BIOSECURITY PREACAUTIONS ADOPTED BY PROFESSIONALS WORKING IN AUDIOLOGY

Medidas de biossegurança adotadas por profissionais atuantes em Audiologia

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ABSTRACT

Purpose: to know the Biosecurity practices adopted by Speech Therapists working in the field of Audiology and relate these practices with continuing education and professionals' time of graduation**. Methods:** this study subjects were 70 speech therapists working in the field of Audiology in the cities of Belo Horizonte and Contagem. We administered a questionnaire on Biosafety in Audiology, based on Regulatory Norm 32, comprising 27 closed questions, covering aspects of hand hygiene, personal protective equipment, organization and cleanliness of working items and the environment. **Results:** most of the speech therapists interviewed reported adopting the following Biosafety actions: hand hygiene before patients care (71%), use of lab coats with long sleeves (74%) and buttoned (91%), hair tied (79%), nails cleaned and cut (91%), separation and disinfection of used items (83%), organization of the environment (97%). However only 40% of them reported washing their hands between patients' appointments and 9% reported glove use when carrying out meatoscopy. It was observed that the allocation of items for disinfection is a routine practice for most professionals with expertise ($p < 0.05$). Professionals with longer time of graduation adhered better to the hand hygiene practice. **Conclusion:** washing the hands before the appointments, dressing properly, allocating the items intended for disinfection and organizing the work environment are Biosecurity practices adopted by most of speech therapists. Some factors such as time of graduation and continuous education positively influence the adoption of correct measures on Biosafety.

KEYWORDS: Audiology; Exposure to Biological Agents; Speech, Language and Hearing Sciences; Education, Continuing; Occupational Health

INTRODUCTION

Biosafety is a set of actions that aims to prevent and remove (or minimize) the inherent risks of the activities of research, production, education, technological development and provision of services, thereby seeking to preserve human, animals and environment health[1]. Particularly in health sphere, biosecurity practices are essentials to infections control and reduction of the intrinsic risks associated to health assistance[2,3]. The health care professionals are responsible for preventions and control of diseases and health promotion. However, they are not always aware of the importance of adopting biosecurity measures and ready to following the required steps in order to eliminate and/or reduce the risks for patients, themselves and for your staff[4], which increases the chance of accidents and infections risks.

All sectors of health assistance institutions present potential for biological contamination[3,5], and generally, the major cause of accident in these environments are related to: inappropriate

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instruction, inefficient supervision, misuse of the personal protective equipment, do not follow the rules and inappropriate practices, among others factors[6].

The Decree 485 of the Ministry of Labour and Employment, of 11 November 2005, approving the Regulatory Norm 32 (NR32), is responsible for implementing the basic protections measures to the worker's safety and health[7]. As the speech therapist works autonomously and independently and exercises its activities in different environments of health care, they should know about biosafety and its importance, in order to apply them in the daily practice[6,8]. In this professional clinical activity, the direct contact with possibly infected patients is a potential risk for health, which demands the adoption of procedures of infection's control in the various fields of work and workplace, especially hand hygiene.

The aim of this research was to identify the biosecurity practices adopted by speech therapists working in Audiology and related these practices with continuing education and time of graduation.

METHODS

This is a transversal study with a random sample. The participants were the professionals that fulfill the following inclusion criteria: a) speech therapists working in audiology, b) speech therapists working in the cities of Belo Horizonte and Contagem, c) speech therapists that agree to participate of the research through the signature of Informed Consent Form.

The data collection was realized between October of 2010 and January of 2011 by means of the application of the questionnaire of Biosafety in Audiology (Figure 1), structures by the authors, based on the Regulatory Norm 32 (NR32) of the Ministry of Labour, that deals with "safety and health at work in health service"[7]. The questionnaire was previously tested in a pilot version with ten speech therapists and the questions considered hard to understand were redrafted.

The participants answered the questionnaire in the workplace and/or in previously scheduled place and were free to express any doubts and make questions, which were clarified.

The questionnaire was composed by 27 closed questions about "Biosafety in Audiology", which were divided in accordance with the items: 1) hand hygiene; 2) personal protective equipment and health professionals; 3) organization and cleanliness of working items; 4) organization and cleanliness of the environment. The speech therapist should mark "yes" to the presence of the behavior or biosecurity practice; "no" to the absence of that; "sometimes" to the biosafety practices that were realized in one time or situation and not realized in another time or situation; or "not apply" to the biosecurity practices that are not part of the work routine of Audiology.

