



PROFESSIONAL INDUSTRY SAFETY STANDARDS WHEN APPLYING THE AUTHOR'S HAIR EXTENSION TECHNIQUE IN THE BEAUTY INDUSTRY

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Abstract. Issues related to the safety of services provided in beauty salons are becoming increasingly relevant amid growing customer demand for safe, high-quality, professional beauty services. This article highlights professional standards for ensuring safety when hairdressers and stylists perform hair extensions in Ukraine. Professional safety standards require specialists to develop knowledge and skills regarding materials, various hair extension methods, and the technological sequence of hair extensions using different methods. At the same time, in the practical implementation of professional standards, specialists in the provision of hairdressing services encounter a number of problems. The main challenges of the practical activities of hairdressers include the practical application of knowledge and skills in the work of a hairdresser, as well as information problems. Given the existing problems in the work of hairdressers, two innovative hair extension techniques are being considered. The innovative SensHair technique is based on a gentle approach to hair extension and involves the thermal fixation of microstrands to the client's hair using 3-5 hairs and ultra-light microcapsules. The SensHair technique allows the specialist to adapt to the client's needs, ensuring comfort, safety, and an aesthetic appearance. In contrast, the technique developed by Simone Aparesido Alves Nunk is based on a comprehensive approach, combining the experimental, scientifically proven experience of hair extension professionals and taking into account the problems of clients with scalp issues. The method involves the use of a system of microcapsules and biologically pure materials in hair extensions, which minimizes care and possible scalp problems. Taking into account the differences and advantages of the methods considered, the author proposes a hair extension method that combines knowledge in the field of trichology for professional diagnosis of scalp problems and the SensHair hair extension technique.

Keywords: beauty industry, professional standards, safety, beauty salons, methods, aesthetic services.

Introduction

Industry standards for safety in the beauty industry play an important role in providing quality professional services. Industry standards form a set of rules and set requirements for the safety of cosmetic products, occupational safety for beauty salon employees, and requirements for the knowledge, skills, and competencies of specialists in this field of services. Protecting the rights and health of consumers – beauty salon customers – is one of the most important aspects of ensuring safety when providing professional aesthetic services. To promote visitor safety, Ukrainian hairdressers are increasingly striving to standardize the work of stylists, use professional equipment for sterilizing tools, high-quality modern materials, and the latest techniques for providing



hairdressing services. The safety of hairdressing services, given the increasing variety of such services, is becoming an increasingly relevant subject of research.

Research on the safety of hair extensions focuses on the main negative consequences of using various hair extension methods. The study notes the constant expansion of the hair extension market and emphasizes the significant problems associated with the unprofessional and unsafe use of extension methods [10]. For example, the authors of one empirical study examine the experiences of women with atopic dermatitis who developed irritant contact dermatitis (ICD) from synthetic hair extensions [3]. Existing synthetic fibers are made of polyamide material, so their use for hair extensions leads to frequent allergic reactions and various skin diseases [5]. Among the negative side effects are traction alopecia, which occurs as a result of applying synthetic hair to the hair follicle, sensitivity, local pain, or itching [2]. In response to significant safety challenges, the global beauty industry is increasingly using innovative hair extension methods that ensure safety, aesthetics, and a more natural appearance. In the article, Romanyuk M. discusses two of the most innovative hair extension methods: the SensHair method, which is a proprietary technique for micro-strand hair extension; the Nanoker method is an innovative non-chemical system of visual color modeling that creates a “toned but not dyed” effect by manually mixing 2 to 4 shades of hair within a single strand [4]. Another article presents a new hair extension technique by Simone Amaresida Alves Nunk, which combines textile engineering, dermatological safety, and sustainable development [9]. The technique is based on professional experience and iterative experiments and avoids the limitations of traditional methods (scalp irritation, unethical appearance [9]). The new extension method combines micro-fastening techniques based on new technologies with the use of ethically produced and biodegradable materials [9].

The aim of the study was to examine professional industry safety standards in the beauty industry using the example of Ukrainian experience in the practical application of various hair extension methods.

