



TEKSTİL VE MÜHENDİS
(Journal of Textiles and Engineer)



<http://www.tekstilvemuhendis.org.tr>

Perspectives of Chefs on Performance and Comfort Properties of Their Chef Jackets

Aşçı Ceketlerinin Performans ve Konfor Özellikleri Üzerine Aşçıların Görüşleri

Hande Gül ATASAĞUN

Department of Technical Programs, İzmir Vocational School, Dokuz Eylül University, İzmir, Turkey

Online Erişime Açıldığı Tarih (Available online):30 Haziran 2020 (30 June 2020)

Bu makaleye atıf yapmak için (To cite this article):

Hande Gül ATASAĞUN (2020): Perspectives of Chefs on Performance and Comfort Properties of Their Chef Jackets, Tekstil ve Mühendis, 27: 118, 91-97.

For online version of the article: <https://doi.org/10.7216/1300759920202711805>

Sorumlu Yazara ait Orcid Numarası (Corresponding Author's Orcid Number) :

<https://orcid.org/0000-0001-6956-8727>



Araştırma Makalesi / Research Article

**PERSPECTIVES OF CHEFS ON PERFORMANCE AND COMFORT PROPERTIES
OF THEIR CHEF JACKETS**

Hande Gül ATASAĞUN*

<https://orcid.org/0000-0001-6956-8727>

Department of Technical Programs, İzmir Vocational School, Dokuz Eylül University, İzmir, Turkey

Gönderilme Tarihi / Received: 30.01.2020

Kabul Tarihi / Accepted: 28.05.2020

ABSTRACT: The aim of this study was to determine the uniform preferences of chefs and their satisfaction with the performance and comfort characteristics of chef jackets using a questionnaire. In conclusion, it was observed that the jackets with 100% cotton, white-colored, long-sleeved, snap fasteners, and mandarin collar were preferred more by chefs. The characteristics that the participants were least satisfied in their chef jackets were their protectiveness, stain-resistance, absorbency, and flexibility properties. On the other hand, the participants gave the highest mean scores for ease to put on and take off and non-irritating features of their jackets.

Keywords: Chef uniform, chef jacket, comfort properties, garment preferences, performance properties

**AŞÇI CEKETLERİNİN PERFORMANS VE KONFOR ÖZELLİKLERİ
ÜZERİNE AŞÇILARIN GÖRÜŞLERİ**

ÖZET: Bu çalışmanın amacı aşçıların üniforma tercihlerini tespit etmek ve kullandıkları şef ceketlerinin performans ve konfor özelliklerinden memnuniyetlerini bir anket yardımıyla belirlemektir. Çalışma sonucunda %100 pamuklu, beyaz renkli, uzun kollu, çitçit kapamalı ve mandarin yakalı ceketlerin şefler tarafından daha çok tercih edildiği gözlenmiştir. Katılımcıların şef ceketlerinde en az memnun oldukları özellikler ceketlerinin koruyuculuk, kirlenme dayanımı, emicilik ve esneklik özellikleridir. Bunun yanı sıra katılımcılar ceketin giyip-çıkarma kolaylığı ve kaşıdırmamasına ise en yüksek ortalama puanları vermişlerdir.

Anahtar Kelimeler: Aşçı üniforması, aşçı ceket, konfor özellikleri, giysi tercihleri, performans özellikleri

***Sorumlu Yazar/Corresponding Author:** handegul.yuksel@deu.edu.tr

DOI: <https://doi.org/10.7216/1300759920202711805> www.tekstilmuhendis.org.tr

1. INTRODUCTION

Cleanliness is one of the main points that customers pay attention to when choosing food and beverage (F&B) companies [1-4]. Chefs and other kitchen staff who care about personal hygiene and neatly dressing are prominent indicators of the cleanliness of F&B services [5]. Even though garments worn by people working in a commercial kitchen can vary relying on food service facilities, a traditional chef uniform, which gives customers confidence and is a symbol of professionalism, consists of a chef jacket, apron, pants, toque, neckerchief and slip-resistant shoes (Figure 1) [5-7].

