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Personal Hygiene Behaviors in Egyptian TV Cooking Shows: An Exploratory Study

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ARTICLE INFO ABSTRACT

The research purpose to examine personal hygiene **Keywords:** behaviors of chefs in Egyptian television cooking shows, as Personal Hygiene, these programs play a pivotal role in promoting food Safe Food handling in a safe manner via television, adding to use Handling, Cooking recommend them to offer a good examples hygienic Shows, Chefs, Food cooking practices for viewers. Data collection technique Handlers. used observation sheet to collect data from 37 episodes of ten popular Egyptian television cooking shows, during the period of January of 2022. Data was gathered and analyzed by IBM SPSS Version 23.0 software. The results revealed in general that there are many violations of recommended safe standards for food handling addition to little interest is paid (JAAUTH) to personal hygiene behaviors in Egyptian television Vol. 22, No. 2, cooking shows. One of the most common types of mistakes (June 2022), the rareness of hand washing during food preparation and **PP.74-88.** cooking in these shows adding to utilize of dirty cutting shingles. Similarly, putting food stuffs and spices with bare hands followed by wiping dirty hands with dry cloth. Insights are provided to develop effective general strategies to employ of television cooking programs as a mean to reinforce good hygienic behaviors education among the audiences. This is one of the rare studies that give an Egyptian judgment on displaying hygienic behaviors throughout preparing and cooking food in some of common television cooking programs.

1. Introduction

FAO (1995) documented that inadequate hygienic knowledge drive to bad handling behaviors of foods according to food microbial contamination evaluation. Also, World Health Organization (2006) identified that there are many and various factors reasoned food borne illness such as inadequate knowledge of food safety measures and procedures; inadequate personal hygiene behaviors; cross-contamination; and temperature improper during storage; preparation; cooking; and holding of food. According to Park et al. (2010); Nee and Sani, (2011); Ismail et al. (2016), Lee et al. (2017), unsuitable food preparation practices and absence of food safety awareness could be a source of food borne illness. In spite of food contamination can occur at any food production stage, a high rate of foodborne diseases have been occurred as a

result of mishandled or inappropriately cooked foods in television cooking programs kitchens or other different premises of food production (Fotannaz, 2011; Bodenlos and Wormuth, 2013). WHO (2015) estimated that thirty one percent of food borne hazards caused in more than 400000 deaths and 600 million foodborne illnesses in 2010. Foodborne diseases are one of important reasons that affect economic growth negatively, furthermore passive economic outcomes for man' health; food industry; and national economy of developing and developed countries both as well (Isara et al., 2010; Baser et al., 2017; Stratev et al., 2017; Luo et al., 2019). No doubt those developing countries were been mainly influenced by foodborne illnesses since of low personal hygiene levels (Odeyemi and Bamidele, 2016; Odeyemi et al., 2019). The European Food Safety Authority "EFSA" (2016) reported that forty five thousand cases of food poisoning reasoned 3892 hospitalizations addition to 17 deaths in 2015 in the EU.

Food handlers play a pivotal role in carrying pathogens negatively from contaminated sources such as raw meat and fish to a ready to eat or cooked food (Sheth et al., 2011; Anuradha and Dandekar, 2014; and Lee et al., 2017). Unhygienic food handling practices drive to food contamination, growth and survival of food borne pathogens (Isara et al., 2010; Osaili et al., 2013; Ismail et al., 2016; Marzena et al., 2018). Poor and Inadequate hygienic behaviors of food handlers in the area of food preparation such as sneezing, coughing, wearing dirty clothes, washing hands improperly, using unclean equipment and tools mainly contributes to foodborne illnesses and vice versa where good knowledge and safe and healthy food handling can help control foodborne illnesses (Chassy, 2010; Bou-Mitri et al., 2018; Hessel et al., 2019; and Soon, 2019). Villani et al. (2015) agreed with Egan et al. (2007) that food handlers were in charge of 97% of all spread foodborne illness in the catering sector addition to hands of food handlers were the most usual carrier for pathogens, consequently this might a reason of cross-contaminations, spread pathogens hazard as result of possible infected of food handlers. Similarly Food handlers may also considered as a vehicle or source of transmitting several food-borne pathogens such as Hepatitis A; Shigella; Salmonella; and Staphylococcus by their bare hands; mouth; hair; cuts; and skin (Stratev et al., 2017; Luo et al., 2019). All food handlers in a food preparation and production areas have to keep a high level of hygienic attitudes which includes the three basics rules of personal hygiene such as body and clothing cleanliness, washing hands properly and, where necessary, adding to healthy practices for assuring food safety (Nee and Sani, 2011; Abdul-Mutalib et al., 2012; Hassan and Dimassi, 2014; and Akabanda et al., 2017).

