

Health Professionals and hand hygiene: a question of pediatric patient safety^a

Os profissionais da saúde e a higienização das mãos: uma questão de segurança do paciente pediátrico

Los profesionales de la salud y el lavado de las manos: un asunto de seguridad del paciente pediátrico



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ABSTRACT

This paper is a qualitative descriptive study, which aims to analyze how the academic education concerning hand hygiene contributes to the pediatric patient safety. This research was developed in an university hospital in Southern Brazil, in the pediatric unit, during the period of August to December, 2012. Sixteen healthcare professionals participated (doctors, nurses and physical therapists). A semi-structured interview was used to gather information. Data was organized by the software QSR Nvivo and analyzed using the content analysis technique. The results allowed us to list two thematic categories: "Hand hygiene and healthcare professionals' academic education"; and "Hand hygiene and professional life". The first thematic category will be presented in this paper. It was identified that the academic education contributes in an ineffective way to the creation of a patient safety culture. According to the professionals, there are gaps during the educational process regarding hand hygiene. The topic is treated in an ineffective and not very significant way to the learning and adhesion of hand hygiene in the professional life. It is recommended that, for the internalization of the practice by future professionals, a transversal, continuous and systematic approach is adopted during the professional's training, evaluations concerning the hand hygiene are done throughout the academic life as well as healthcare professors bethink the topic.

Descriptors: Hand hygiene. Pediatrics. Patient safety. Nursing. Health education. Health personnel.

RESUMO

Estudo qualitativo descritivo com objetivo de analisar como a formação acadêmica sobre a higienização das mãos (HM) contribui para a segurança do paciente pediátrico. Realizado em um hospital universitário do sul do Brasil, nas unidades de internação pediátrica no período de agosto a dezembro de 2012. Participaram 16 profissionais da saúde (médicos, enfermeiros, técnicos de enfermagem e fisioterapeutas). Para a coleta das informações, utilizou-se entrevista semiestruturada. Os dados foram organizados pelo software QSR Nvivo e analisados pela técnica de análise temática de conteúdo. Os resultados permitiram elencar duas categorias temáticas: "A HM e a formação acadêmica do profissional de saúde"; e "A HM e a vida profissional". Neste manuscrito será apresentada a primeira. Constatou-se que a formação acadêmica contribui de forma pouco efetiva para a criação de uma cultura de segurança do paciente. Existem lacunas, sob a ótica dos profissionais, durante o processo formativo quanto a temática da higienização das mãos. A mesma é tratada de forma pouco eficaz e significativa, para o aprendizado como parte inerente da profissão. Recomenda-se que para tal introyecção dos futuros profissionais, seja importante uma abordagem de forma transversal, contínua, sistemática e foco de avaliações sobre a durante toda a formação, assim como tema de reflexões para os formadores em saúde.

Descritores: Higiene das mãos. Pediatria. Segurança do paciente. Enfermagem. Educação em saúde. Pessoal de saúde.

RESUMEN

Estudio cualitativo descriptivo con el objetivo de analizar cómo la formación académica en el lavado de las manos contribuye para la conciencia de una seguridad del paciente pediátrico. Fue desarrollado por un hospital universitario en el sur de Brasil, entre agosto y diciembre de 2012, en las unidades de hospitalización pediátrica. Participaron 16 profesionales de la salud. (médicos, enfermeras, técnicos de enfermería y fisioterapeutas). Para recolectar la información, se utilizó de entrevista semiestruturada. Los datos fueron organizados y procesados por el software QSR Nvivo, y analizados mediante la técnica de análisis temático del contenido. Los resultados permitieron enumerar dos categorías temáticas: "El lavado de las manos y la formación académica del profesional de salud"; y "El lavado de las manos y la vida profesional". En este manuscrito se mostrará la primera. Se observó que la formación académica contribuye de forma incipiente para la creación de una cultura de seguridad del paciente. Se observó que existen lagunas en el proceso de formación del profesional de la salud en relación con el tema del lavado de las manos no ser tratado de manera significativa tanto en el aprendizaje y en la introyeción como parte inherente de la profesión. Se recomienda que para tal introyeción de los futuros profesionales, sea importante un abordaje transversal continuo, sistemático y con enfoque en evaluaciones sobre y durante toda la formación, así como tema de reflexiones para los formadores en salud.

