

Original article

**Sociodemographic profile of manicures operating in western Paraná: aspects of professional training and biosafety**

*Perfil sociodemográfico de manicures atuantes na região oeste do Paraná: aspectos da formação profissional e biossegurança*

*Perfil sociodemográfico de manicures actuantes en la región oeste de Paraná: aspectos de la formación profesional y bioseguridad*

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**ABSTRACT**

**Background and Objectives:** The emergence and development of professional manicures are and related to the development of aesthetics and podiatry, combined with the economic development of the country and the media, which lead individuals to care about their body, requiring a quantitative growth of professionals who can meet this demand, including manicures. However, this growth has not accompanied the proper professional qualification, exposing workers and the clientele served to risks inherent to the activities developed. The objective of this study was to evaluate the sociodemographic profile of professional manicures, focusing on aspects such as professional training and biosafety. **Methods:** Descriptive, cross-sectional and prospective study, with a field study design and quantitative data analysis. **Results:** The total access sample consisted of 61 beauty establishments, with predominance of female professionals (96.72%), with incomplete high school education (58.91%), monthly income up to a minimum wage (77.04 %); regarding courses on biosafety, 73.77% of the interviewees never performed it. **Conclusion:** It was evidenced that the low level of education, related to the lack of courses that involve biosafety issues, reinforce the risks that these professionals face daily.

**Keywords:** Beauty and Aesthetics Centers. Public Health. Health Profile.

**RESUMO**

**Justificativa e Objetivos:** O surgimento e o desenvolvimento de profissionais manicures têm relação direta com o desenvolvimento da estética e da podologia, aliado ao desenvolvimento econômico do país e os meios de comunicação, que levam os indivíduos a se preocuparem com o corpo, sendo, necessário o crescimento quantitativo de profissionais que possam atender esta demanda, incluindo as manicures. Entretanto,

esse crescimento não tem acompanhado a devida qualificação profissional, expondo trabalhadores e clientela atendida, aos riscos inerentes às atividades desenvolvidas. O objetivo do estudo foi avaliar o perfil sociodemográfico de profissionais manicures, enfocando os aspectos da formação profissional e biossegurança. **Métodos:** Estudo descritivo, transversal e prospectivo, com delineamento para o estudo de campo, com análise quantitativa dos dados. **Resultados:** A amostra total de acesso, constituiu-se de 61 estabelecimentos de beleza, com predomínio de profissionais do sexo feminino (96,72%), com escolaridade entre ensino médio incompleto a completo (58,91%), com uma renda mensal de até um salário mínimo (77,04%), com relação a realização de cursos que envolvam a temática biossegurança (73,77%) das entrevistadas nunca o realizaram. **Conclusão:** Evidenciou-se que a baixa escolaridade, relacionada a não realização de cursos que envolvam questões de biossegurança, reforçam os riscos que estas profissionais enfrentam cotidianamente.

**Descritores:** Centros de Embelezamento e Estética. Saúde Pública. Perfil de Saúde.

## RESUMEN

**Justificación y Objetivos:** El surgimiento y el desarrollo de profesionales manicures tienen una relación directa con el desarrollo de la estética y la podología, aliado al desarrollo económico del país y los medios de comunicación, que llevan a los individuos a preocuparse por el cuerpo, siendo necesario el crecimiento cuantitativo de profesionales que puedan atender esta demanda, incluyendo las manicuras. Sin embargo, ese crecimiento no ha acompañado la debida cualificación profesional, exponiendo trabajadores y clientela atendida a los riesgos inherentes a las actividades desarrolladas. El objetivo del estudio fue evaluar el perfil sociodemográfico de profesionales manicures, enfocando los aspectos de la formación profesional y bioseguridad. **Métodos:** Estudio descriptivo, transversal y prospectivo, con delineamiento para el estudio de campo, con análisis cuantitativo de los datos. **Resultados:** La muestra total de acceso, se constituyó de 61 establecimientos de belleza, con predominio de profesionales del sexo femenino (96,72%), con escolaridad entre enseñanza media incompleta a completa (58,91%), con una renta mensual de hasta un salario mínimo (77,04%), con relación a la realización de cursos que involucran la temática bioseguridad (73,77%) de las entrevistadas nunca lo realizaron. **Conclusión:** Se evidenció que la baja escolaridad, relacionada con la no realización de cursos que involucran cuestiones de bioseguridad, refuerza los riesgos que estas profesionales enfrentan cotidianamente.