The temperature in the cooking zone of a commercial kitchen might be above 40°C due to the heat and humidity produced by kitchen equipment and hot foods/liquids [8, 9]. Unsatisfactory thermal conditions negatively affect the performance and productivity of workers and also might present occupational safety hazards [8]. Therefore, a chef uniform, which is a barrier between the environment and the skin of the wearer, should help to eliminate people's discomfort sensations, as well as should be a protective layer against burn injuries caused by occupational accidents [9-14].

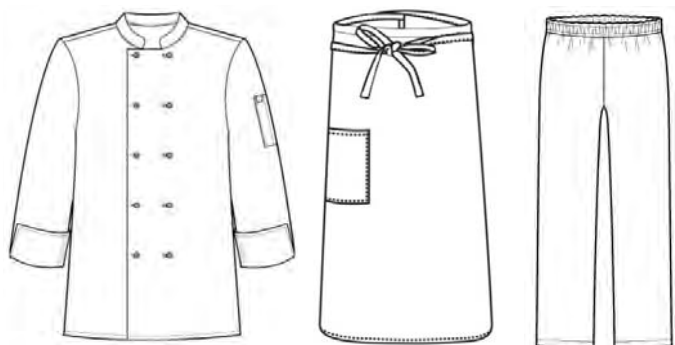


Figure 1. Chef jacket, apron, and pants that can be used in the chef uniform.

Chef jackets can be made of various materials, and the most known are cotton and cotton/polyester blended woven fabrics having twill weave type [9]. The utilization of polyester fiber improves the laundering ability of chef jackets and increases their crease- and stain resistance [5, 9, 15]. Some manufacturers use new technology materials (e.g., Quick Cool®, CookCool®, Cool Vent™, Chef-tex Breeze™) in the shoulder, side panels, and inverted pleat of chef coats in order to keep the thermophysiological comfort of the staff [16-19]. Moreover, the flame-retardant, oil-repellent, moisture management, and antimicrobial finishing treatments can be applied to fabrics to enhance the functional properties of chef jackets. The textiles made from cotton and polysulfonamide/Aramid 1313 blended yarns might be an option for using in chef jackets thanks to good flame retardance and permeability properties [12]. Teflon® finished cotton/polyester blended fabrics can ensure the protection against scald injuries and improve repellency against oil and water-borne stains [13]. Another essential criterion for

chef jacket selection is its design properties. White color, which is the symbol of cleanliness, is often used in chef jackets. However, chefs can also prefer different colors to camouflage stains on their garments or for fashionableness [10]. Even though both single- and double-breasted jackets are worn by chefs, because the double-breasted jacket design allows chefs to change easily top and bottom layers when the coat gets dirty, chefs do not waste time to replace their soiled jacket with a new one [5, 18]. The zipper, button, and snap closures are used in chef coats, and short-sleeved, three-quarter sleeved, long-sleeved chef jackets are available in the market [10, 16-19]. Different button types (e.g., plastic, fabric-covered, knotted cloth) and pockets (e.g., thermometer holder) can be attached to the jacket [10]. Cuffs of the jacket, which can be turned back, enable chefs not only a professional appearance but also to prevent contact with food. While these cuffs protect chefs' forearms and wrists against burn injuries as a result of splatter or spill of hot materials, the neckband of jackets helps to restrain the occurrence of burns in the neck [5]. The ease of movement of chefs might be provided thanks to ample rooms under arms and at elbows of jackets [10].

Bib and bistro aprons, which have different heights and are with/without pockets, are used by chefs during working in the kitchen. Thick, flame-resistant aprons are used to protect chefs from burn injuries by preventing spilling and splashing hot liquids on permeable garments [9, 10, 18]. The water-impermeable aprons are more protective against hot liquids and steam hazards than the permeable ones [11]. Chef pants might have checkered/houndstooth patterns providing an optical illusion for hiding stains or be solid-colored (e.g., black, white), depending on the preference of chefs [5, 10]. Loose and baggy chef pants ensure the thermal comfort and ease of movement to chefs during working, and they can carry their kitchen utensils and towels in large pockets of pants [10]. Snap fasteners used in pants can help chefs take off their pants easily when the hot liquids are poured on them, and the straight-cut pants can prevent these liquids from being trapped at the ankle of chefs [10]. A white, long, pleated chef hat, which is called a toque, is considered as a symbol of the knowledge and authority of chefs [5]. Nowadays, as well as the toque, chef hats protecting products from chefs' hair and sweat are manufactured in different designs such as the skull, bandana, berets, and baseball caps [10, 18]. The neckerchief is an accessory that catches sweat occurred on the face and neck of chefs when exposed to high temperature and humidity during working [5, 10, 18].