Descritores: Higiene de las manos. Pediatria. Seguridad del paciente. Enfermería. Educación en salud. Personal de salud.

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■ INTRODUCTION

Based on the experiences in the pediatrics wing of a large scale university hospital, situations were observed in which one of the most basic measures to avoid bacterial dissemination – hand hygiene (HH) – were often not taken. Despite incentives from the institution, the practice of HH, remains below that expected⁽¹⁾. We believe that the experiences acquired by professionals during their professional training could be the key for the development of this practice in their everyday working life.

These questions are disturbing, principally in child care, since the hospitalization of children demands greater proximity of the professionals undertaking the health care and consequently, the need for more frequent HH. When the child is unaccompanied, the demand increases considerably. As well as general child care, hygiene and comfort also require frequent professional intervention, such as with the diaper changes or help using the toilet.

And still we have food care, administration of medications, changing of dressings and other procedures, which, many times, require the involvement of a professional. Also, with child care, it is often necessary to soothe and cuddle. So many situations related to the assistance of hospitalized children can interfere with the provision of safety and care to the patient, in the context of transmission of infections, through a lack of hand hygiene at the correct time.

In Brazil, ordinance number 529, from the 1st of April, 2013, established a National Program for Patient Safety (PNSP) with the general objective of contributing to the qualification of care in all health establishments in the country⁽²⁾. On a worldwide scale, since 2004, the Worldwide Alliance for Patient Safety has as its main purpose, the establishment of measures to increase the safety of patients and the quality of health care. The alliance treats HH as a priority and as the one of the basic components for the safety of patients, facing germ contamination in a hospital environment. In view of the evidence, that the professional's hands are involved in the dissemination of infection in the hospital environment, the World Health Organization (WHO) launched the First Global Challenge for Patient Safety, with the slogan *Clean Care is Safer Care*. The campaign aims to reduce Healthcare Associated Infections (HAIs) through Hand Hygiene⁽³⁾.

According to the International Classification for Patient Safety (ICPS), patient safety can be defined as the reduction, to an acceptable minimum, of the unnecessary risk of damage associated with health care. In this context, adequate Hand Hygiene should be followed rigorously in all situations so as to ensure the safety of the patient⁽⁴⁾.

It is known that hospitalized children require special attention from health professionals due to their fragility and the peculiarities in the process of growth and development⁽⁵⁾. However, a study describing healthcare professionals behavior in a children's Hospital in Botucatu – with regards to HH – where only 7% of the participants observed, washed their hands before performing a procedure, and among them, half of the participants didn't follow the correct steps in the technique. The study concluded that there is a low adherence, by healthcare professionals, to hygiene practices before performing procedures with children.

It appears that one of the contributing factors to low adherence could be the training process; it is during this training that the student prepares himself for professional life. In Health undergraduate courses, generally the hand hygiene topic and infection control is approached during the early stages, before the student takes on any practical activities. In the final academic phase, these questions may only be inferred and it's hoped that the student, during their internship, is already aware of the importance of HH.

Studies, made with healthcare students at different academic stages, observed mistakes and shortcomings in the approach to question related to HH, proving that the academic process is interfering with adherence to HH⁽⁷⁻⁹⁾.

Considering that the theme of the safety of the pediatric patient still represents a gap in knowledge which deserves to be addressed, as well as the fact that there are only a few publications about this theme in our national scenario⁽⁵⁾, this study was realized, with the objective of analyzing how HH taught in the academic process could contribute to the safety of the pediatric patient.