**Palabras clave:** Centros de Belleza y Estética. Salud Pública. Perfil de Salud.

## INTRODUCTION

The emergence and development of professional manicures is directly related to the development of aesthetics and podiatry, with the exacerbated demand for aesthetic procedures, thus emphasizing the importance of the beauty attribute and the possibility for all to improve their physical appearance or to conform to standards of body aesthetics.<sup>1</sup>

The country's economic development and the media have influenced the increased income, bringing about with it standards image and beauty, reaching all social

strata, age groups, and both genders. Such condition has led individuals to be concerned about quality of life, mainly related to body care, thus requiring an increased number of professionals able to meet this demand, including manicures and pedicures.<sup>2,3</sup>

However, such growth has not been accompanied by proper professional qualification, exposing workers and clientele to risks inherent to the activities developed.<sup>4</sup>

When Beauty and Aesthetics professionals do not know and/or do not adhere to good safety practices, there is an increased chance of exposing themselves to microorganisms through direct or indirect contact, either through the cutaneous-mucosal, cutaneous or percutaneous route, such as, for instance, through skin-which suffers abrasions, scaling and perforations; or through the ocular mucous, stroked by fragments of nails.<sup>5,6</sup>

Manicures were recognized as professionals only from a bill project sanctioned on January 18, 2012, allowing professionals in the area to organize themselves to regulate the profession- professionals who carry out hygiene activities and aesthetic and corporal beautification of individuals, and who may be exposed to the risk of microbial transmission when they are unaware and do not adhere to biosafety measures.<sup>7</sup>

Despite the professional recognition, other obstacles have arisen and have been faced by these professionals until the present day, in which we can highlight:<sup>5</sup> The absence of a formal employment contract (signed work permit), causing professionals to provide services by their own and receive proportionally on what they produce. Some of them work only on days of greater customer demand, being responsible for the acquisition of their own articles and products, which results in a lower income for these professionals when compared to those who work in industries, with a work contract duly signed and with labor rights ensured.

It should also be noted that this category, in most cases, has few materials to perform the procedures, which must be previously cleaned, disinfected and sterilized, and the use of these instruments may occur in more than one client, unaware of the essential need to perform of the aforementioned processes to ensure the safety of customers and of themselves.<sup>5</sup>

The importance of beauty as a discriminatory element can be analyzed both from the point of view of the labor market as of the capital involved in the production of inputs required to provide beauty services.<sup>6,7</sup>

As an economic variable with a strong impact on the labor market, it seeks to unravel the mechanisms of segregation or differential of wages between workers, the new profile of labor in the provision of these services and in industries producing inputs, and the expansion of workforce in this segment.<sup>8</sup>

As for capital, the requirement of a good appearance requires expenditures on services and products that currently move large volumes of capital. The relevance of these investment is expressed in the emergence of new products, in response to the demand generated by the reasons already mentioned. Worldwide, the cosmetics and perfumery industry carries out billion-dollar business and occupies millions of people and, in Brazil, it has experienced great growth in recent years.<sup>1</sup>

Another aspect to be considered is that professionals are not required to present a diploma of any nature, whether in technical, vocational or higher education, that certifies their training and qualification in the area. According to the Brazilian Classification of Occupations (CBO) of the Ministry of Labor, for these professionals to work it is necessary, at least, incomplete elementary education, qualification course and up to a year of professional experience.<sup>2</sup>