Some researchers examined whether different types of uniforms or their parts met the needs and expectations of workers wearing them in terms of design, comfort, fit, and protection [20-25]. On the other hand, there are only a few studies about chef uniforms in the literature. Ehnes et al. [26] formed a focus group consisting of culinary arts students and asked them questions about the comfort, injuries, and protective clothing in their workplace. It was determined that jackets, which have longer

arms than they should, posed a problem in terms of hygiene and occupational accidents. Also, the most observed injuries in the kitchen were cuts and burns occurring on peoples' forearms and hands. In the study of Black et al. [27], design students prepared female chef jackets according to the Functional, Expressive, Aesthetic (FEA) Consumer Needs model. After a market survey, the needs and expectations of a female chef were analyzed. Taking into account the results, a semi-fitted jacket block and patterns were developed, and prototypes were prepared. Two jackets were found appropriate to wear in the kitchen by the female chef. The purpose of our study was to establish uniform preferences of chefs and their satisfaction with uniforms, particularly chef jackets, by using a questionnaire, and thus to identify areas that can be improved. The findings will help designers and uniform manufacturers to develop chef jackets meeting the needs and expectations of chefs.

2. RESEARCH METHODOLOGY

The research was carried out in two stages. The first stage of this study was to learn chefs' daily activities and understand their opinions on their uniforms with open-ended questions before preparing a questionnaire. For this purpose, an email including these questions was sent to five chefs working in İzmir, Turkey, and a questionnaire was developed depending on their suggestions. In the second stage, this questionnaire was sent to many chefs to establish their uniform preferences and satisfaction levels. The first part of the questionnaire was about demographic attributes of chefs (gender, age, height, weight, educational background, experience). In the second part, chefs' uniform preferences were determined, and participants rated on the satisfaction with the different components of their uniforms using a 7-point Likert scale (1: strongly dissatisfied, 7: strongly satisfied) [20, 21]. The next section was focused on only the chef jacket. The wearer acceptability scale - the 7-point semantic differential scale of 12 bipolar adjective sets, additionally price - was used to determine how participants feel about performance characteristics of their chef jackets [20, 21, 28]. On the other hand, participants assessed jackets' comfort properties using the 7-point semantic differential scale of 10 descriptive adjective sets [21]. All adjective sets were adapted from previous studies [20, 21, 28]. Despite some modifications made to the scales, reliabilities measured by the Cronbach's coefficient alpha were 0.90, 0.91, and 0.89 for the satisfaction with uniform components, the performance and comfort properties, respectively. Hence, all scales were appropriate for use in this study. Lastly, chefs answered an open-ended question to define additional suggestions and complaints about their chef jacket.

The participants of the study were reached through professional social networks. In the sample selection process, only chefs wearing uniforms were contacted, and therefore, chefs who worked in small companies were not included in the sample of the study. Three hundred forty-eight questionnaires were sent to chefs between August and November 2019, and 114 chefs have returned. A total of 110 questionnaires were used to analyze the data due to missing information. Chefs participating in the study were from different countries, mostly Turkish chefs. Of these

participants, 95.5% were male, and 4.5% were female. The age of participants ranged from 24 to 66, with the majority ages 35-44 (48.2%). Most participants were between heights of 170-190 cm (85.5%) and weighed over 75 kg (80.7%). Also, 91.8% of them graduated from minimum high school or an equivalent. The rate of participants who work in hotels and restaurants was 65.5% and 20.9%, respectively. More than half of participants (52.7%) were between 1- and 10-years of experience.