■ METHODOLOGY

This descriptive qualitative study was made in the Clinical Hospital in Porto Alegre, (HCPA), in Rio Grande do Sul, Brazil. HCPA is a university and public hospital, primarily responsible for providing services to the patients of the Public Health System (SUS) in the capital city of the state. 16 health professionals of the Pediatric Internment Units participated (doctors, nurses, nurse assistants, and physiotherapists). They had direct contact with the children and had been qualified for up to 10 years. Psychologists, nutritionists, nutritional assistants and hygiene assistants, amongst others, were removed from the list because they didn't have direct contact with the children.

Approximately 40 professionals were invited to take part in the study. Afterwards, a list was organized containing names of the people interested, separated by professional category. Finally, the participants were randomly

selected adding up to 16 professionals (4 in each professional category in the morning and night shifts).

From the data collected between August and December 2012, using semi structured interviews with guided questions, for example: Tell us what you remember regarding HH during your professional training? How was this technique requested or approached during the training? When exactly?

The interview lasted 30 minutes and they took place outside working hours and were recorded and transcript, and submitted for thematic analysis of contents⁽¹⁰⁾, following the steps:

1st) Pre- analysis: material selection, according to the study objectives, in search of information that indicated the direction of the interpretation.

2nd) Material exploitation: Organization and codification using the software Qualitative Solutions Research (QSR) Nvivo 10. This software presents a tool to operate the qualitative researches⁽¹¹⁾. Afterwards, the categories were listed: "Hand hygiene and healthcare professionals' academic education"; and "Hand hygiene and professional life". In this manuscript only the first will be presented.

3rd) Treatment and interpretation of the results obtained: inferences and interpretations based on the referential theory.

The research followed the Resolution number 466/12 of the National Health Council and was approved by the Research Ethics Committee of HCPA (number 120,192).

The participants signed an Informed and Free Consent Form twice. The participants identities were preserved by adding a letter P followed by a number to their names.

It must be highlighted that this article was extracted from a doctoral thesis: "Hand Hygiene for those who care for hospitalized children: a question of safety"⁽¹²⁾.

■ RESULTS AND DISCUSSION

4 nurses, 4 nursing technicians, 4 physiotherapist and 4 doctors, all females participated. Their average age was 31.9 years old. When separated into professional categories, the physiotherapists had 11.7 years of working experience, the nurses 7 years, the nursing technicians 9.7 years and the doctors 2 years, on average. In general, the professionals had undertaken the profession for 7.4 years on average and worked in pediatrics for approximately 2 years.

Hand hygiene and healthcare professionals' academic education

The participants' memories, regarding how HH was approached during their professional training, shows

the importance of this theme. It can be observed how little enforcement of the technique was given by the teachers during practical activities, as described by the study participants:

I remember that I had one discipline [...] the teacher started it by asking very basic questions about hand washing, tying up hair [...] we didn't think it was very important at the time, this was at the beginning of the course and then after in the internships [...] It was touched on in theory but not covered in practice [...] hand washing wasn't covered. It was never covered during practice. (P4)

It wasn't all of them. Some of the teachers who taught some subjects...the practical classes that covered it. In the more theoretical subjects it wasn't covered. (P5)

I cannot remember, the theory nor the practice [...] I don't remember having this class and cannot even highlight the importance of it explaining how this and that can be transmitted, I don't remember. (P7)

These statements reinforce the need for a continuous approach to HH during academic study, this being, still, one of the greatest challenges facing teaching in the area of healthcare⁽¹³⁾. Teaching of this theme is usually given at the beginning of the semester in an emphatic manner, which perhaps isn't the most effective way for students and could have the repercussion of them not associating HH as a practice specifically associated with professional activity: it is learned by everyone, from childhood and incorporated in to the every-day. This fact can favor the equivocal and dangerous understanding – by future professionals – that this procedure is less important than other more complex ones which they have to learn during the course, for example: changing dressings, aspiration of airways, surgery and others. However, not only these procedures but all assistance given to the patient can be prejudiced by the lack of the "simple" act of HH, compromising the safety of patients. The challenge for health care education, regarding the theme of hand hygiene, is the graduation of professionals committed to an adherence with HH, and this should be widely emphasized⁽¹³⁾, being a transversal theme in the training of healthcare professionals, and should therefore be instigated, required and assessed. However, the way that HH was approached in the reports shows that this theme explored only a little during professional training. According to the statements, HH techniques were given, but its need and importance were not highlighted. Besides this, it is possible to assume that when the subject was given, it was in the

form of guidelines among informal discussions associated with procedures.

