

AN EVALUATION ON THE THREATS CAUSED BY COVID-19 ON FOODS AND FOOD&BEVERAGE INDUSTRY

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Abstract The purpose of this study is to evaluate the relationship between Covid-19 and the food in the light of all information that has been obtained till now. In the light of information being obtained and other outbreaks being experienced, it has been stated that there was no risk of transmission of this virus through the food and farm animals but that there could be a risk of transmission from workers, surfaces, a through the food production equipment. As a result of the literature review, it has been understood that the virus that causes Covid-19 disease does not transmit through food but on surfaces in particular groups in order to survive within certain time limits. These evaluations have caused all attention to be directed to humans (workers) and the areas relating with production. Within context of information that has been obtained till today, the most important proposals are focused on people working areas. This situation prepares the ground for focusing the measures to be taken on these two groups. In addition, wild animal production has been announced to be one of the fundamental actors concerning the risk of transmission.

Keywords:
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1 Introduction

Through the centuries, various epidemic diseases have caused for humans to experience different problems and while permanent solutions could be produced at certain times, sometimes the continuing new epidemics have revealed even bigger obstacles. The pandemic that is experienced today at global level (Covid-19) has affected many areas (economics, health psychology, sociology etc.) with the number of countries, spreading speed, and death incidents it has caused and it has turned into a phenomenon on which different and famous people and institutions have focused their researches in relation to their areas of specialization.

Number of studies relating with food and beverages sector or the relationship between food and beverages and Covid-19 are quite limited for the time being (Power *et al*, 2020; Miles, 2020; Desai & Aronoff, 2020; Jalava, 2020; Ghoch & Valerio, 2020; Wittwer, 2020; Gangopadhyaya & Waxman, 2020; Lu *et al*, 2020).

In the environment causing pandemic diseases, there are various actors being involved such as wild animal consumption and cross transmission. Eating and drinking action which is a fundamental requirement for humans to continue their lives, bears significant importance in this respect. As said requirements are met from food, investigation of this subject relating with pandemic diseases comes to the forefront. In the researches being conducted it attracts attention that in the cases where food relating with disease play a role, the transmission act mainly occurs by means of viruses with a significant rate (67%) (Mead *et al*, 1999:610; Yépiz-Gómez *et al*, 2013; Dublineau *et al*, 2011; Mullis *et al*, 2012; Yezli and Otter, 2011; Indriani *et al*, 2010; Casanova *et al*, 2009; Deneen *et al*, 2000; Pönkä *et al*, 1999).

The purpose of this study is to examine the impacts of pandemic diseases that occurred on earth and especially Coronavirus (Covid-19) on food and the aspects relating with their transmission and to determine the fundamental differences in between them. Hence, in the study with regards to the relationship between pandemic diseases and food and beverages, the relationship of Covid-19 that is experienced today and food has been examined by considering the studies that are conducted as specified in the literature and a general frame has been determined. In this way, it was aimed to provide answers to certain doubts not only as relating with

food but also with respect to their consumers and enterprises such as hotels and restaurants that make production and provide services in relation to food.

2 COVID-19 and relationship with food production area

In the researches being conducted recently, it is stated that Covid-19 is rapidly being transmitted widely from people to people but that there are no evidences proving that it is contaminated from food to people, yet. Similarly, it has not been determined that it gets contaminated from farm animals. As measures it is mentioned about making the workers playing role in the preparation of food and beverages to be made conscious and taking necessary sanitation measures (COVID-19 Advice For Food Businesses, 2020 ,<https://www.safefood.qld.gov.au/Covid-19-advice>) as being required.

With the Covid-19 outbreak being experienced, millions of people continue their work from their homes. But the situation is different for the food and beverage production industry. In order for the production of food and beverages not to be disrupted, it is required to be present at production sites and to bear the responsibility to continue the production activities. Although many enterprises such as restaurants and cafes have closed their doors today, they still continue with their activities on home delivery terms or take away method. In the food chain where there are many number of stages, more attention must be given to each stage due to pandemic disease and to contribute for creating awareness in this respect. Coronaviruses search for living areas with the aim to reproduce (humans, animals etc). Food can not meet these requirements of viruses (World Health Organization, 2020).