This study was previously approved by the Ethics Committee of UFMG under the number ETIC 0380.0.203.000-10.

After the data analysis, a database was structured specifically for this research in the statistical software EPI INFO version 6.04. For the descriptive analysis, it were realized the frequency distribution of the categorical variables of the study and the analysis of the measures of central tendency and dispersion of continuous variables. The data were previously imparted and the ones that were considered inconsistent and the deleted information were properly treated. For the answer marked as "sometimes", the data were considered as "no", since the biosafety practices, according to Regulatory Norm 32 (NR32) should always stand by in the routine of the health professional. The Chi-Square was used for the statistical analysis. The significance level adopted was 5% ($p < 0.05$).

QUESTIONNAIRE OF BIOSAFETY IN AUDIOLOGY

Name: (it is not necessary to fill): _____
Gender:_____ Age: _____
Time of graduation: _____
Do you have specialization: ( ) Yes ( ) Conclude ( ) Undergoing Area of expertise_____
( ) No

Hand Hygiene

1. Sinks for hand hygiene are provided with paper towels, liquid soap and trash with drive for foot or elbows?
( ) Yes ( ) no

2. Do you remove rings, bracelets and watches for hand hygiene?
( ) yes ( ) no

3. Do you wash your hands before starting attendance?
( ) yes ( ) no ( ) sometimes

4. Do you wash your hands between the attendances?
( ) yes ( ) no ( ) sometimes

5. Do you realize antiseptic cleaning with alcohol?
( ) yes ( ) no ( ) sometimes

Personal Protective Equipment and Health Professionals

6. Do you wear gloves for performing meatoscopy?
( ) yes ( ) no ( ) sometimes

7. Do you wear gloves for performing auditory tests (immitanciometry, tonal audio)?
( ) yes ( ) no ( ) sometimes

8. Do you use lab coat during the service?
( ) yes ( ) no ( ) sometimes

9. Does your lab coat have protective barrier for individual clothing (long sleeves and high collar)?
( ) Yes ( ) no

10. Is your lab coat always kept buttoned?
( ) yes ( ) no

11. Do you keep your hair tied during the sessions?
( ) yes ( ) no ( ) not apply

12. Do you maintain your nails clean and cut?
( ) yes ( ) no

13. Have you received instructions on how to use the personal protective equipment?
( ) yes ( ) no

14. Do you usually leave the workplace wearing personal protective equipment used in the workplace (eg: lab coat)?
( ) yes ( ) no ( ) sometimes

Organization and cleanliness of working items

15. The headphones and vibrators used during audiometric test are cleaned or disinfected between attendances?
( ) yes ( ) no

16. Are the items (olives, headphones) used in the patient care intended for disinfection?
( ) yes ( ) no

17. Are the items (olives, speculums) used in patients care put in a suitable place, separated from the others articles?
( ) yes ( ) no

18. Are the cleaned items (olives, speculums) packaged in jars with lids and labeled with name and date of disinfection?
( ) yes ( ) no

19. Is the audiometric booth lined with washable material, allowing for easy cleaning?
( ) yes ( ) no

Organization and Cleanliness of Environment

20. Do you smoke in the workplace?
( ) yes ( ) no

21. Do you use adornments like earrings, bracelets or necklaces in the workplace?
( ) yes ( ) no

22. Do you handle contact lenses in the workplace?
( ) yes ( ) no

23. Do you consume food and beverages in the workplace?
( ) yes ( ) no

24. Is the environment (attendance room, waiting room) kept organized by the professionals?
( ) yes ( ) no

25. Is there an appropriate place to store food and personal items?
( ) yes ( ) no

26. Are there instructions on how to use the equipment of the clinic?
( ) yes ( ) no

27. Is the covering of the wall, floors and ceiling resistant to washing and use of disinfectant?
( ) yes ( ) no

Figure 1 – Questionnaire of Biosafety in Audiology

RESULTS

This research was realized with 70 adults subjects aged from 23 to 44 year, mean age of 26,2 years (±4,6), being that 66 (94,3%) female and 4 (5,75) male. The speech therapists presented an average time of graduation of 2 years and 8 months, with minimum of 6 months and maximum of 14 years (± 9,5).