I think this is related, well as far as I remember, from graduation to procedures, patient contact, these things. To have control of infection, from one patient to another, before you do anything to the patient and after you do anything to the patient. This is what I remember.(P5)

If it was (given), then it was theory, like, it wasn't anything formal, you know, it wasn't anything to be tested or a specific practical. You know you wash your hands... something like that... nothing else.(P8)

[...] I don't remember, or at least it wasn't important. I don't remember anything formal, a class, a subject, I don't remember. [...] hey, I think not even in the surgery classes! (P9)

No, I've never had a theoretical class, only when we studied each illness, the importance of washing hands was mentioned, nothing like theoretical class or HH practice (P10)

Well, I didn't have this notion of before contact from one patient to another. I thought more about myself, in truth. But it was in the practical, it was I think, during nursing introduction when the teacher mentioned about washing hands(P13).

[...] This was more a thing to do with nursing, before a procedure, you understand, nothing to do with flue prevention, for example. (P14)

It can be seen that some participants mention that the theme was approached in association to the procedure, without going any deeper into the factors involved in the process. Memories related to the importance, the covering of the practice and even up to some depth of content, don't appear in the reports, and therefore it can be concluded that this theme was not very marked in the academic period of the interviewees.

The fact that academic training contemplates HH as associated to procedures is very worrying, because with this perspective, the student can be oblivious to the many other moments when hygiene is necessary, such as touching the child, reaching for a dummy or a toy which fell onto the floor, as illustrated in the following statements:

We have to get very close to the child to be able to examine her (P9).

Here in pediatrics it's more complicated to manage. For example, one child is crying because the dummy fell. So,

somebody else's mother takes a look, doesn't see anybody else in the room, then puts the dummy into the child's mouth. It's this that is difficult in paediatrics. (P16).

In the summer we have many outbreaks of diarrhea, such that, it is evident that hand washing is everything, because the diarrhea starts in one hospital bed and then spreads to them all. (P7).

It's that in pediatrics, as we have many children with bronchitis [...] you have to take care. So, from the beginning, I made sure that I always really took care (P11).

[...] we advise the mothers before they enter to visit the child, that the first thing is to wash your hands. (P14)

We always have to instruct; "look, stay with your child, but don't touch the child in the next bed, wash your hands before, when you leave and when you enter the infirmary or room (P15).

It is considered that professional practice should be mirrored in the teaching-learning process, the graduation period being fundamental for the development of the future competent professional⁽⁸⁾. In the area of children, awareness and incorporation of HH in the field of practices can help confront the challenge of overcoming "enchantment" with the pediatric patient. During the professional life, principally with the particulars inherent in the care of pediatric patients, there can exist the necessity to conciliate precautionary measures against infections with demonstrations of affection between professionals and children, as observed in the statements:

One thing that I note, because I have been with trainees, especially when they are with babies: "Ahhh it's so cute" and then cuddles the child, and all precautionary practices disappear, if not well ingrained. (P6)

But what can also happen, when you are walking in the corridor, a child comes and grabs you (...) nothing can stop a child running in the corridor jumping to hug you (P2).

[...] sometimes we have to coexist with a child for two, three, five months. [...] so it is impossible not to have the minimum of affection or connection... If I meet someone in the corridor, I joke, I kiss, I hug, you know... until sometimes I feel that it is a bit of a pain, but it is impossible, as such, for you not to get involved with them. (P3).