Data analyses were done using SPSS 21.0 (Statistical Package for the Social Sciences, IBM, Armonk, NY, USA). The Mann-Whitney U and the Kruskal-Wallis H tests were used to determine differences between groups. While the first test shows the differences between the two groups, the second test was used to compare data from three or more independent groups. A 95% confidence level was considered to be significant.

3. RESULTS

3.1. Chefs' Uniform Preferences and Their Satisfaction with Garment Components

In this part, chefs' raw material and design preferences were detected for each garment component of chef uniform. Regarding their preferences of chef jacket, 100% cotton, cotton/polyester, and viscose/polyester blended fabrics were the most common materials, respectively. While 66.3% of participants chose only white color jackets, 25.5% of them stated that they preferred both white and black colors. It was determined that jackets with the long-sleeved (83.6%), snap fasteners (53.6%), and mandarin collar (64.5%) were widely used among chefs. Furthermore, double-breasted jackets were slightly more preferred compared to single-breasted ones.

Examining apron preferences of participants, it was observed that whilst 43.7% of respondents preferred bib aprons, 40.6% of them reported that they use bistro aprons. More than 80% of respondents also stated that they preferred aprons with pocket rather than those without a pocket. The findings of the pants preferences of chefs revealed that 82.7% of respondents chose pants in a solid color, mainly black color. Also, 56% of them stated that they used pants with zippers rather than with snap fasteners or elastic waistband.

The most preferred hat while working in the kitchen was the skull cap, with a percentage of 42.7%. Furthermore, the usage of skull caps was statistically related to the age of respondents ($p < 0.05$). 67.7% of respondents aged 25-34 years stated that they preferred to use skull caps, and this percentage decreased in an increase in the age of chefs. Moreover, almost 90% of participants reported that they did not use a neckerchief as a garment component in their uniform. The experience of chefs significantly affected the use of neckerchief ($p < 0.05$), and as their experience increased, the usage rate of neckerchiefs showed an increase.

The satisfaction with garment components of the uniforms was evaluated by participants, and mean ratings were calculated for each part (Table 1). The findings indicated that respondents were

moderately satisfied with all components, and all mean scores were between 4.42 and 5.68, with the overall satisfaction of 5.42. The mean ratings of chef jackets were slightly higher than those of other garments. The respondents who did not wear long-sleeved jackets were more satisfied with their chef jacket than those wearing ones, and this difference was statistically significant ($p < 0.05$). Another finding was that the weight of participants was associated with satisfaction with chef jackets ($p < 0.05$). While respondents who had the weight ranged from 65 to 74 kg were the most satisfied from their coats, those with 55-64 kg was the most unsatisfied group. When examining the overall satisfaction with chef uniforms, it was observed that the usage of bib aprons decreased the mean ratings of respondents ($p < 0.05$).

Although chef hats and neckerchiefs had the least mean ratings in this study, the number of people wearing them was less than those of other garment components. Therefore, in the next sections, the chef jacket, which is an essential garment component of chef uniforms, was chosen to examine performance and comfort properties, and thus, to elucidate problems encountered by chefs in detail. Based on the data about jacket preferences of chefs determining in this section, the effects of jackets' raw material (i.e., cotton, polyester, cotton/polyester blended, viscose/polyester blended, and others) and design (i.e., short-long sleeved, color, single-double breasted, collar and closure types) on these properties were statistically investigated in the following parts.

3.2. Chefs' Satisfaction with Performance Characteristics of Their Jackets

The wearer acceptability scale was used to determine satisfaction with the performance properties of chef jackets [20, 21, 28]. Also, the price of the jacket was evaluated in this section (Table 2). Many mean scores were mostly around 5-point, indicating moderately satisfaction. The highest ratings were the easy-to-take off and easy-to-put-on properties of jackets, which had around 6-point, and these scores indicated that chefs were mostly satisfied with these characteristics. The durability and the seam and fabric qualities followed them, respectively. Mean scores for protectiveness (4.53) and stain-resistance (4.39) were below 5-point on the scale. These findings demonstrated that there were aspects to be developed in chef jackets.