Regarding the academic education, 23 (32,8%) are graduated and are taking a expertise in Audiology; 13 (18,6%) are graduated and have an expertise in Audiology; 11 (15,7%) are graduated and have an expertise in other area; 2 (2,9%) are graduated and have more the one expertise and 21 (30%) are graduated and do not have a expertise. All of them work in Audiology in the cities of Belo Horizonte and Contagem (MG).

The biosecurity practices realized by the speech therapists in the work routine of Audiology can be visualized in Figure 2.

PRACTICES OF BIOSAFETY	Yes		No		Not apply	
	N	%	N	%	N	%
Hand hygiene						
Sinks are appropriate (Standards of ANVISA) ?	50	71	20	29	-	-
Remove adornments (ex: rings) to hand hygiene?	46	66	24	34	-	-
Hand hygiene before attendance?	50	71	20	29	-	-
Hand hygiene between attendances?	28	40	42	60	-	-
Makes antisepsis with alcohol?	40	57	30	43	-	-
Personal Protective Equipment and Health Professionals						
Wear gloves during meatoscopy?	6	9	64	91	-	-
Wear gloves during audiological tests (eg:imitanciometry)?	1	1	69	99	-	-
Wear lab coat during attendance?	62	89	8	11	-	-
Does lab coat has a protective barrier (eg :long sleeve)?	52	74	18	26	-	-
Is lab coat always kept buttoned**?**	64	91	6	9	-	-
Is hair always tied?	55	79	10	14	5	7
Cleaned and cut nails?	64	91	6	9	-	-
Received instructions on how to use the PPE?	70	100	0	0	-	-
Leave the workplace wearing PPE?	6	8	64	92	-	-
Organization and Cleanliness of working items (phones, olives e speculum)						
Are the items cleaned between attendances?	5	7	62	89	3	4
Are the used items intended for disinfection?	58	83	11	16	1	1
Are the used items separated from the others?	62	89	8	11	-	-
Are the clean items packed properly?	27	39	43	61	-	-
Is the audiometric booth easy to clean?	30	43	37	53	3	4
Organization and Cleanliness of Environment						
Smoke in the workplace?	3	4	67	96	-	-
Wear adornments (eg:earrings) in the workplace?	48	69	22	31	-	-
Handling contact lenses in the workplace?	3	4	67	96	-	-
Consume food in the workplace?	28	40	42	60	-	-
Maintains the enviroment organized?	68	97	2	3	-	-
Is there an appropriate place to store food and personal items?	55	79	15	21	-	-
Are there instructions on how to use the equipment?	37	53	33	47	-	-
Is the wall cladding and flooring resistant to washing?	58	83	12	17	-	-

Legend: N=Professional numbers; %: percentage of professionals
Source: Survey Data

Figure 2- Practices of biosafety adopted by 70 speech therapists from Belo Horizonte and Contagem in work routine in Audiology, 2011

The relation between the biosecurity practices adopted by the speech therapists and continuing education can be visualized in Table 1.

The Table 2 presents the relation between the biosecurity practices adopted by the speech therapists and the time of graduation.

Table 1 – Biosafety practices adopted by speech therapists and continuing education

