



Application of hygienic and sanitary standards for cookware against food quality

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Abstract

Aim: This study aimed to investigate the relationship between the hygienic and sanitary standards applied to cooking utensils and the quality of the food produced.

Methodology: The methodology was descriptive and qualitative, and the data came from previously published scientific articles and journals.

Findings: According to the research results, various materials, including metal, stainless steel, wood, and Glass, are suitable for cooking utensils. Stainless steel is the most sanitary and hygienic standard because it does not rust and is simple to clean, meaning it will not pollute the body or leave behind any microbes or pathogens. Glass is another material generally accepted as safe. However, its fragility makes it vulnerable to breakage.

Implications/Novel Contribution: Cooking utensils can be considered the most important component used in food processing and will affect the overall quality of the food served. As a result, it is necessary to discuss and explain further related to the hygienic and sanitary standards application of cooking utensils to food quality. Both the findings and the subsequent discussion of this research will improve the overall quality of the food.

Keywords: Hygienic, Sanitation, Cooking Equipment, Food Quality.

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INTRODUCTION

One of life's most necessities is food. Among the most fundamental human requirements, it plays a vital role in maintaining good health. Yet, food is not just a collection of nutrients and other compounds that act independently but in concert with one another within the food and across different food combinations (Shahbaz, Tiwari, Jam, & Ozturk, 2014; Tapsell, Neale, Satija, & Hu, 2016). As a result, it's important to eat healthy foods. But it should consider more than just nutrition, like how the food is prepared and served. It's necessary to ensure that foods are free of any biological, chemical, or other contaminants that could compromise consumer health. Processing foodstuffs in a safe manner is crucial. Good food quality exists when eating it won't make you sick from eating something tainted with poisonous chemicals or pathogenic microorganisms.

Food processing, storage, and transportation must all adhere to strict guidelines to maintain the nutritional value and reach consumers in good health. Cleanliness and sanitation practise, particularly during food processing, are also critical in determining whether or not a food is healthy. The most critical factor is food preservation, which may unintentionally play a role in spreading pathogenic germs in food. It's essential to think about how people act when processing food. Hazards to the food supply can result from the mindset and actions of food processors who pay no heed to safe, hygienic practices. A lack of knowledge and education contributes to the absence of hygiene-related attitudes and behaviours in the food processing industry.

Hygiene standards, particularly with regard to food quality, are still quite low in Indonesia. This is because the pattern and trend of the food quality are important despite the origin of the food (Liu, Micha, Li, & Mozaffarian, 2021; Ziauddin, Khan, Jam, & Hijazi, 2010). The application comes from Western nations where regulations called Good Manufacturing Practices (GMP) have been widely implemented in food processing sanitation. Meanwhile, the Good Food Processing Method (CPPB) has yet to be fully implemented in developing countries like Indonesia.

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Diarrhea, worm disease, and food poisoning are just some health issues resulting from improper hygiene and sanitation during the food processing stage. The people handling the food, the location where the food is served, the tools used to prepare and store the food, and the way the food is presented all good places to start when implementing food hygiene and sanitation. This highlights the importance of using clean cooking utensils to preserve food quality.

With this background in mind, it's clear that cooking utensils are crucial in determining the final product's quality. That's why it's important to talk about how using clean, sanitary tools in the kitchen can improve the quality of the food you serve your family and friends. Ultimately, it will aid in making better food.

METHOD

This study employs a descriptive qualitative approach to research by conducting a literature review. Articles and journals discussing the impact of hygienic and sanitary standards on cookware quality provide the bulk of the data used in this study. Then the information gathered is explained in terms of the study's stated goal, which was to visualize how high hygiene and sanitation standards for cooking utensils affect food quality.

RESULTS AND DISCUSSION

Hygienic and Sanitation

The concept of hygiene is related to and rooted in the relationship between hygiene and good health maintenance (Vandegrift et al., 2017). Hygiene is also embedded in a broad and complex set of values and social sentiments related to concerns about privacy, neatness, social prestige, comfort, respect, and civilized character (van der Geest, 2015). In particular, personal hygiene is a practice that contributes to maintaining health and preventing disease that can be supported along with the development of sanitation that can improve nutrition (Kumar et al., 2020). Meanwhile, sanitation comes from the Latin word meaning healthy. Low levels of sanitation cause several diseases, making sanitation a substantial public health problem concurrent with a clean water supply (Reddy & Snehalatha, 2011). Preventing the spread of infectious diseases is often the main reason the public invests in sanitation (Ross et al., 2021).