Phillipov (2013) and Borda et al. (2014) mentioned that television has become a facility in pervasion food program and increase of the popularity of chefs in few recent years. Redmond and Griffith (2005); Woods and Bruhn (2016); and Cohen and Olson (2016) assured that forty four percent of the shows audience indicated that the healthy behaviors watched in television culinary programs affected their possess food handling behaviors. Therefore, the aim of this research is examine personal hygiene behaviors of chefs in Egyptian TV cooking shows.

2. Review of literature

TV Cooking Shows

Mathiasen et al. (2004) cleared that chefs or presenters on popular television culinary programs often do food safety errors where these television cooking shows have developed and turned from concentrating on educating to focus on entertaining or competitive, as well. According to De Solier (2005) and Clifford et al. (2009), the majority of the culinary programs are presented into the studio kitchen, but some other cooking programs are been conducted in hotels' or restaurants' kitchens, or other open areas such as garden in which a popular chef is frequently involved. Phillipov (2013) mentioned that culinary programs are considered one of many growing number of television shows that stump the classical difference among recreation, educational, and competitive programs, the primary component is the cooking presentation. Diehl et al. (2010) and Matwick and Matwick (2014) mentioned that in spite of culinary shows and food programs are seen as entertainment sources, they are also considered to some extent educational, so they are major and excellent vehicles for providing knowledge about personal hygiene behaviors to viewers specially house wives. Matwick and Matwick, 2014; Backer and Hudders, 2016; and Geppert et al., 2019 indicated that the last few decades, interest in food has increased with television culinary devoted channels nationally and globally, to reach millions of viewers. This popular chef often prepares the food or share as food cooking observer, whilst shows providers do one or more plates during the show duration (Borda et al., 2014; Geppert et al., 2019).

Personal Hygiene

Park (2002) explained that the term of hygiene is obtained from word of "Hygeia" which was known in Greek mythology as the health goddess, it is also defined as the science of health and main pillars provide to healthful living. Redmond and Griffith (2003) reported that 21% of foodborne diseases were been caused by consuming contaminated food. The recommended personal hygiene standard aim is to confirm that the food is safe and to improve, promote personal cleanliness standards (Al-Shabib et al., 2016; Pal and Pal., 2017). According to Abdul-Mutalib et al. (2012); Wambui et al. (2017); and Adetunji et al. (2018); personal hygiene behaviors have to involve bathing before work beginning; wearing clean and tidy uniforms and gloves; washing hands after smoking, eating, toilet, coughing, and sneezing; care of nails to be short and clean; and avoid watches and jewelry. According to Assefa et al. (2015), poor personal hygiene handlers can contribute to 97% of foodborne illness outbreaks. Abdul-Mutalib et al. (2012) cleared that bare hands of food handlers' may be transfer harmful pathogens and may reason of cross-contaminations and foodborne illnesses. This can be minimized by proper hand washing and other hygienic practices (Bas et al., 2006; Tóth, et al., 2017; Thakadu et al., 2018).