		Concluded Expertise/ Undergoing		Without Expertise		Chi - Square	P
		N=49	%	N= 21	%		
Hand Hygiene							
Remove adornments (ex: rings) to hand hygiene?	yes	9	18	11	52	8,21	0,04*
	no	40	82	10	48		
Hand hygiene before attendance?	yes	33	67	17	81	1,31	0,25
	no	16	33	4	19		
Hand hygiene between attendances?	yes	21	43	5	24	2,25	0,13
	no	28	57	16	76		
Make antisepsis with alcohol?	yes	27	55	13	62	0,27	0,60
	no	22	45	8	38		
Personal Protective Equipment and Health Professional							
Wear gloves during meatoscopy?	yes	4	8	2	10	0,99	0,32
	no	45	92	19	90		
Wear gloves during audiological tests (eg:imitanciometry)?	yes	1	2	0	0	0,43	0,51
	no	48	98	21	100		
Wear lab coat during attendance?	yes	42	85	20	95	1,30	0,25
	no	7	15	1	5		
Is lab coat always kept buttoned**?**	yes	43	88	21	100	0,65	0,41
	no	6	12	0	0		
Cleaned and cut nails?	yes	44	90	20	95	0,55	0,45
	no	5	10	1	5		
Leave the workplace wearing PPE?	yes	5	10	2	10	0,01	0,93
	no	44	90	19	90		
Organization and Cleanliness of working Items (phones, olives and speculums)							
Are the items cleaned between attendances?	yes	5	10	2	10	0,02	0,88
	no	42	90	19	90		
Are the used items intended for disinfection?	yes	43	91	14	67	6,50	0,01*
	no	4	9	7	33		
Are the clean items packed properly?	yes	15	31	7	33	0,05	0,82
	no	34	69	14	67		
Organization and Cleanliness of environment							
Smoke in the workplace?	yes	2	4	1	5	0,02	0,89
	no	47	96	20	95		
Wear adornments (eg:earrings) in the workplace?	yes	37	75	11	52	3,60	0,05*
	no	12	25	10	48		
Handling contact lenses in the workplace?	yes	3	6	0	0	1,32	0,24
	no	46	94	21	100		
Consume food in the workplace?	yes	22	45	6	29	1,61	0,20
	no	27	55	15	71		
Maintains the enviroment organized?	yes	47	96	21	100	0,87	0,35
	no	2	4	0	0		

Legend: N= number of professionals; %: percentage of professionals; P= p-value
*p<0,05; Chi-square test
Source: Survey Data

Table 2 – Relation between the biosafety practices adopted by the speech therapists and the time of graduation

		Up to 18 months of graduation n=36		More than 18 months (n=34)		Chi - square	P
		N	%	N	%		
Hand Hygiene							
Remove adornments (eg: rings) to hand hygiene?	yes	23	64	22	65	0,01	0,94
	no	13	36	12	35		
Hand hygiene before attendance?	yes	26	72	24	71	0,02	0,88
	no	10	28	10	29		
Hand hygiene between attendances?	yes	12	33	16	47	6,32	0,011*
	no	24	67	18	53		
Personal Protective Equipment and Health Professionals							
Wear gloves during meatoscopy?	yes	4	11	2	6	0,60	0,43
	no	32	89	32	94		
Wear gloves during audiological tests (eg:imitanciometry)?	yes	1	3	0	0	0,94	0,33
	no	35	97	34	100		
Wear lab coat during attendance?	yes	36	100	31	91	3,27	0,07
	no	0	0	3	9		
Is lab coat always kept buttoned**?**	yes	34	94	30	88	0,85	0,35
	no	2	6	4	12		
Cleaned and cut nails?	yes	31	86	33	97	2,64	0,10
	no	5	14	1	3		
Leave the workplace wearing PPE?	yes	4	11	3	9	0,10	0,75
	no	32	89	31	91		
Organization and Cleanliness of working items (phones, olives e speculums)							
Are the items cleaned between attendances?	yes	4	11	3	9	0,08	0,78
	no	32	89	30	91		
Are the used items intended for disinfection?	yes	31	89	26	79	1,18	0,27
	no	4	11	7	21		
Are the clean items packed properly?	yes	8	22	14	41	2,87	0,09
	no	28	78	20	59		
Organization and Cleanliness of Environment							
Smoke in the workplace?	yes	1	3	2	6	0,40	0,52
	no	35	97	32	94		
Wear adornments (eg:earrings) in the workplace?	yes	25	69	23	68	0,03	0,87
	no	11	31	11	32		
Handling contact lenses in the workplace?	yes	0	0	3	9	2,27	0,07
	no	36	100	31	91		
Consume food in the workplace?	yes	15	42	14	41	0,00	0,96
	no	21	58	20	59		
Mantains the environment organized?	yes	36	100	32	94	2,15	0,14
	no	0	0	2	6		

Legend: N=number of professionals; %: percentage of professionals; P= p-value
*p<0,05; Chi-square Test
Source: Survey Data

DISCUSSION

This research aimed to study and analyze the biosecurity practices adopted by speech therapist working in Audiology. As there is no specific Federal legislation about biosecurity in health, this research is based on Regulatory Norm 32 (NR32)[7], which deals with safety and health at work in health service, presenting the basic guidelines for the implementation of protection measures to the worker's safety and health in health care services, as well in that one that promotes activities of promotions and health assistance.