Meanwhile, research on sanitation practices requires skills, creativity, and appropriate data collection methods (Simiyu, 2022). In the food industry, sanitation is creating and maintaining hygienic and healthy conditions. Food hygiene refers to all the conditions and measures needed to ensure the safety and suitability of food at all stages of the food chain. Sanitation is an applied science that combines principles from design, development, implementation, maintenance, and repair and that can improve hygienic conditions and practices. Meanwhile, the application of sanitation refers to hygienic measures designed to pay attention to a healthy and clean environment suitable for preparing, processing, and storing food and food.

Cooking Equipment and Food Quality

Multiple factors, including food processing equipment and food equipment, are considered when applying food sanitation (Amqam et al., 2021). Assessing food-preparation behaviours is difficult to standardize, and numerous indicators are required (Ahmad & Waheed, 2015; Méjean et al., 2017). It's important to think about how easy it will be to clean the equipment you choose to use in the food processing process and the materials it's made from. It is also important to use materials that will avoid causing reactions with foods and food processing equipment. A cleaning tool's effectiveness mainly depends on the tool's design. This is because certain trace metals present in food at sufficiently high concentrations can harm human health due to environmental contamination (Dan & Ebong, 2013). In part, food hygiene practises can be aided or hindered by the design of the kitchen itself (Mihalache et al., 2022; Waheed & Jam, 2010).

Metals like iron and copper help build the apparatuses used in the food processing industry. Still, they must not come into contact with the food themselves because, despite their durability, both metals can oxidize the nutritional components of food, particularly oil, leading to potentially dangerous free radicals. Yet, it is still used in various contexts, most notably in frying pans and other kitchen implements. Most cooking vessels are made of a combination of metals, some of which can melt at high temperatures or corrode at acidic or alkaline levels (Onyeka & Ibeawuchi, 2018). Instead, a wooden stirrer is a standard. Wood does not contribute to the oxidation of food ingredients, but it does allow liquids to penetrate easily due to its porous and easily weathered nature. Wood

also has properties that make it difficult to clean, which means microbes can grow in the pores, which are also challenging to clean, and cause an unpleasant odour. Products containing wood may also be contaminated due to their wooden construction. Wooden cutting boards, for instance, harbour harmful bacteria because they are so hard to clean (Sekoai et al., 2020).

Indeed, other materials like aluminum are frequently used in the construction of cooking utensils, but this makes them more flimsy. The aluminum used in construction can quickly corrode in the presence of acids or alkalis. Because of its susceptibility to electrolysis at high temperatures, there are better choices than aluminum for kitchen implements. The problem with aluminum consumption is that the human body can only efficiently excrete minimal aluminum. This allows for widespread exposure to aluminum at levels far beyond what the human body can safely tolerate (Dordevic et al., 2019).

Material such as stainless, also known as stainless steel, does not react readily with food. Because it is not corrosive, this metal can be used in the kitchen without compromising the food's taste (Kaushik & Bala, 2010). Therefore, this material can be used as a tool in the food processing industry without fear of contamination. The design is not only sturdy but also simple to maintain. All kinds of foods can be prepared using this stainless steel. Meanwhile, glass is the most reliable material for food preparation equipment. Glass, like the earlier building material, has the drawback of being easily cracked, so it is rarely used as a food processing tool.

In recent decades, there has been a growing demand for healthy, high-quality food, which calls for effective responses to the industry's inherent complexities and challenges in governance (Petrescu, Vermeir, & Petrescu-Mag, 2020; Zheng & Hu, 2022; Borroni et al., 2017). Qualified foods offer a wide variety of options, are clean and healthy, have a well-balanced nutritional composition, and are tasty, attractive, and aesthetically pleasing. Raw materials, water, equipment and facilities, employees, and pest animals should not introduce harmful microorganisms into finished products. A comprehensive sanitation plan will address all of these points:

- The sanitation of water and processing equipment and facilities.
- The sanitation and safety of employees.
- The prevention of further microbial contamination at each stage of production.
- The distribution of finished goods.

Given the ease with which microorganisms can multiply in food products, limiting their presence has always been essential.

If you want high-quality results in the kitchen, you need high-quality tools. Stainless steel, which has no corrosion effect and is also easy to clean, is the best material for the cooking utensils mentioned because it does not leave pathogens after use. Cooking utensils made of glass are another possibility, but they are prone to breaking and, therefore, not very long-lasting.

CONCLUSION

Hygiene and sanitation are essential during the preparation and cooking of food. Stoneware is an often-overlooked but crucial part of maintaining sanitary conditions in the sanitation. According to the literature review, stainless steel is the best material for cooking utensils because it is durable and corrosion-resistant, meaning that it will not affect the health of the body and will aid in keeping food and the environment clean.

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