According to Karabudak et al. (2008) majority of food cookers and house wives have inadequate information on how foodborne illnesses could be prevented. Many studies showed that television kitchens were the most common risk factors which contributed to the occurrence of foodborne disease (Borda et al., 2014; Geppert et al., 2019). Therefore good knowledge and education are a significant factor in enhancing and

ensuring convenient food practices (Jeinie et al., 2015; Srinivasan et al., 2020). Finally, television cooking shows could be employed to give good support for hygienic behaviors such as properly hand washing; wearing clean, neat, and tidy uniforms, gloves; and hair net.

The researchers based on this backdrop, assumed that all Egyptian TV culinary shows presenters applied to the procedures and standards of personal hygiene and safe food handling.

3. Methodology

Type and Nature of the Study

This research depended on utilizing a qualitative or descriptive research. The descriptive study aims to search; collect; and describe in-depth to personnel hygiene practices in cooking shows in Egyptian channels. Descriptive research is characterized by its focus on the quality and depth of the phenomenon under study, which aims to research without focusing on quantitative results, where watching of the cooking shows, regardless of the occasional time and those who represent them, whether they are chefs with wide reputation or unpopular chefs.

Study population and sample

The study population included all the cooking shows presented on the Egyptian channels, and since it was difficult to enumerate all programs due to their large number and due to the capabilities of the researchers and the limitations of time and cost, the researchers resorted to studying a convenience sample of these shows. The Convenience sampling is defined as one of the types of non-sampling probability, where sample individuals are selected according to their accessibility and their spatial and temporal proximity to researchers. This type of sampling is often used in descriptive research, which aims to deepen the understanding and description of the phenomena under study as well as how often. All cooking shows on Egyptian channels have been listed, where the number of shows reached 40 shows, and the programs nominated by the researchers were reached to 10 shows. This sample covered all the days of a month. The authors used also purposive sampling to select the experts to give the researchers the best evaluation to used observation sheet, as well as providing accurate information about the studied phenomena as mentioned by (Saunders et al., 2009).

Research Method

Data collection technique used observation sheet to collect data from 37 episodes of ten popular Egyptian TV cooking shows with a length of 45 to 60 minutes, during the period of January of 2022 (appendix A). The observation sheet was designed to achieve the aim of the research with 5-point Likert-style scale ("1= Never" and "5= Always"). It is divided into three segments, the first section related to collect data on general knowledge of personal hygiene which includes body and clothes cleanliness commitment of culinary show provider. The second part included hand washing rules while the third part was designed to evaluate healthy practices of them during the show. Items of observation sheet was extracted from earlier studies of (Borda et al., 2014; Matwick and Matwick, 2014; Cohen and Olson, 2016; Geppert et al., 2019;

Delea et al., 2020). This observation sheet was watched; reviewed and analyzed by authors who have a general expertise is in the personal hygiene issue and five experts with a related academic scientific context in food hygiene management and safe behaviors at food production areas. Data was gathered and analyzed by IBM SPSS Version 23.0 software. The observation sheet reliability of the research was investigated by employing the Cronbach's α coefficient for various items. The Cronbach's α value was (0,753) showed that the list assessment was reliable (Hair et al., 2010).

4. Results and discussions **Descriptive data**

The majority of the culinary programs in this research was educational (eighty percent), had professional chefs (sixty eight percent) and was of thirty to sixty minutes (sixty three percent). The results revealed in general that there are many mistakes were documented in most of the Egyptian TV cooking shows where shows providers had a very low score of personal hygiene behaviors and inadequate safe practices during food handling and cooking as follow:

