the people who handle food to be excluded from work immediately if they are suspected of being a virus transmitter or carrier. This should include food riders and not food sellers or food handlers only. Other than monitoring health and ensuring cleanliness of kitchen area, all food handlers are advised to take the typhoid vaccine to prevent typhoid fever which can be spread to other people (Abdullah, Personal interview, June 11, 2021).

Food delivering approach during COVID-19 pandemic in Malaysia in achieving the Sustainable Development Goals (SDGs)

In a previous study conducted by Barouki *et al.* (2020), they mentioned that this COVID-19 crisis is affecting the progress made in achieving United Nations' Sustainable Development Goals (SDGs) by 2030. In another previous study, this pandemic has shown that the efforts made in addressing poverty, hunger, good health and well-being may encounter serious problems and difficulties (Fenner and Cernev, 2021).

According to Abdullah (Personal interview, June 11, 2020), this COVID-19 crisis has affected not only the health and well-being of people but also their financial condition. This has driven many job sectors to cut off the number of workers and some sectors are forced to be closed. Moreover, this has added to the amount existing number on unemployed people who are having trouble finding a new job. This problem contributes to the challenge in achieving SDG 8 (decent work and economic growth). In addition, the efforts made to achieve SDG 1 (no poverty) and SDG 2 (zero hunger) are also facing difficulties as the number of unemployment increases and causing many people having problems due to limited access to food supplies (Nchanji and Lutomia, 2021).

Since food is one of the essential needs, many demands for it occur especially during the MCO. However, ever since the movement control order (MCO) being implemented, many people are unable to go out to buy food or dine in restaurants like before. So, the other option that is available for people is to use the OFD. This somehow opens a job opportunity to many people by becoming food riders to deliver the food from restaurants to their customers' home. This could be one of the ways to ensure the effort of achieving zero poverty and zero hunger will be continuous until it is achieved in the future (Abdullah, Personal interview, June 11, 2021).

According to Li & Miroso (2020), OFD services also create environmental issues regarding the use of plastic. The consumer seems to believe that the use of single use food plastic packaging is more hygienic and safer to protect food from virus or contamination, thus

there is a rise in the volume of food packaging during COVID-19 pandemic. Due to the increase in uses of plastics especially within food industry, it could possibly slow down the progress made towards SDG 14 (life below water) and SDG 15 (life on land) if the plastic materials did not undergo proper disposal (Mohd Hafiz, Personal interview, June 9, 2021).

Hence, post-pandemic measures should simultaneously be produced across combinations of multiple SDGs such as increasing job opportunity, reducing poverty, improvement on the environmental condition and improvement on the economic activity in order for us to deliver the SDGs by 2030 (Barbier and Burgess, 2020).

CONCLUSION

Even though there is no direct evidence that COVID-19 is a foodborne disease, the process of handling food or any contact with food cannot be considered as completely safe especially during this ongoing pandemic. Since food is a product of the first need, and therefore there is a demand for it all the time, it is very important to always monitor and check the health of staff who are in charge of handling food. It is also important to identify all infected people, especially asymptomatic carriers of the virus, while at the same time preventing its spread. To ensure the safety and hygiene of food during this COVID-19 crisis is practiced, it is safe to say that everyone ranging from food seller, food handler, food riders and customers should be responsible to take part in it.

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