Considering all the properties in Table 2, while the overall satisfaction with chef jackets was rated as 5.60 - between somewhat and mostly satisfied -, the mean score of the price was 4.05. Respondents who did not wear jackets with the mandarin collar and snap fasteners stated that their jackets were more durable than jackets with this collar and closure ($p < 0.05$). As expected, people wearing double-breasted jackets stated that their coats protected against injuries ($p < 0.05$), which is consistent with the findings of Black et al. [27]. Also, respondents who reported not wearing single-breasted jackets were more satisfied with their chef jackets ($p < 0.05$).

Table 1. Satisfaction with garment components of the chef uniform.

| Components | n | Mean | Std. dev. | Frequency* | |
|-----------------------------|------------|-------------|-------------|------------|-----------|
| | | | | Negative | Positive |
| Chef jacket | 110 | 5.68 | 1.41 | 2 | 63 |
| Apron | 109 | 5.58 | 1.56 | 4 | 62 |
| Pants | 110 | 5.46 | 1.72 | 7 | 62 |
| Hat | 98 | 4.98 | 1.93 | 11 | 43 |
| Neckerchief | 12 | 4.42 | 2.61 | 4 | 6 |
| Overall satisfaction | 110 | 5.42 | 1.46 | 12 | 59 |

* Negative scores were chosen as 1 and 2; positive scores were 6 and 7-point.

Table 2. Mean ratings for performance properties and the price of chef jackets.

| Chef jacket characteristics | n | Mean | Std. dev. | Frequency* | |
|--|------------|-------------|-------------|------------|-----------|
| | | | | Negative | Positive |
| Hard to take off/ Easy to take off | 110 | 6.15 | 1.15 | 1 | 81 |
| Hard to put on /Easy to put on | 110 | 6.06 | 1.20 | 1 | 77 |
| Not durable/Durable | 110 | 5.77 | 1.35 | 1 | 70 |
| Low seam quality/High seam quality | 110 | 5.67 | 1.41 | 4 | 69 |
| Low fabric quality/High fabric quality | 110 | 5.58 | 1.56 | 5 | 64 |
| Low washing durability/High washing durability | 110 | 5.56 | 1.57 | 7 | 66 |
| Not easy care/Easy care | 110 | 5.48 | 1.55 | 6 | 59 |
| Heavyweight/Lightweight | 110 | 5.42 | 1.49 | 4 | 57 |
| Easy to wrinkle/Hard to wrinkle | 110 | 5.38 | 1.63 | 6 | 57 |
| Loses color/Retains color | 110 | 5.28 | 1.78 | 12 | 57 |
| Lack of protection/Provides protection | 110 | 4.53 | 1.93 | 19 | 41 |
| Stains easily/Resistant to stains | 110 | 4.39 | 1.94 | 20 | 35 |
| Overall satisfaction | 110 | 5.60 | 1.29 | 1 | 60 |
| Expensive/cheap | 110 | 4.05 | 2.03 | 30 | 28 |

* Negative scores were chosen as 1 and 2; positive scores were 6 and 7-point.

3.3. Chefs' Satisfaction with Comfort Characteristics of Their Jackets

Mean ratings given for various comfort properties of chef jackets are provided in Table 3. The non-irritating, ease of movement, and fit characteristics of chef jackets were rated slightly higher compared to others. Two features having the lowest mean scores in Table 3 were tightness/looseness and coldness/hotness, and however, both ends on the scale are undesirable in actual conditions for these properties. Therefore, their scores around 4-point indicating neutral value were acceptable. On the other hand, more respondents gave negative ratings for the absorbency and flexibility of chef jackets.

The experience played a significant role in some responses of participants. As the experience of people increased, median scores of the sweaty feeling and the ease of movement rose ($p < 0.05$). Moreover, the respondents who wore jackets with snap fasteners reported that their jackets were looser than people who did not wear them ($p < 0.05$). Another result was that the usage of double-breasted coats decreased the score of garment fit ($p < 0.05$).

The findings revealed that the respondents were slightly less satisfied with overall comfort properties (5.44) of jackets compared to those with their performance characteristics (5.60). While the number of chefs who rated their jackets positively in terms of overall performance properties was 60, this dropped to 54 in total comfort satisfaction.