One of the issues covered by this norm and investigated in this research refers to hand hygiene. It is known that this action is basic for prevention and control of infection inside and outside the

health service[2,8-11], since the hands are considered the main tools of the health professionals, which can be colonized by pathogenic microorganisms[2]. It was observed in this study that 50 professionals (71%) stated that they wash their hands before start service. However, only 28 (40%) reported hand hygiene between attendance. Such percentage is considered as low, due to the importance of this procedure for the reduction of dissemination of microorganisms between patients and professionals. Those findings corroborate with the literature, which mentions that the health professionals adherence to the recommended practices varies between 5% and 81%, on average stand at around 40%[2,3]. However, one study that approached biosecurity measures in nursing professionals in an Intensive Care Unit has found that hand hygiene is a procedure incorporated in the work routine and occurs with a high frequency[12]. Such variance can be explained by the type of work environment, as well as the kind of patient of the intensive care in relation to audiological clinic.

According to the literature, the performance of washing with water and soap is indicate when hands are clearly dirty or contaminated with blood, secretions and/or others body fluids, in initiating and finishing work shift, before and after contact with patient[13], between different procedures with the same patient, after any contact with contaminated item or equipment, before putting on gloves and immediately after withdrawal[2,6-8,10] or as often as required during patient service[11].

When the speech therapists were questioned about removing rings, bracelets and watches for hand hygiene, 46 (66%) reported that they do it against 24 (24%) that say they do not do it. According to the National Health Surveillance Agency (ANVISA, in Portuguese)[2], any and all adornment of hands and forearm, as watches, rings and bracelets should be removed before hand hygiene, once they can gather microorganism[2,6,10]. The findings of this research can be related to the lack of knowledge of the speech therapist about the importance of removing these adornments and the fact that the use of them is habitual and was not properly approached during graduation.

Also according to ANVISA[2], the sink for hand hygiene should be used only for this purpose, provided with: disposable paper towel, liquid soap and trash with drive for foot or elbows. 50 (71%) of the 70 professionals, who have participated in this research, reported to work in audiological clinics in which the sink follow the standardization described above. Others manuals and literatures articles also state the importance of an exclusive sink, with a facilitate access to professionals and appropriate material for the correct procedure of hand hygiene[7-9,11]. The non-compliance of these orientations, as the lack of equipment or not accessible localization items for hand hygiene and no provision of supplies like soaps and paper tower is appointed in the literature as a factor for no adherence to the correct practices of hand hygiene[2,3].

In this study, 40 speech therapists (57%) related to be used to do the antiseptic cleaning with alcohol. It is recommended the use of antiseptic products for hand hygiene, due to their antimicrobial activity and the residual and persistent effect. The alcohol-based solution that contains ethanol (ethyl alcohol) is recommended for hand hygiene by having an antimicrobial effect. In Brazil, they are the antiseptic products most widely used[2]. Others products that also have the antiseptic function and can be used for hand hygiene are: chlorhexidine, iodophores (PVPI – povidone-iodine) and triclosan[2]. It is important to highlight that such procedure does not exclude the need for hand hygiene with water and soap, but can be a feasible solution in audiological clinics that does not have adequate sink (28%).

Another biosecurity measure is the use of personal protective equipment (PPE), which is a device destined to protect worker's physical integrity and health. This practice is one of the basic precautions that help the professionals in the correct technical procedures[14]. The use of barriers of protections by the health professionals should be prioritized, since in the large part of situations is impossible or infeasible to control the source of biological agents or the environment as a whole[15]. In addition, it is important to consider that it is not always possible to know if the patient has an infectious disease[13]. In relation to this issue, it was observed that 62 (89%) of the professionals working in Audiology use lab coat as protective equipment. The use of safety practices like this significantly reduces the risk of occupational injury[4], and should be done independently of the use of write clothes or uniform, since it is a physical protection barrier for personal clothes[16]. In this research, only six professionals (8%) leave the PPE in the workplace, including lab coat. A previous study showed that uniform and write lab coats became progressively contaminated during clinical treatments and contamination reaches a level of saturation, suggesting the possibility that they are a potential vehicle for transmission of microorganisms[17]. Thus, lab coat must be changed from time to time or daily and/or whenever dirty[6] and taken off every time the professional get out of the workplace[7,9]. Furthermore, in this research 52 (74%) of the professionals informed the use of lab coat with long sleeve and 64 (91%) of buttoned lab coat, which corroborates with the literature

researched, that appoints that the lab coat must has long sleeves and should be kept buttoned[16,18].