The profession regulation was fundamental not only to value these workers, but also to require formal qualification in educational institutions, with a minimum curriculum for the effective exercise of the profession.<sup>9</sup>

Finally, due to the increasing insertion of women in the labor market, their income has been increasing and, consequently, also their participation in the family budget. From the 1970s, the rate of participation of Brazilian women in the Economically Active Population (PEA) was only 18%, rising to 40.1% in 2001 and reaching the proportion of just under 50.0% in 2009. This was one of the factors that caused the increased consumption of beauty and aesthetics services in the country since the 1990s, also considering that, between 2001 and 2009, the percentage of Brazilian families headed by women increased from approximately 27.0% to 35.0%.<sup>10,11</sup>

In view of the above, the realization of this study intends, after evaluating the sociodemographic profile of professional manicures, to demonstrate the need for new comparative studies with the findings presented here, which show the performance of these professionals in Brazil and especially in the southern region of the country, where popular adherence to beauty practices involves health risks to the clientele and workers, mainly related to professional training and biosafety. In addition, the theme is of social

relevance because it involves workers and clientele of various age groups, economic class and both sexes.<sup>12</sup>

Based on this assumption, the goal of this research was to evaluate the sociodemographic profile of professional manicures, focusing on aspects of professional training and biosafety.

## **METHODS**

This is a descriptive, cross-sectional and prospective study, with a field study design and quantitative data analysis. The research was developed in beauty salons located in western Paraná. The population was composed of manicures working in these establishments; we worked with a total sample of access, consisting of 61 beauty establishments.

The study included professionals aged 18 years and over, who voluntarily agreed to participate in the study after clarification and signing the Informed Consent Form (ICF). The beauty centers visited more than three times due to being closed, as well as establishments that only worked in the hairdresser and barber branches, were excluded from the study.

For data collection, a semi-structured questionnaire containing open and closed questions was elaborated — some of which were partially extracted from Garbaccio's doctoral thesis<sup>2</sup>, with data on the establishment, the interviewee, the work process and on specific knowledge, carried out in an assisted way.

The pilot test of the data collection instrument was conducted in a beauty salon (not included in the sample) and the answers were analyzed to verify the congruence of the questions with the research objectives.

All the ethical aspects provided for in Resolution No. 466 of December 12, 2012, of the National Health Council/MS, which deals with guidelines and regulatory norms with research involving human beings, have been observed.<sup>13</sup>

The research was approved by the Research Ethics Committee (CEP) of the State University of Western Paraná (UNIOESTE), under the favorable opinion No. 1,447,806/2016 and CAEE 50066815.8.0000.0107.

Professionals from the beauty salons were contacted through a visit to the establishment, and the researcher explained them the research objectives. Then, if the individual agreed to participate in the study, the collection was performed with the signing of the ICF by the interviewee.

Data from the collection instruments were duly tabulated in a Microsoft Excel spreadsheet, and later synthesized by means of descriptive statistics (absolute frequencies, relative frequencies, averages and standard deviation).

Quantitative variables (age, time of experience in the beauty/aesthetic branch/segment, time working at the beauty salon) were evaluated by descriptive statistics of minimum, maximum, mean, and standard deviation.

Frequencies of response categories were compared to each other by the Chi-square test for adherence, when these variables were classified as nominal qualitative dichotomies. The frequencies of responses of categorical nominal qualitative variables, in turn, were compared using the Chi-square test for k proportions, followed by the Marascuilo follow-up test.

All statistical analyzes were performed in the XLStat2015 program, with the p-value at a significance level of 0.05.

## RESULTS

The sample consisted of 61 people, most women (59 - 96.72%), with education level from incomplete to complete middle school (36 - 58.91%). Usually, they do not work in another salon (58 - 95.08%) and have a monthly income of up to a minimum wage (47 - 77.04%) (Table 1).