3.4. Qualitative Findings

Respondents were asked open-ended questions to indicate their additional complaints related to chef jackets. Most of the complaints were related to colorful jackets on the market and many unnecessary logos on jackets, and respondents reported that a chef jacket should be simple and elegant. Furthermore, many chefs stated that since they could not find chef uniforms that met their expectations on the market, and their uniforms

were custom-made. Also, after sweating, people complained about the bad odor emitting from their armpits, and they desired that armpit air vents should be used in a chef jacket. Another problem was about cuffs of the jackets, and respondents reported that even they rolled the cuffs up, the sleeves of their coat could get dirty due to the sagging of the lower part of the sleeves. Ehnes et al. [26] referred to the same problem in their study.

4. DISCUSSION AND CONCLUSION

In this study, garment components of the uniform preferred by chefs were determined, and their satisfaction levels with these components were measured using a Likert scale. The use of toques, which are known as an essential component of a traditional uniform, was lower than that of skull caps, and mainly younger chefs preferred more to wear skull caps. Moreover, the number of participants using a neckerchief, which absorbs sweat on the face and neck, was quite low, and the more experience the chefs had, the more use the neckerchiefs were. These findings showed that younger chefs have a different point of view about chef uniforms as compared to experienced ones. Having better working conditions of today's industrial kitchens than those in the past are also thought to have an influence on these results.

The satisfaction with chef jackets, pants, and aprons was almost similar and between 5 and 6- points indicating that the respondents were somewhat or mostly satisfied (Table 1). Many chefs who participated in this study stated that they wear a custom-made chef uniform. Therefore, high satisfaction with garment components was ordinary. Furthermore, it was thought that this affected positively scores given for the fabric and sewing qualities (Table 2), the garment fit, and the ease of movement (Table 3). However, tailoring may have caused an increase in jacket prices (Table 2). In consequence of solving fitting and sizing problems and increasing the material quality of chef jackets, ready-to-wear garments might be more preferred by chefs, and thus, high prices might be avoided.

Table 3. Mean ratings of the comfort properties of chef jackets.

| Chef jacket characteristics | n | Mean | Std. dev. | Frequency* | |
|-----------------------------------|------------|-------------|-------------|------------|-----------|
| | | | | Negative | Positive |
| Irritating/Non-irritating | 110 | 6.01 | 1.31 | 2 | 78 |
| Confining/Ease of movement | 110 | 5.67 | 1.28 | - | 65 |
| Does not fit well/Fits well | 110 | 5.51 | 1.31 | 1 | 59 |
| Not breathable/Breathable | 110 | 5.35 | 1.59 | 4 | 55 |
| Feels sweaty/Does not feel sweaty | 110 | 5.19 | 1.51 | 6 | 48 |
| Feels stiff/Feels soft | 110 | 5.01 | 1.57 | 8 | 43 |
| Rigid/Flexible | 110 | 4.96 | 1.91 | 15 | 49 |
| Nonabsorbent/Absorbent | 110 | 4.95 | 1.76 | 10 | 49 |
| Tight/Loose | 110 | 4.75 | 1.13 | 2 | 23 |
| Keeps cold/Keeps hot | 110 | 4.20 | 1.31 | 9 | 12 |
| Overall satisfaction | 110 | 5.44 | 1.33 | 2 | 54 |

* Negative scores were chosen as 1 and 2; positive scores were 6 and 7-point.

Chefs are faced with occupational accidents in the kitchen, which harm employees physically and also affect their psychology negatively, caused by various hazards or risks in the kitchen such as exposure to chemical and biological factors, exposure to hot steam, and contact with the overheated tools [10, 29]. Thus, chef uniforms should provide protection against such accidents, mainly burn injuries. In this study, although people who wore double-breasted coats gave higher scores for the protection performance of their jackets, the respondents generally stated that the protection level was not well enough, below 5 points in the scale (Table 2). Namely, a chef jacket should design as personal protective equipment in order to protect the kitchen staff against splashing or spilling, and additional precautions should be taken for other body parts (e.g., forearms, neck), apart from the chest.