Personal hygiene issue includes several basics rules; the first rule involves protecting the food from contamination by maintaining chef's body and clothing cleanness by utilizing clean and sanitized aprons, hairnet, gloves etc. But the results cleared that sixty one percent of them were not commitment with these measures even when popular chefs were existed. And this agreed with previous studies' results mentioned by (Jianu and Golet, 2014; Pal and Pal, 2017; Delea et al., 2020). The second rule of personal hygiene standard includes hand washing since they play a vital and pivotal role as a source for various and many typologies of food associated pathogenic (Montville et al., 2002; Mathiasen et al., 2004; Irlbeck et al., 2009). The results showed that almost all usual mistakes were correlated to insufficient and lack hand hygiene and this consistent with that mentioned by (Cohen and Olson, 2016; Maughan et al., 2016; Woods and Bruhn, 2016; Borda et al., 2014). These inadequate and poor practices include hand washing lack before/after handling foods (noticed in seventy one percent of all shows evaluated). Likewise, many of chefs at Egyptian television food cooking shows had lengthy nails and often worn watches and rings and sometimes bracelets, which maintain pathogens during the hand washing process, (seen in fifty four percent), these poor behaviors were been followed by more unhygienic behaviors such as un washing hands after smoking, cough, eating, toilet, sneeze adding spices to plate, touching their eyes, nose, hair, or wiping sweat in the most of cooking shows assessed (Perceived in sixty eight percent). In addition several chefs appeared to make it easy to clean their hands with the same dry cloth or towel among each operation throughout duration of the cooking show programs (observed in thirty six percent of all shows assessed). Utilizing the same dry towel to wipe and clean chefs' hands, especially after handling raw meat was not appropriate as it spreads food pathogens and increases the cross-contamination risk (spotted in forty two percent of all shows assessed), furthermore poor and insufficient hand washing simplified and supported moving of bacteria, viruses, parasites and harmful yeasts such as E. coli from infected food handlers, chefs and chefs' assistants by feces and this agreed with mentioned by (Enriquez, 1997; Abdul-Mutalib et al., 2012). According to Medeiros et al. (2001) and Assefa et al. (2015), the cost of inadequate and lack hygienic behaviors were so high, for several reasons since un washed hands properly were been considered a primary source of different harmful microorganisms such as bacteria which could move from raw food stuffs to another cooked food. Similarly, it can move to utensils; shafts; handles and other surfaces by hands using (Michaels and Ayers, 2000; Montville et al., 2002). There are several previous researches that showed that the behavior of hands wiping or cleaning is considered the fundamental basic rules of personal hygiene behaviors, but at the same time it is the hardest behavior to commitment (Larson et al., 2000; Pittet, 2000; Clayton and Griffith, 2003). Finally, television culinary programs could employ as a mean to reinforce optical displaying of hand washing, in the case of persons in charge realize the effect of these shows in improving and maximize suitable behaviors that related to hygienic practices.

The third personal hygiene basics rule covers healthy practice during food handling, preparing and cooking. The results identified that the habit of tasting food during handling, preparation, and cooking by used or dirty spoon for several times throughout duration of cooking programs (noticed in forty nine percent of all shows evaluated). Moreover, utilizing fingers to savor food was spotted (appeared in thirty one percent of all shows evaluated), which was happened numerous times with the same food (noticed in twenty four percent of all shows assessed). Including all rules, behaviors and practices concerning personal hygiene in the used observation sheet were not possible, however the researchers and academic experts recorded the majority of poor practices and which includes touching the head and nose during cooking (seen in eighty two percent of all shows assessed), and smelling food by make nose very close to it (perceived in fifty nine percent of all shows evaluated), use of unwashed cutting boards for food processing (seventeen percent), food programs chefs did not utilize thermometers during show to assess foods doneness and in many episodes it perceived that meats were not cooked properly (thirty three percent), adding food ingredients, spices and herbs with bare unwashed hands without washing, and not separating cooked and raw food (observed in seventy six percent of all shows evaluated), this unhygienic behavior could be related to the risk of moving harmful bacteria and other pathogens to food, adding to store foodstuffs improperly allow to these harmful microorganisms pathogens to double and cause foodborne illnesses which corresponds to findings of previous studies (Mathiasen et al., 2004; Irlbeck et al., 2009; Kahraman et al., 2010; Anuradha and Dandekar, 2014; Cohen and Olson, 2016). Hedberg et al. (2006) and Lee et al. (2017) assured that dirty and unwashed hands are considered as basis for thirty five percent of food contamination and outbreaks in US restaurants. Using clean, neat and tidy uniforms; hair net; addition to utilizing clean equipment; tools; surfaces; and gloves are considered as plain and successful safety measures to bypass different food hazards and to prevent spreading foodborne diseases (Littlejohn, 2013; Borda et al., 2014). Previous results studies of Redmond and Griffith (2005); Anuradha and Dandekar (2014); and Woods (2015) revealed that personal hygiene behavior perceived in cooking shows affect audience behavior adding to many viewers will mimic these practices.