Regarding professional training in the area, 52 (85.24%) attended face-to-face courses and 16 (26.23%) started their activities on their own initiative. Most did not follow improvement courses in the area in the last 2 years (50 - 81.96%), nor did any course related to biosafety (45 - 73.77%). Of the 16 (26.23%) interviewees who did some biosafety course, 6 received training in another establishment (37.50%), and 6 (37.50%) in a technical school (Table 1).

**Table 1** - Sociodemographic characterization of manicures of the western region of Paraná. Cascavel-PR, 2016.

Variable	Categories	N	%	p-value
Gender	Female	59	96.72	<0.0001
	Male	2	3.27	
Education Level	Some Elementary School	17	27.86	<0.0001*
	Elementary School	3	4.91	

	Some Middle School	10	16.39	
	Middle School	26	42.62	
	Some Higher Education	3	4.91	
	Higher Education	2	3.27	
Works in another salon	Yes	3	4.91	<0.0001
	No	58	95.08	
Monthly Income	Up to 1 Minimum Wage	47	77.04	
	From 1 to 2 Minimum Wages	13	21.31	<0.0001*
	More than 2 Minimum Wages	1	1.63	
Professional training in the area by	In-service professional courses	52	85.24	
	Online professional course	1	1.63	<0.0001*
	Informal training	2	3.27	
	Own initiative	16	26.23	
Improvement course	Yes	11	18.03	<0.0001
	No	50	81.96	
Biosafety course	Yes	16	26.23	0.0002
	No	45	73.77	
Biosafety-related course (location)	Training at the establishment	1	6.25	
	Training at another establishment	6	37.50	
	At a technical school	6	37.50	0.097*
	Short course	3	18.70	
	Others: City Hall	1	6.25	

Absolute (n) and relative (%) frequencies of the categories of variables related to the sample characterization. P-value of Chi-Square test for adhesion or k proportions\*.

The participants' ages ranged from 18 to 60 years, with an average of 36.70 years ( $\pm 10.40$ ). Regarding the time of experience in the beauty/aesthetic branch/segment, there was a wide variation, with professionals with from only one year to up to 30 years of experience ( $\pm 5.90$ ) (Table 2).

In the evaluation of the time working in the salon, the research showed there were subjects with only one year of employment and others with up to 16 years (SD = 3.70) (Table 2).

**Table 2** - Descriptive statistics of quantitative variables related to sample characterization. Cascavel-PR, 2016.

Statistics	Minimum	Maximum	Mean	Standard deviation (n-1)
Age	18.00	60.00	36.70	10.40
Experience	1.00	30.00	10.10	5.90
Time working in the current salon	1.00	16.00	4.50	3.70

## DISCUSSION

Data found in this research and presented in Table 1 corroborate with the findings of other studies on the same theme, which showed that, in a group of manicures and pedicures interviewed in Belo Horizonte (MG) in 2013, 100% were female.<sup>4</sup>

Regarding training knowledge, the findings of this research are in line with data from other researches, in which a low level of education can be observed, with illiteracy ranging from 2.2% to 12.0% and the elementary level of schooling varied between 12.3% and 56.7%, in another research involving the same theme.<sup>4,14</sup>

Possibly this fact is due to the professions origin, the legal requirement of any technical training or professional qualification to carry out the activity, besides the lack of orientation and monitoring by health agencies. Thus, it is assumed that many of these professionals learn the activity under the guidance of older ones, and this knowledge on the possible impacts to the health of both professional and client is indispensable for their performance.<sup>14</sup>

Regarding the question whether the professional works in another beauty salon, the result found was similar to another study, in which 231 (98.3%) did not work in another establishment and 4 (1.7%) reported working in more than one place.<sup>15</sup>

As to the monthly income of manicures and pedicures, this study indicated that most interviewees receive up to a minimum wage/month, which, in the period of the research, was about R\$ 880.00 (eight hundred and eighty Reais). This is due to the variation according to the clientele served, location of the establishment, reputation, among other attributes. The profit margin of these professionals is between R\$ 1,200.00



(one thousand and two hundred Reais), according to the amount charged for each service.