In relation to the use of gloves, 69 speech therapists (99%) do not use this kind of PPE in Audiology. The literature describes gloves as protective barriers that avoid the contact with body fluids, secretions and contaminated items[9]. The use of gloves is indicated during audiological test[8,19] and in the handling of specula and olives, in order to minimize the risk of cross infection[9]. Furthermore, the literature suggests the use of gloves during meatoscopy[8], which is a practice that is not realized for the most professionals of this research (91%). This can happen due to lack of information regarding these specific recommendations or negligence due to a poor perception of risks, which leads to non-compliance of such measures[15]. This fact was not observed in others areas, as Nursing and Dentistry, in which the use of gloves for handling patient is more frequent[12]. Regarding to the practice of use hair tied and keep clean and cut nails, it was observed that 55 (795) and 64(%) of the respondents, respectively, keep such habits, which is advocated in the literature, that suggests the use of hold hair and kept short nails regularly[6,19].

The hygiene of the items is relates to the care with the supplies used in health and their cleaning. The process of cleaning is composed by the removal of dirty or organic matter, preceding actions of sterilization or disinfection[6,16]. Failures in this case facilitate microbial growth and thus promote the transmission of infections[16]. Approximately 80% of the professionals send the items for disinfection and separate them from the others. However, 61% stated that, despite carrying the recommended cleaning, they do not store the olives, speculums and other articles adequately, increasing the risk of items contamination even before direct contact with the patient. It is important to highlight that, according to literature, speculums and olives should be, preferably, disposable[19]. If this is impossible, these articles should be disinfected[8].

During audiological tests realized by speech therapists noncritical items are used, those intended for contact with intact skin of the patient and require cleaning and disinfecting[6,13], for example electrodes, vats, phones and cannula for irrigation[8]. It is also used semi-critical items, those intended for contact with no-intact skin or intact mucous and require high level of disinfection or sterilization[6,13], for example speculum and olives[8]. In this research, 62 (93%) professionals reported that phones and vibrators used in workplace are not cleaned during service. Such practice increases considerably the chance of patients and professionals contamination from microorganism present, especially, on hearing mucosa[8].

30 (43%) professionals reported that the material that covered the audiometric booth does not favor the hygiene of it. Generally, the internal and external material for cover the wall, ceiling and floor of the audiometric booth are selected in order to increase sound absorption. However, it is essential to pay attention if these materials make the hygiene a routine[20].

In relation to the practices of the professionals in workplace, it was observed that the most of them (96%) do not smoke or handle contact lenses, in accordance with NR 32. However, 40% (n=28) of the investigated population stated that consume food and beverages in labor, which is prohibited, as well as storage food in places not intended for that purpose[7].

The maintenance of the organization in the workplace is important not only for biosafety, but also to make the environment enjoyable for the professional and the patient. In this research, 68 (97%) of the interviewee reported that the environment is kept organized.

The companies must be careful to follow the norms of biosafety, offering the employee a place to store food and personal items and instructing them in the use of equipment, among others recommendations. The most professionals – 55 (79%) and 37 (53%) respectively – related that the company in which they work addresses these two recommendations. The company must also pay attention to the criterion of lining the walls, floor and ceiling, which must be resistant to washing and to the use of disinfectant[16]. The research showed that 58 (83%) professionals work in places that meet this criterion.

When analyzing the influence of continuing education on execution of correct biosecurity practices (Table 1), it was observed that the speech therapists with completed or undergoing expertise had better biosecurity practices when compared to those without expertise. In the question related to the allocation of the items (olives and speculums) for disinfections, it was observed a statistically significant difference (p=0,01) when comparing the responses of interviewees who have expertise with those who do not have. This result corroborates with the literature that says that continuing education is a type of intervention that can lead to the adoption and implementation of biosecurity measures on the daily routine of the health worker[12,21]. Studies reported that biosafety is a educational activity and should be represented by a system of teaching and learning[22,23], in a continuous process.

However, in questions 2 and 21 – Do you remove rings, bracelets and watches to hand hygiene? and

Do you use adornments like earrings, bracelets or necklaces in workplace?, respectively – it was observed that a higher number of professionals without expertise stated to have a practice of withdrawal adornments during work routine for hand hygiene when compared to the number of professionals who reported the same practice and have expertise. This result was not expected, since it is believed that specialization is a period of learning best practices. This fact can be explained by a deficit that exists between academic training and the routine of work, regarding to biosafety[24,25].