5. Conclusion

The research purposes to examine personal hygiene behaviors of chefs in Egyptian television cooking shows. Likewise investigating of the Egyptian cooking shows by professionals in the personal hygiene rules and healthy practices at different food production areas, using observation sheet enabled determining of similarities and differences in personal hygiene behaviors of these shows. The results revealed that insufficient and low of personal hygiene standard adding to lack of healthy practices and safety measures taken to minimize the probability of food contamination are repeated in Egyptian TV cooking shows. Time stresses have no be a justification to make mistakes related to personal hygiene issue and healthy practices of food safety. The research findings do not clarify any evidence if Egyptian TV cooking shows presenters acts different at broadcast on air than in actual life outside of television studios, whether they give little attentiveness to personal hygiene behavior or safe food handling are skipped out due to time constraints. This research is considered one of the rare studies that give an Egyptian judgment on displaying of hygienic behaviors through preparing and cooking of food in some of common television cooking programs. So, recommend develop an effective general strategies to employ of television cooking programs as a mean to reinforce good hygienic behaviors education among the audiences.

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Appendix A

Observations Sheet of Personal Hygiene Behaviors in Egyptian Television Culinary Shows (n =37 episodes)

We're conducting research on examining personal hygiene behaviors of chefs in Egyptian TV cooking shows. This observation sheet will help us to complete the research.

A. Please answer the following question:

1. Type of Television Cooking Shows

O Educational/ cultural

O Entertainment

O Competitiveness

2. Type of Television Cooking Shows Presenter

- O Professional Chef
- O Popular chef
- O Competitors

3. Television Cooking Shows duration

- O Less than 30 minutes
- O 30 to 60 minutes
- O More than 60 minutes

B. To what extent do you agree with the following statements?

Observation Sheet	Always	Often	Sometimes	Rarely	Never	
A. Personal Hygiene "General Rules"						
Wearing a clean and Hygienic work wear.						
Wearing a clean apron.						
Making sure Fingernails are cleaned and short.						
Wearing hairnet or cap.						
Removing Jewelry like rings or watches.						
Gloves worn properly						
Wearing a clean and Hygienic work wear.						
B. Personal Hygiene "Hand Washing"						
Avoid bare hand contact with ready to eat food.						
Washing hands properly before using gloves and change into						
a new pair of gloves after touching anything that may						
contaminate my hands, when I prepare or serve food.						
Wearing gloves before touching the ready-to-eat food						
product.						
Washing hand after cleaning table.						
Washing hand after handling the garbage.						
Washing hand after blowing my nose.						
Washing Hands after coughing, Licking of fingers, smoking,						
86 D o g o				Conti	inued	