Thus, a broad discussion on the salary of these professionals is necessary, seeking to establish a salary floor, with definition of working days and school training dealing with the specificities of the work they develop, to facilitate the approach and understanding of the current health guidelines in place and necessary for adherence to biosafety measures, ensuring safe practices.

Considering the professional training in the area, the research showed that 52 (85.2%) professionals reported having attended professional in-service courses.

In another study, the participants opted to train themselves through short courses such as nail decoration, porcelain nails, among others.<sup>2</sup> These regular professional courses are intended to provide professional training, aiming to enable individuals to develop practices indispensable to the practice of the profession.<sup>16</sup>

In a research already conducted, 155 (66.0%) professionals reported having completed professional training through non-regular/informal courses.<sup>2</sup> This type of training is characterized by not occurring in regular professional schools or courses in the beauty and aesthetics segment, but by kinship relationships, friendships or by means of communication, associations, organizations, societies, among others.<sup>17</sup>

We also verified the existence and formation of rapid preparatory courses whose main concern is the technical skill for the cutting and the use of products in the hair and nails, acting almost always as a way of divulging the novelties of the beauty and aesthetics market, and not necessarily in the fundamental training of the profession.<sup>17</sup>

The lack of regulated training courses, the small number of training courses for manicures and pedicures, and the informality allow these professionals to perform their functions without proper knowledge so that they can carry out their work safely.<sup>5</sup>

In some countries, such as in the United States, beauty professionals need to acquire skills and follow new technologies and techniques from cosmetology schools, making it imperative to have a high school diploma or equivalent. Some programs are available at post-secondary vocational schools and other full-time accredited programs lead to an associate's degree in cosmetology.<sup>18</sup>

In the State of Paraná, the Resolution No. 700/2013 of the State Secretariat of Health (SESA) preconizes no specifications on the obligation to participate in professional courses focusing only on biosafety, in fact, it only presents

recommendations for the adequate practice of these workers' professional activities by prioritizing the collective and individual's vulnerability, although indeterminable, in their relations with the agents of the provision of services of interest to health.<sup>19</sup>

Among the interviewees, 45 (73.7%) did not take any course related to biosafety. This result corroborates with other studies, in which 72.3% of the professionals did not perform any course aimed at biosafety and performance in beauty establishments.<sup>2</sup>

The lack of training and/or knowledge on biosafety measures contributes to the dissemination of microorganisms and diseases that are often acquired but seldom associated with these environments, in a silent transmission process.

In other studies dealing with the same theme, the predominant age was  $\geq 31$  years, with an experience time  $\leq 10$  years and with working time in the visited salon of  $\geq 2$  years<sup>15</sup>, similar to the findings of this study.<sup>20,21</sup>

This research allowed us to disclose the socioeconomic profile of professional manicures, in addition to identifying the activities developed by these professionals, which was not an easy task given the great difficulty of contact with such establishments, mistakenly forwarded addresses, refusals to participate in research due to the fact they were in their work environment and with clients being attended at the same time.

The population's great concern about the good looks of the hands and feet is visible, including nail care. However, due to the various occupations and tasks to be carried out on a day-to-day basis, many people look for manicure/pedicure services, sometimes without paying attention to the hygiene related to the service.

Regarding professional qualification, principles of microbiology, immunology, among others, should be considered, as well as health problems caused by materials used in their daily practice and that are not submitted to adequate sterilization processes, and may compromise the reputation of the establishment and the professional, in addition to causing damages to the clientele.

## **REFERENCES**

1. Pimenta GRP, Jesus LO, Almeida CS, et al. Ações de promoção e prevenção à saúde do trabalhador sob risco de exposição e transmissão de hepatites virais [Internet]. Rev

APS 2017 [citado 2018 mar 08]; 20 (1): 140-144. Disponível em: <https://aps.ufjf.emnuvens.com.br/aps/article/view/2818/1069>

2. Garbaccio JL. Conhecimento e Adesão às Medidas de Biossegurança entre Manicures e Pedicures [tese]. Minas Gerais (MG): Universidade Federal de Minas Gerais, 2013.