Research Results

Various hair extension methods are becoming increasingly popular around the



world, allowing people to improve their appearance. We will consider hair extensions as an aesthetic tool and procedure that is provided to different types of patients (both those with hair loss problems and those with aesthetic needs) using various extension methods. Hair extension methods involve the sequential attachment of synthetic or human hair to a person's hair using the following basic methods: strand by strand, weft, or clip-in. The cuticles of the extended hair must be aligned in the same direction as the natural hair, and they are usually no longer than twice the length of the person's natural hair to ensure a cosmetic aesthetic result [2].

In Ukraine, the safe, high-quality, and professional provision of hairdressing services has become a growing trend amid an increase in the number of businesses providing hairdressing services and beauty salons. The number of businesses in this sector has grown from 75,700 in 2020 to 78,100 in 2024, of which more than 99.4% are individual entrepreneurs [6]. At the same time, the volume of hairdressing services sold has decreased significantly: from UAH 11,778.18 million in 2020 to UAH 337.45 million in 2024 [7]. In these conditions, the issue of safety and industry standards for ensuring it becomes particularly important. The general legislation of Ukraine guarantees the protection of the rights of consumers of products and the obligations of manufacturers and service providers to provide quality services (Fig. 1).

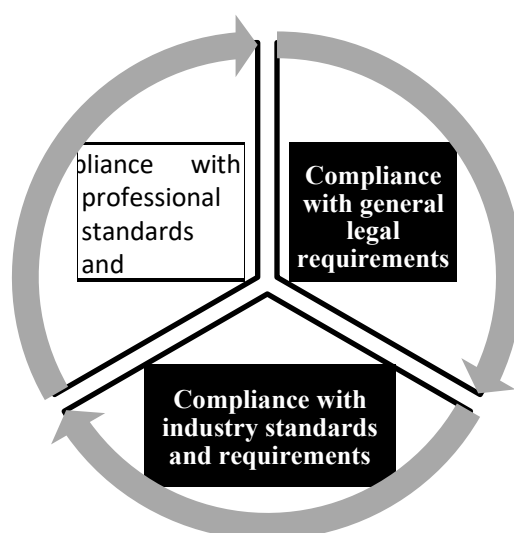


Fig. 1. Concept of safe, high-quality, and professional hairdressing services

Source: author's own work

Ukrainian legislation provides for the protection of consumer rights for various products by creating conditions for consumers to obtain adequate knowledge about



their rights, implementing measures by central and local executive authorities and local self-government bodies to protect rights, and labeling products. Manufacturers and contractors are required to provide consumers with information about their products and ensure the proper performance of work when using the products [1]. In practice, central executive authorities and local self-government bodies mainly provide consumers with information about current industry requirements for the safety of hairdressing salons, in particular sanitary and hygienic requirements. In this regard, the level of safety in the provision of hairdressing services depends on the standards of beauty salons, their level of competence and responsibility.

The key and professional competencies that hairdressers of the 1st and 2nd classes and hairdressers-stylists must possess when providing hairdressing services are defined in the Standard of Professional (Vocational and Technical) Education developed by the Ministry of Education and Science of Ukraine [8]. The general professional competencies that must be developed in the process of training hairdressers include knowledge and skills in complying with and implementing requirements in the field of occupational safety, industrial fire safety, industrial sanitation, and occupational hygiene. Hairdressers of different categories must know the industry safety rules. Mastering the basics of hairdressing, in particular when providing basic coloring services, is also defined as a general professional competence of hairdressers. Specialists in this field must know the rules for performing preparatory and final work, the basic operations and rules of coloring, the peculiarities of using dyes of different groups, etc. This knowledge and these skills are important for the safe, professional, and high-quality provision of hairdressing services. The professional skills of hairdressers-stylists as a separate professional qualification according to the Standard of Professional (Vocational and Technical) Education include the skills of performing modern types of perming, taking into account the individual characteristics of a person, namely hair extension using various methods. The development of relevant knowledge and skills in the process of training a hairdresser-stylist requires that when extending hair using various methods, a specialist must [8]:

- 1) have the following knowledge: knowledge of materials used for hair



extensions, knowledge of various hair extension methods, knowledge of the technological sequence of hair extensions using various methods, and rules for caring for hair extensions;

2) have the following skills: performing hair extensions using various methods in the correct technological sequence; caring for products made from natural and artificial hair.