Although, many healthcare professionals haven't adopted this practice in their work routine⁽¹⁴⁻¹⁶⁾, the talk of some participants shows that there are some concerns related to HAIs:

Because hospital infections do not come from nowhere, they were passed on at some point and that is what we are trying to pin point... It isn't the case of trying to point the blame at someone. It's to try and make sure that the machine runs better, because it has a fault that we still can't explain. (P16)

I think that people are getting more used to the idea of washing their hands, as well as the way it is approached. All the time there is someone talking about it, at the shift change the nurse reminds us: "Hey, let's do the five steps, let's do hand hygiene, it is talked about and also expected. [...] I think there is more adherence to it, I don't know. (P2)

The majority of interviewees refer to the theme being approached in the early stages of academic studies. One of the statements highlights that the theme wasn't discussed. This statement could signify: lack of recollection by the graduate; the person was absent at the time when the theme was given or, still, indicates that the theme wasn't relevant during the formative process.

Nothing! I was never taught how to wash my hands in university! Never, in the university, no! (P16)

I remember that when we commenced semiology, there at the very beginning, we were taught that we had to wash our hands. (P11)

I think that it was the teacher's guidelines... when we started in the hospital, when we started semiology, that I remember this. (P12)

As we observe in the statements, it is possible to infer that the HH theme, treated as it was with less importance, could contribute to professionals not prioritizing this action and not relating it to the safety of patients when they start in the job market. According to Ordinance number 529, from the 1st of April, 2013, that established PNPS, one of the specific objectives of the program is to promote the inclusion of the patient safety theme in the technical education, under-graduate and post-graduate healthcare courses⁽²⁾. It's considered that professional graduates who are capable of acting with responsibility, promoting general health for people, implies the training of workers committed to the security of the patient.

A study made in an under-graduate course at a University institution in São Paulo, showed that adequate hand hygiene diminished measured against the students advance in their academic studies. During the second year 17.6% executed the HH technique properly, in the 3rd year this number dropped to 9.5% and in the 4th year not one student executed it properly⁽⁶⁾. The researchers associated these findings to the temporal distance between the initial semesters in which the technique was taught and up to the professional example.

At an international level, a study developed in Austria, with the objective of evaluating HH knowledge and adherence to this practice among the medical students of the 3rd year, it was revealed that 70% of the students considered their knowledge about this subject excellent or good. However, only 49% of the students related adherence to HH as conforming to that proclaimed by WHO⁽¹⁴⁾.

These studies draw attention to the lower rates of adherence in reference to academic students in the area of healthcare who are being trained to treat people^(5, 11). It is regarded as one of the great challenges of the teaching process in the area of health to qualify capable professionals to work in health institutions, engaged in the prevention of infections and with a broad vision of health.

■ FINAL CONSIDERATIONS

The results of this study show that the academic process did not approach the theme in a transverse, systematic, effective, significant and continuous form, to the point of mobilizing future professionals to adhere to the correct practice of Hand Hygiene.

In this perspective, the academic process of healthcare professionals still has a long way to go, especially in the nursing area, due to the fact that this profession stays 24 hours with the patient and provides a range of care which requires physical contact and proximity to the patient, especially when the patient is a child. These 'ways' must involve reflections about teaching practice and self awareness of the teachers in understanding that they should be committed to raising the awareness of the student to the ethics involved in the understanding of the role of the health professional.

This study had some limitations, such as refusals in take part and absences in interviews. It should also be highlighted, as a limitation for this study, the un-deepening of the many aspects which contribute to patient safety. However that said, we consider that the aspect related to HH and its repercussions on the safety of the patient were not emphatically approached during academic studies,

and will possibly be given little consideration in the future professional life. This will result in what is observed all over the world: low rates of adherence to hygiene. We hope that Ordinance number 529, of the 1st of April, 2013, will change this reality by the effective inclusion of the theme of patient safety in technical education, under-graduate and post-graduate healthcare courses.

Finally, we consider that other studies on this theme still need to be developed, as much in healthcare services as in the academic institutions.

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