3. Moreira ACA, Silva FL, Silva JKF, et al. Grau de informações dos profissionais de salões de beleza sobre AIDS e hepatite. Rev Ciênc Méd Biol 2013; 12 (3): 59-366. <http://dx.doi.org/10.9771/cmbio.v12i3.6937>

4. Garbaccio JL, Oliveira AC. Adesão e conhecimento sobre o uso de equipamentos de proteção individual entre manicures e pedicures. Rev Bras Enferm 2015; 68 (1): 52-9. <http://dx.doi.org/10.1590/0034-7167.2015680108p>

5. Garbaccio JL, Oliveira AC. O risco oculto no segmento de estética e beleza: uma avaliação do conhecimento dos profissionais e das práticas de biossegurança nos salões de beleza. Texto Contexto Enferm 2013 2015; 22 (4): 989-98. <http://dx.doi.org/10.1590/S0104-07072013000400015>

6. Ramírez CLC, Gomez CPL, Tunjano JCO, et al. Evaluación de la efectividad de los procesos de desinfección de los utensilios em salones de belleza en un municipio de Cundinamarca. Nova Publicación /Científica 2007; 5 (7): 65-69. <http://dx.doi.org/10.22490/24629448.375>

7. Al-Rabeei NA, Al-Thaifani AA, Dallak AM. Knowledge. Attitudes and Practices of Barbers Regarding Hepatitis B and C Viral Infection in Sana's City, Yemen. [Internet] Journal of Community Health 2012 [citado 2018 mar 29]; 37 (5): 935–939. Doi: 10.1007/s10900-011-9535-7

8. BRASIL. Casa Civil. Lei nº 12.592, de 18 de janeiro de 2012. Dispõe sobre o exercício das atividades profissionais de Cabeleireiro, Barbeiro, Esteticista, Manicure, Pedicure, Depilador e Maquiador. Diário Oficial da República Federativa do Brasil, Brasília (DF), 2012 jan 19; Seção 1:1.

9. Ataei BK, Shirani SMA, Ataie M. Evaluation of Knowledge and Practice of Hairdressers in Women's Beauty Salons in Isfahan about Hepatitis B, Hepatitis C, and AIDS in 2010 and 2011. [Internet] Hepat seg 2013 [citado 2018 mar 30]; 13 (3):e6215.

Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3644795/pdf/hepatmon-13-03-6215.pdf>