Despite the legislative certainty of standards that should promote the safety of services provided by beauty salons, a number of problems arise in the practical activities of beauty salons, in particular hairdressers. First, there is the problem of the practical application of knowledge and skills in the work of a hairdresser when performing hair extensions using various methods in the context of the constant development of innovative methods and techniques. As Romanyuk M. notes, specialists are required to have a precise command of innovative techniques, the ability to respond to specific customer needs, and, at the same time, to comply with safety standards [4].

Table 1 - Main problems with compliance with safety standards in the beauty industry in Ukraine (summarized by the author)

Problem	Substantive essence of the problem
Practical application of knowledge and skills in the work of a hairdresser	Hairdressers-stylists face difficulties in the practical application of skills in performing hair extensions using various methods
	Hairdressers-stylists do not always provide recommendations to clients on how to care for hair extensions
Information problems	Hairdressers-stylists do not always have sufficient information about the materials used for hair extensions
	Hairdressers-stylists do not always provide sufficient information about innovative hair extension methods to clients

Hair extension techniques began to be used in hairdressing in the 1970s, mainly to solve aesthetic problems. However, over time, due to the emergence of health problems associated with hair extensions, there has been a growing focus on the safety of various hair extension methods. The development of the cosmetology industry and the trend toward using environmentally friendly materials in providing aesthetic



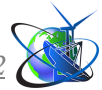
services have also influenced various hair extension methods. Beauty salon specialists are increasingly using materials that are not harmful to health and offering innovative, original hair extension methods. Among the most innovative are the SensHair [4] methods and the new hair extension technique by Simone Aparesida Alves Nunk, which combines textile engineering, dermatological safety, and sustainability requirements in the beauty industry [9]. These techniques are examples of innovative hair extension technologies that are radically different from classic approaches and technologies, opening up new opportunities in professional hairdressing practice.

The SensHair technique is based on a proprietary approach to gentle, careful hair extension, involving the attachment of micro-strands to the client's hair using 3-5 hairs, lightweight microcapsules for heat setting, and fasteners adapted to the client's scalp for safety and aesthetic appearance [4].

The SensHair technique is based on micro-strand hair extension technology and involves the use of very light microcapsules with 3-5 hairs in each strand. The main technical characteristics of the method include: gentle thermofixation, which minimizes thermal stress on the scalp and hair, which is extremely important for clients with sensitive scalp or alopecia; microscopic capsules that provide inconspicuous but reliable fixation of strands, allowing them to be adapted to the anatomy of each patient's scalp; very low weight of the materials used for fixation, which does not weigh down the client's natural hair and provides a natural aesthetic appearance [4].

The innovation of the SensHair technique lies in combining the basic requirements for hair extensions, such as comfort, anatomical features of the scalp, and aesthetics. These characteristics make the extension technology comfortable, safe, and invisible. Before the emergence of this technique, none of the extension methods took into account the lightness of the materials, the microscopic size of the capsules, the individual approach to fixation, or the gentle effect of thermal fixation.

Simone Aparesida Alves Nunk's technique is based on the experience of professional hairdressers who conducted iterative experiments in response to the problems of traditional hair extension methods, which led to scalp irritation, causing discomfort to clients [9]. The new hair extension technique combines micro-attachment



of strands based on new technologies, and its technology involves the use of pure biomaterials [9].

The flowchart entitled “Development of Innovative Hair Extension Techniques” reflects the four main stages of the innovative process of developing hair extension techniques. The first stage involves identifying the client's problems, in particular, susceptibility to scalp irritation and rapid detachment of extended hair due to the use of traditional methods. The second stage involved the experimental development of a hair extension technique, including informal testing with different materials and micro-fastening systems based on the principles of textile engineering. A six-month pilot study provided scientific confirmation of the effectiveness of the new hair extension technique. A reduction in scalp irritation was confirmed, and clients did not require intensive hair care after the extension. In the third stage, the results of the pilot study were put into practice, combining the procedures for launching the certification program, using digital platforms to inform clients, and exploring opportunities for future improvements to the technique, such as antimicrobial technologies [9].