	1	т	
sneezing, blowing nose, contact with head hair or eyes,			
wiping away of sweat etc.			
Wiping dirty hands by work wear or tea towel.			
No separate towel present for hands.			
Washing hand when taking spices and herbs from containers			
and added to foods.			
C. Personal Hygiene "Healthy Practices"			
Smoking, spit, eating, touches mouth, and pick nose is			
prohibited in the television kitchen or other food production			
areas.			
Using a separate clean utensil for each food item.			
Using a handkerchief when coughing.			
Storing raw food items in an area separate from cooked food.			
Cleaning and sanitizing work surfaces after each operation.			
Checking the internal temperature of meat with a			
thermometer.			
Using cutting boards of different colors or sanitize a cutting			
board between preparation of raw foods and cooked foods.			
Making sure not cough during preparation of food.			
Using mouth cover during food handling.			
Covering cuts and wounds suitably.			
Knives changed or washed after contact with raw meat/fish?			
Spoons changed or washed properly after tasting the cold			
meal?			
Dipping unwashed hand/finger into food to taste it etc.			
Cooking should be above 75°C.			



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(JAAUTH) المجلد 22، العدد 2، (يونيو 2022)، ص 74-88. الموقع الإلكتروني: http://jaauth.journals.ekb.eg

سلوكيات النظافة الشخصية في برامج الطهي التلفزيونية المصرية: دراسة استكشافية

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الملخص	معلومات المقالة
يهدف البحث الحالي بشكل عام الي فحص سلوكيات النظافة الشخصية لمقدمي	الكلمات المفتاحية
برامج الطهو التلفزيونية المصرية، حيث تلعب هذه البرامج دورًا محوريًا في تعزيز	النظافة الشخصية؛
التداول الآمن للغذاء عبر شاشات التلفزيون بالإضافة إلى اقتراح استخدامها لتوفير	التداول الأمن للغذاء؛
أمثلة لممارسات وسلوكيات النظافة الشخصية المثلي للمشاهدين. اعتمد هذا	عروض الطهو؛ الطهاة،
البحث على استخدام المنهج النوعي/الوصفي لتحقيق أهداف الدراسة، حيث يتميز	متداولي الغذاء .
البحث الوصفى بتركيزه على الكيف وعمق الظاهرة محل الدراسة الذي يهدف الى	
بحثها دون التركيز على النتائج الكمية، حيث تم فهم أعمق لممارسات النظافة	
الشخصية في عروض الطهو في القنوات المصرية بغض النظر عمن يقدمها	(JAAUTH)
سواء كانوا طهاة محترفين ذات سمعة واسعة أو طهاة غير مشهورين. تم جمع	المجلد 22، العدد 2،
البيانات من خلال استخدام استمارة الملاحظة كأداة لجمع البيانات المطلوبة من	(يونيو 2022)، ص 74-88.
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استخدم الباحثان العينة الميسرة نظراً لمحددات الوقت والتكلفة وامكانيات وقدرات	
الباحثين. تم إجراء التحليلات الإحصائية باستخدام برنامج الحزمة الإحصائية	
البعلوم الاجتماعية الإصدار 23. كشفت النتائج بشكل عام أن هناك العديد من	
الانتهاكات لمعايير النظافة الشخصية والتداول الآمن الموصي بها للتعامل مع	
الغذاء في برامج الطهو التلفزيونية المصرية، ومن أكثر أنواع الأخطاء شيوعًا ندرة	
غسل اليدين أثناء تحضير وتداول الغذاء في هذه العروض فضلا عن إضافة	
الخامات الغذائية والتوابل بأيديهم ثم مسحها بقطعة قماش جافة. لذلك يمكن أن	
يسهم هذا البحث في تقديم بعض الرؤى لتطوير وتحسين إستراتيجيات فعالة	
لاستخدام برامج الطهي التلفزيونية كأداة لدعم وتطوير سلوكيات النظافة الشخصية	
الجيدة بين الجماهير . كما يعد هذا البحث إحدى الدراسات النادرة التي تعطي	
وجهة نظر مصرية حول عرض ممارسات النظافة الشخصية أثناء تداول الغذاء	
وإعداده في مجموعة من برامج الطهي التلفزيونية المصرية الشهيرة.	