10. BRASIL. Ministério do Planejamento, Desenvolvimento e Gestão. Instituto de Pesquisa Econômica Aplicada (IPEA). Nota técnica: Mulheres e trabalho: breve análise do período 2004-2014. n 24. [Internet]. Brasília: Ministério do Planejamento, Desenvolvimento e Gestão; 2016 (citado 2018 fev 05). 24 p. Disponível em: [http://www.ipea.gov.br/portal/images/stories/PDFs/nota\\_tecnica/160309\\_nt\\_24\\_mulher\\_trabalho\\_marco\\_2016.pdf](http://www.ipea.gov.br/portal/images/stories/PDFs/nota_tecnica/160309_nt_24_mulher_trabalho_marco_2016.pdf)
11. BRASIL. Ministério do Planejamento, Desenvolvimento e Gestão. Instituto Brasileiro de Geografia e Estatística (IBGE). Pesquisa Nacional por Amostra de Domicílios (PNAD) [Internet]. Brasília: Ministério do Planejamento, Desenvolvimento e Gestão; 2016 (citado 2018 fev 05). 108p. <https://biblioteca.ibge.gov.br/visualizacao/livros/liv98887.pdf>
12. Juliana, JL, Oliveira AC. Biossegurança em salões de beleza: avaliação da estrutura e dispositivos. Revista de Enfermagem do Centro-Oeste Mineiro 2018 [citado 2018 agost 15]; 8: e1833. <http://dx.doi.org/10.19175/recom.v8i0.1833>
13. BRASIL. Ministério da Saúde. Conselho Nacional de Saúde. Resolução n° 466/2012, de 12 de dezembro de 2012. Aprova normas regulamentadoras de pesquisas envolvendo seres humanos. Diário Oficial da União, Brasília (DF), 2012 dez 12; Seção 1:59.
14. Zahraoui-Mehadji M, et al. Risque infectieux lié au sang chez les coiffeurs-barbiers traditionnels et leurs clients au Maroc [Internet]. Cahiers Santé 2004 [citado 2018 mar 03]; 14 (4): 211-216. Disponível em: [https://www.jle.com/fr/revues/san/e-docs/risque\\_infectieux\\_lie\\_au\\_sang\\_chez\\_les\\_coiffeurs\\_barbiers\\_traditionnels\\_et\\_leurs\\_clients\\_au\\_maroc\\_264851/article.phtml?tab=texte](https://www.jle.com/fr/revues/san/e-docs/risque_infectieux_lie_au_sang_chez_les_coiffeurs_barbiers_traditionnels_et_leurs_clients_au_maroc_264851/article.phtml?tab=texte)
15. Garbaccio JL, Oliveira AC. Adesão e conhecimento sobre o uso de equipamentos de proteção individual entre manicures e pedicures. Rev Bras Enferm 2015; 68 (1): 52-9. <http://dx.doi.org/10.1590/0034-7167.2015680108p>
16. Walsh, SA. Beyond the Polish: An Examination of Hazardous Conditions in Nail Salons and Potential Solutions for the Industry in New York City. [Internet] Journal of Law and Policy 2012 [citado 2018 mar 30]; 21 (1). <https://brooklynworks.brooklaw.edu/cgi/viewcontent.cgi?article=1069&context=jlp>
17. Jokhio AH, TA Bhatti, Memon, S. Knowledge, Attitudes and Practices of Barbers about Hepatitis B and C Transmission in Hyderabad, Pakistan. [Internet] East Mediterr Health J 2010 [citado 2018 mar 29]; 16 (10): 1079-84. <https://www.ncbi.nlm.nih.gov/pubmed/21222425>

18. Nam DP, Anil S. The Value of Cosmetology Licensing to the Health, Safety, and <https://static1.squarespace.com/static/52850a5ce4b068394a270176/t/54ca482ee4b04bc79092e6da/1422542894461/PBA+Report+-+February+2015.pdf>
19. Secretaria de Saúde (PR). Resolução nº 700, de 06 de dezembro de 2013. Dispõe sobre as condições para instalação e funcionamento dos Estabelecimentos de Salão de Beleza, Barbearia e/ou Depilação no Estado do Paraná. Secretaria de Estado da Saúde, 2013. Diário Oficial do Estado, Curitiba (PR), 2013 dez 06.
20. Sobrinho HMR, Gomes CM, Ferreira BD, et al. Avaliação do conhecimento e práticas de biossegurança em uma amostra de profissionais da beleza de Goiânia-Goiás. [Internet] J Health Sci Inst 2014 [citado 2018 fev 5]; 32 (4): 343-52. [https://www.unip.br/presencial/comunicacao/publicacoes/ics/edicoes/2014/04\\_out-dez/V32\\_n4\\_2014\\_p343a352.pdf](https://www.unip.br/presencial/comunicacao/publicacoes/ics/edicoes/2014/04_out-dez/V32_n4_2014_p343a352.pdf)
21. Yang J, Hall K, Nuriddin A, et al. Risk for hepatitis B and C virus transmission in nail salons and barbershops and state regulatory requirements to prevent such transmission in the United States. Public Health Manag Pract 2014 [citado 2018 mar 29]; 20 (6): E20-E30. Doi: 10.1097/PHH.0000000000000042