Both methods – SensHair and the Simone Apiresido Alves Nunk method – are based on an individual approach to hair extensions, combining professional practice, advanced hair extension materials, new extension technologies, and an individual approach to the client. Both methods improve the quality and safety of hair extension procedures and ensure an aesthetic appearance for the client. Their use in the professional activities of hairdressers and stylists meets the modern requirements and needs of the beauty industry. At the same time, the SensHair method is based on a careful approach to hair extension, while Simone Apiresido Alves Nunk's technique is based on a comprehensive approach that integrates the professionalism of the masters, the identification of scalp problems, and the selection of a micro-extension system to minimize possible future problems with the condition of the hair and scalp (Table 2).

Taking into account the innovative hair extension techniques discussed above, the author proposes a technology that combines knowledge in the field of trichology with the knowledge, skills, and practical experience of a hairdresser-stylist in hair extension based on the SensHair technique. This technology allows for the diagnosis of the



condition of the scalp and hair, the identification of health problems using the latest diagnostic equipment, and the recommendation of the most appropriate method of hair extension and hair care for the client's specific problems. Trichology allows to identify the most common symptoms (partial alopecia, dermatitis, itching and redness, scalp sensitivity due to the use of cosmetics).

Table 2 - The main differences between the new SensHair and Simone Apiresida Alves Nunkie hair extension techniques (summarized by the author)

Technique	SensHair gentle hair extension technique	Comprehensive hair extension technique by Simone Apiresida Alves Nunes
Approach	A gentle approach to hair extension based on micro-strand thermofixation, taking into account the anatomy of the scalp and adapting the technique to the client's needs	Comprehensive approach to hair extension, which involves identifying the client's scalp problems, using a micro-fastening system for strands and biologically pure materials, and certification of the hair extension technique
Focus	Aesthetic appearance, client comfort and safety, reduction of stress on the scalp	Safety of procedures and extension materials, consideration of the client's scalp problems
Materials	Lightweight materials that do not weigh down the hair	Biomaterials, environmentally friendly materials
Technological sequence	Identification of anatomical features of the scalp Thermofixation of microstrands using lightweight materials and fasteners	Identification of the client's scalp problems for the selection of materials The use of a micro-fastening system for hair strands based on new technologies and biologically pure materials for hair extensions

Conclusions

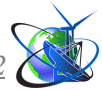
The professional standards in the beauty industry in Ukraine provide for the development of specialists' knowledge and skills in the process of training, retraining, and advanced training of hairdressers. At the educational stage of vocational training, specialists acquire knowledge and skills about materials, various hair extension methods, and knowledge about the technological sequence of hair extension using various methods. At the same time, in the practical implementation of professional standards, specialists in the provision of hairdressing services encounter a number of



problems. The main challenges of the practical work of hairdressers include the practical application of knowledge and skills in the work of a hairdresser, as well as information problems. Quite often, hairdressers do not have sufficient educational knowledge and skills to meet the needs of clients for high-quality, professional, and safe services. In this regard, professional specialists in the beauty industry offer innovative hair extension techniques. The innovative SensHair technique is based on a gentle approach to hair extension and involves the thermal fixation of microstrands to the client's hair using 3-5 hairs and ultra-light microcapsules. The SensHair technique allows the specialist to adapt to the client's needs, ensuring comfort, safety, and an aesthetic appearance. In contrast, Simone Aparecido Alves Nunk's technique is based on a comprehensive approach, combining the experimental, scientifically proven experience of hair extension professionals with consideration for clients' scalp problems. The technique involves the use of a system of microcapsules and biologically pure materials in hair extensions, which minimizes care and possible scalp problems. Taking into account the differences and advantages of the methods considered, we can offer an original hair extension method that combines knowledge in the field of trichology for professional diagnosis of scalp problems and SensHair hair extension medicine.

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