When analyzing the influence of time of graduation in the adoption of biosafety practices (Table 2), it was verified a better compliance in the practice of hand hygiene in the professionals with longer time of graduation (p=0,011). It is believed that this result is due to the improvement in the practices that occur over time, in which the health professional acquires training and passes to observe the necessity of such measures in their daily lives. This corroborates with the literature, which reports improvement of practices with the increase of graduation time[26].

It is observed that hand hygiene, use of PPE and organization and cleanliness of working items and the environment are biosafety measures known by almost all health professionals and speech therapists interviewee in this study. However, it can be notice that there are professionals that do not incorporate such practices in the work routine or realize them in a wrong way.

The NR 32 is nationally recognized as one of the most important achievements of health professionals in relation to safety and health at work. The effectiveness of this norm is directly related to the extensive knowledge of all aspects by the professionals. However, a considerable part of these professionals, be they speech therapist, doctors or nurses presents deficits knowledge related to the care of their work activities, surrounded by high degree of dangerousness[27]. Thus, the educational institutions should promote the empowerment of their students. So that, they are suitably qualified to promote procedures that minimizes and/or eliminate the real risks to the health employees and customers[27-29]. The professional who is omitted in the implementation and execution of the NR 32 would be breaching the professional Code of Ethics, which specifically recommends obedience to the laws of the country in which fits the norm.

The change of behavior (development of skills and change attitudes) and the implementation of best practices are required for prevention of cross-transmission between patients and professionals of occupational diseases. A program of professional training in biosafety as performed at the Instituto Oswaldo Cruz is essential besides an instruction in the graduation and campaigns that maintains the professional oriented[30].

New researches in phonoaudiology that approaches the biosafety practices, not only in Audiology, but also in the others areas, must be developed. There is also the need to include questions about immunization of the speech therapist, according to what is determined for the health care professional, issue not addressed in this study.

CONCLUSION

It concludes that the most biosecurity practices are follow by the speech therapists working in Audiology.

Factors as time of graduation and continuing education positively influence the adoption of correct biosafety precautions.

The data indicate the need to improve the adherence of the speech therapist working in Audiology to biosecurity measures, in order to prevent and reduce infections, as well the promotion of the safety of patients, professionals and others users of health services.

RESUMO

Objetivo: explicitar as práticas de biossegurança adotadas por fonoaudiólogos atuantes na área de Audiologia e relacioná-las com a educação continuada e o tempo de formação dos profissionais. **Métodos:** participaram deste estudo 70 fonoaudiólogos atuantes na área de Audiologia, nos municípios de Belo Horizonte e Contagem. Foi aplicado um questionário sobre biossegurança em Audiologia, com base na Norma Regulamentadora 32, composto por 27 perguntas fechadas, abordando os aspectos de higienização das mãos, equipamentos de proteção individual e organização e higienização dos artigos e do ambiente. **Resultados:** a maioria dos fonoaudiólogos relatou que adota as seguintes medidas de biossegurança: higienização das mãos antes dos atendimentos (71%), uso de jaleco com mangas longas (74%) e abotoado (91%), cabelos presos (79%), unhas limpas e cortadas (91%), separação e desinfecção dos artigos usados (83%) e organização do ambiente (97%). No entanto somente 40% dos profissionais referiram higienizar as mãos entre os atendimentos e 9% referiram o uso de luvas na realização da meatoscopia. Observou-se que a destinação dos artigos para desinfecção é uma prática mais rotineira para profissionais com especialização ($p< 0,05$). Os profissionais com maior tempo de formação aderiram melhor à prática de higienização das mãos. **Conclusão:** higienizar as mãos antes dos atendimentos, vestir-se corretamente, destinar os artigos para desinfecção e organizar o ambiente de trabalho são práticas de biossegurança adotadas pela maioria dos fonoaudiólogos. Fatores como tempo de formação e educação continuada influenciam de maneira positiva na adoção de corretas medidas de biossegurança.

DESCRITORES: Audiologia; Exposição a Agentes Biológicos; Fonoaudiologia; Educação Continuada; Saúde Ocupacional

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