Another crucial problem was sweat, oil, and water-borne stains on chef jackets. Even though some garment manufacturers have tried to solve this issue using stain-repellent jacket fabrics, the results of the questionnaire showed that the problem has continued (Table 2). In this case, it should be examined chef jackets that are claimed to have stain repellency property in the market, and if necessary, novel materials should be developed to increase their stain-repellent function of fabrics. In addition, the problem of length and fit of sleeves should be addressed to hinder stains on these parts of chef jackets.

Thermophysiological comfort is mostly related to heat and moisture transfer characteristics of garments and helps to keep balance the body heat at different levels of activity [30]. High temperatures and humidity occurred in the kitchen can cause an increase in the body temperature of chefs, and accordingly sweating much, in which case the uniforms are expected to assist in maintaining chefs' thermophysiological comfort. According to the findings of this study, the respondents were slightly less satisfied with the overall comfort properties of chef jackets as compared to others (Table 1-3). The results of the open-ended questions presented that the smell of sweat, particularly in armpits, was one of the main issues about which the people complained. Also, the respondents were moderately satisfied with the jackets' absorbency characteristics and the dryness after sweating (Table 3). Some advantageous fibers and fabric structures, particularly designed for active sportswear, on the market, can be used to enhance the thermophysiological comfort of chefs. However, in order not to increase the cost of the jacket, it will be more appropriate to use them in body regions (e.g., armpit, back) that have high sweat rates during working in the kitchen. In addition, the interactions of body, underwear, and garment (i.e., air gap thickness, the contact area between layers) that directly affect thermophysiological comfort should be examined in further studies.

REFERENCES

1. Yamanaka, K., Almanza, B.A., Nelson, D.C. and Devaney, S.A., (2003), *Older Americans' Dining Out Preferences*, Journal of Foodservice Business Research, 6(1), 87-103.
2. Cullen, F., (2005), *Factors Influencing Restaurant Selection in Dublin*, Journal of Foodservice Business Research, 7(2), 53-85.
3. Albayrak, A., (2014), *Müşterilerin Restoran Seçimlerini Etkileyen Faktörler: İstanbul Örneği*, Anatolia: Turizm Araştırmaları Dergisi, 25(2), 190-201.
4. Ertürk, M., (2018), *Müşterilerin Yiyecek İçecek İşletmeleri Tercihlerinde Etkili Olan Kriterler*, Türk Turizm Araştırmaları Dergisi, 2(1), 85-107.
5. Culinary Institute of America, (2001), *The Chef's Uniform*, Gastronomica: The Journal of Critical Food Studies, 1(1), 88-91.
6. Zhang, H., McQueen, R.H., Batcheller, J.C., Paskaluk, S.A. and Murtaza, G., (2015), *Clothing in the Kitchen: Evaluation of Fabric Performance for Protection against Hot Surface Contact, Hot Liquid and Low-pressure Steam Burns*, Textile Research Journal, 85(20), 2136-2146.
7. Robinson, R.N.S., (2013), *Souveniring Occupational Artefacts: The Chef's Uniform*, Tourism and Souvenirs: Glocal Perspectives from the Margins (eds. Cave, J., Jolliffe, L., and Baum, T.), Channel View Publications, Bristol, United Kingdom.
8. Simone, A. and Olesen, B.W., (2013). *Thermal Environment Evaluation in Commercial Kitchens of United States*, In Clima 2013: 11th REHVA World Congress & 8th International Conference on IAQVEC, June 16-19, Prague, Czech Republic.
9. Zhang, H., McQueen, R.H., Batcheller, J.C., Ehnes, B.L. and Paskaluk, S.A., (2015), *Characterization of Textiles used in Chefs' Uniforms for Protection against Thermal Hazards Encountered in the Kitchen Environment*, Annals Occupational Hygiene, 59(8), 1058-1073.
10. Tomshinsky, I., (2014), *A Tale of Tradition: History of Fashion Accessories Series: Kitchen Attire*, Xlibris LLC, United States.
11. Zhang, H., McQueen R.H., Batcheller, J.C., Paskaluk, S.A. and Murtaza, G., (2015), *Clothing in the Kitchen: Evaluation of Fabric Performance for Protection against Hot Surface Contact, Hot Liquid and Low-pressure Steam Burns*, Textile Research Journal, 85(20), 2136-2146.
12. Zhang, J.Y., Ma, J., Li, X.H. and Liu, H.W., (2014), *Design and Development of Flame Retardance Chef Coats Fabric of Polysulfonamide*, Advanced Materials Research, 1035, 96-100.
13. Devarajan, S., McQueen, R.H. and Wen, S., (2017), *Can Common Finishing Treatments used in Chef Jacket Fabrics Improve Protection against Scald Injury?*, Fashion and Textiles, 4:19, 1-15.
14. Havenith, G., (2002), *Interaction of Clothing and Thermoregulation*, Exogenous Dermatology, 1(5), 221-230.
15. Silva-Santos, M.C., Oliveira, M.S., Giacomini, A.M., Laktim, M.C. and Baruque-Ramos, J., (2017), *Flammability on textile of business uniforms: Use of Natural Fibers*, In: 3rd International Conference on Natural Fibers: Advanced Materials for a Greener World, June 21-23, Braga, Portugal.
16. <https://www.chefwear.com/quick-cool-stretch-short-sleeve-jacket-cw5630-black/> (Accessed on 02.01.2020).
17. <https://happychef.com/cookcool.html> (Accessed on 02.01.2020).
18. <https://blog.chefworks.com/uniforms/the-culinary-uniform-what-purpose-each-piece-serves/> (Accessed on 02.01.2020).
19. <https://althartley.com/wp-content/uploads/2016/06/2016-Chefs-Apparel-Guide-from-Chef-Revival.pdf> (Accessed on 02.01.2020).