In his study, Shahidi (2020) has evaluated the situation where Covid-19 influences food safety. In the said evaluation it is underlined that no evidences can be presented as proving that Covid-19 is effective on food with respect to food safety. It is known that many of the infection creators that are known in relation to food have animal origins with a significant rate (75%). It is recommended as an important application to make food become subject to cooking process before consuming them. Situations where Covid-19 viruses contaminate from the packages covering the food and to cause infections by this way, yet. Although it is known that numerous disease causing

microorganisms exist that cause contamination through food, no findings or evidences have been clearly submitted in relation to viruses (Newell *et al*, 2010:3).

While many questions await to be answered in relation to Covid-19 outbreak, it is inevitable that certain doubts will arise during this process. People have certain concerns regarding food safety in relation to this pandemic disease. While people closely monitor the news relating with this pandemic, they try to obtain information about provision or preparation of food.

No research has been conducted till now which proves that Covid-19 virus, on which new researches are rapidly being continued, is transmitted to humans through food and food packages (Brehaut, 2020). Food and beverage businesses are responsible for the health of customers. Due to the basic structure of this sector, restaurant employees process food. This adventure, a process that stretches from soil to plate, involves risks of all sizes. Even if studies on the current pandemic continue, these risks may arise at any time and may have negative consequences.

3 Discussion and recommendations

There are researches being conducted about permanent presence of Covid-19 virus on different surfaces (van Doremalen *et al*, 2020). Although there are various discussions regarding the use of gloves during food processing, the use of food “disposable gloves” is not recommended according to the World Health Organization (World Health Organization, 2020:2). Furthermore, there are studies in literature that prove permanent presence of coronaviruses on gloves (Muller *et al*, 2008; Sizun *et al*, 2000). Nowadays when information change rapidly, this particular being mentioned continues to be debated.

To be supportive, with the aim to eliminate coronaviruses it is recommended for disinfectants to be used. Because due to their structures coronaviruses can be easily destroyed with disinfecting processes (U.S. Department of Agriculture, 2020). In this respect, disinfectant usages get widespread especially for personal cleaning, surface cleaning and equipment cleaning.

Covid-19 (Iuva Fact Sheet on UV Disinfection for Covid-19, <http://www.iuva.org/COVID-19>) viruses are also within this context. It is especially known that coronaviruses remain for long times on steel surfaces (Kampf *et al*, 2020). Therefore, when it is considered that types of knives that are used in commercial kitchens which make wide scale production, it is recommended that it would be appropriate for these knives to be kept in steriliziter knife cupboards providing ultraviolet rays.

Raw food should be kept separately. Especially with respect to cross contaminations in commercial kitchens, importance of application of color codes (red: uncooked meat; brown: cooked meat) was revealed once more within frame of kitchen discipline.

A fact which is known is that Covid-19's virus continues to exist on surfaces and in appropriate environments for a certain period. When it is looked from this perspective it is seen that enterprises such as food producers an restaurants which provide services based on food and which produce food are also under risk. The particular that is emphasized most in the studies is related with personal hygiene and environmental hygiene. Without doubt, applications such as HACCP will have to be revised and new regulations and applications will follow these.

Many areas of life have been affected due to epidemics in the world. One of these areas is the food and beverage industry. The Covid-19 pandemic, which has spread to such a wide area, slowed down the activities of food and beverage businesses, whose purpose is to make profit, and even brought it to a halt. Food and beverage businesses must survive as a result of these difficult conditions. Some moves are required for this purpose. To make these moves, knowledge and application skills in the kitchen/service department are required. There is something to know about the epidemics in the past years and the Covid-19 pandemic in terms of food and nutrition. At the same time, it is very important to put the information that needs to be known into practice.

In order to minimize the possible risks caused by the adverse effects of epidemic diseases in food and beverage businesses, business managers should have a broad knowledge base. It is vital that this information is passed on to lower-level employees.

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