20. Black, C. and Cloud, R.M., (2008), *Assessing Functional Clothing Needs of Bicycle Patrol Officers*, International Journal of Fashion Design, Technology and Education, 1(1), 35-42.
21. Barker, J. and Black, C., (2009), *Ballistic Vests for Police Officers: Using Clothing Comfort Theory to Analyse Personal Protective Clothing*, International Journal of Fashion Design, Technology and Education, 2(2-3), 59-69.
22. Chan, A.P.C., Yang, Y., Wong, D.P., Lam, E.W.M. and Li, Y., (2013), *Factors Affecting Horticultural and Cleaning Workers' Preference on Cooling Vests*, Building and Environment, 66, 181-189.
23. Schutz, H.G., Cardello, A.V. and Winterhalter, C., (2005), *Perceptions of Fiber and Fabric Uses and the Factors Contributing to Military Clothing Comfort and Satisfaction*, Textile Research Journal, 75(3), 223-232.
24. Huang, D., Yang, H., Qi, Z., Xu, L., Cheng, X., Li, L. and Zhang, H., (2012), *Questionnaire on Firefighters' Protective Clothing in China*, Fire Technology, 48(2), 255-268.
25. Perry, A. and Lee, J., (2017), *Satisfaction with Current Martial Arts' Uniforms and Purchase Intention of New Uniforms*, Fashion and Textiles, 4(1), 1-18.
26. Ehnes, B., McQueen, R. and Strickfaden, M., (2012), *Culinary Clothing and Safety: Kitchen uniforms as Personal Protective Equipment*, In: International Textiles & Apparel Association (ITAA) Proceedings, Vol.69, Honolulu, Hawaii.
27. Black, C., Freeman, C. and Rawlings, A. (2018), *Problem-based Learning: Design Development of Female Chef's Jackets*, International Journal of Fashion Design, Technology and Education, 11(1), 123-128.
28. Huck, J., Maganga, O. and Kim, Y., (1997), *Protective Overalls: Evaluation of Garment Design and Fit*, International Journal of Clothing Science and Technology, 9(1), 45-61.
29. https://www.ccohs.ca/oshanswers/occup_workplace/cooks.html (Accessed on 15.01.2020).
30. Öner, E. and Okur, A., (2015), *Thermophysiological Comfort Properties of Selected Knitted Fabrics and Design of T-shirts*, The Journal of the Textile Institute, 106(12), 1403-1414.