FEELINGS OF NURSING STUDENTS BEFORE POSSIBLE RISK OF BIOLOGICAL EXPOSURE

ABSTRACT

Objective: to identify the feelings of students of nursing before possible biological risk, before and after the first contact with hospitalized patients. Method: a qualitative study, which used interviews from a semi-structured script, with 11 graduate students before and after the first hospital practice. The results were analyzed using content analysis. The research project was approved by the Ethics Committee in Research, CAEE 0051.0.135.000-10. Results: at first there were reports of fear of possible exposure by the interviewees. After completion of the first hospital practice, the statements reported that this experience allowed greater security before the theme, due to contact with infectious diseases, improvement of techniques and approach to protective equipment. Conclusion: safety in care was consolidated after the experience of practice, hence the importance of early stimulation of this contact.

Descriptors: Occupational Risks; Nursing Students; Hospitalization.

RESUMO

Objetivo: identificar os sentimentos de graduandos em enfermagem perante possível risco biológico antes e após o primeiro contato com pacientes hospitalizados. Método: estudo qualitativo, que se utilizou de entrevistas a partir de um roteiro semi-dirigido, com 11 alunos de graduação antes e após a primeira prática hospitalar. Os resultados foram analisados segundo a Análise de Conteúdo. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa, CAEE 0051.0.135.000-10. Resultados: no primeiro momento houve relato de medo de possível exposição por parte dos entrevistados. Após a realização da primeira prática hospitalar, as falas relataram que esta vivência possibilitou maior segurança frente ao tema, devido ao contato com as doenças infecciosas, aprimoramento das técnicas e aproximação com os equipamentos de proteção. Conclusão: a segurança no cuidado se consolidou após a vivência da prática, sendo importante o estímulo precoce desse contato. Descriores: Riscos Ocupacionais; Estudantes De Enfermagem; Hospitalização.

RESUMEN

Objetivo: identificar los sentimientos de los estudiantes de enfermería antes de posible riesgo biológico, antes y después del primer contacto con los pacientes hospitalizados. Método: estudio cualitativo, que utilizó entrevistas de un guión semi-estructurado, con 11 estudiantes universitarios antes y después de la primera práctica hospitalaria. Los resultados fueron analizados mediante el análisis de contenido. El proyecto de investigación fue aprobado por el Comité de Ética en Investigación, CAEE 0051.0.135.000-10. Resultados: en el primer momento hubo relato de miedo a una posible exposición por la parte de los entrevistados. Después de la terminación de la primera práctica hospitalaria, los estados informaron de que esta experiencia permitió una mayor seguridad frente al tema, debido al contacto con las enfermedades infecciosas, la mejora de las técnicas y el enfoque de equipo de protección. Conclusión: la seguridad en el cuidado se consolidó después de la experiencia de la práctica, de ahí la importancia de la estimulación temprana de ese contacto. Descriptores: Los Riesgos Profesionales; Estudiantes De Enfermería; Hospitalización.
INTRODUCTION

It is understood as the possibility of biohazard exposure to biological agents - microorganisms, cell cultures, toxins, parasites, or prions. Workers health care during labor activity, are in constant contact with such agents, and relevant risk of acquiring infectious diseases.1

Nursing is the professional category more exposed to the risk, for in fact be numerically greater in health institutions, have direct contact with patients and be responsible for procedures involving the manipulation of needle and greater contact with organic material.1,2

As a form of protection against infection to health workers and clients attending the institution, it is recommended that the professional use standard precautions (PP) for any assistance, as in handling contaminated instruments or when there is suspicion and possible contact body fluids, secretions or blood, disregarding the judgment about the likely infection or not.3

The adhesion of biosecurity measures is necessary not only to prevent transmission of infectious agents between patients, but also for their own protection. This is because the risk of contracting diseases such as AIDS and Hepatitis C, is a constant in this professional routine.1,4,5

The study 6 found out that the experience of accidents with sharps raises concerns about the possibility of infection, emerging feelings of fear, anguish, despair, anxiety and tension, as well as changes in lifestyle.

During the practices in health services, nursing students are exposed to the same risks that professionals once who perform activities similar to these. Between 2007 and 2010, students in the health area occupied fifth category involved in more accidents with biological material in the state of São Paulo, totaling 2,146 cases.7

A research conducted at three universities of São Paulo found that among 55 accidents with biological material occurred with students, 49,1% had not used the Personal Protective Equipment (PPE), and in about 80% of cases there was a need for the student utilizes the least procedure gloves.8

Considering the feelings of fear, anguish, despair, anxiety and tension, affecting the professional health care to the risk of contamination, it is assumed that also are present in the students, since they perform the same activities. Associated to these feelings, authors eight refer that the inexperience and anxiety student, typical of the period learning by feeling observed and evaluated, contribute to which are still more liable to the accidents.

In this perspective, we sought with this study to know the feelings and emotions of undergraduate nursing students at the Federal University of São Carlos/SP (UFSCar), generated against possible risk of exposure to communicable diseases, before and after the first contact with patients hospitalized.

METHODOLOGY

Article compiled from research of Scientifical Initiation at the Federal University of São Carlos/ UFSCar. São Carlos, São Paulo, August 2010 to June 2011.

This is an exploratory study of a qualitative nature. Therefore, we chose to use the scientific method clinical-qualitative, which can be understood as:

[...] The study of the construction of the epistemological limits of certain qualitative method in individualized settings of health and includes discussion of a set of techniques and procedures to describe and understand the relationship of meanings of human phenomena referred to this field.10,26

Participants were 11 of the 18 students of the second year of the nursing UFSCar, entering in 2009, which had not yet developed practical activities of the course in the hospital and agreed to participate. After completion of these activities, the same 11 students were interviewed again. The interviews took place in late 2010 and early 2011.

Individual interviews were conducted, guided by a semi-structured script with open questions, recorded on digital media and later transcribed and analyzed.

The results were analyzed using content analysis; thematic proposed by Bardin.10 After thorough reading of the material, the themes that emerged from the interviews were grouped into three categories.

The study was conducted from August 2010 to July 2011, approved by the Research Ethics Committee UFSCar (CAAE n° 0051.0.135.000-10 and Opinion n° 262/2010) and all the ethical recommendations of Resolution 196/96 were adopted.

RESULTS

- The perception of contact with infectious diseases.

In previous interviews with hospital practice it was found that most students did
not care about the possible contact with patients with infectious diseases, especially those with previous experience in healthcare. However, there were reports of insecurity and fear across the reflection on this exhibition possible.

Graduates related carelessness and inattention in the care of patients to the factors contributing to the occurrence of contact with biological material. [...] So for me I think it will have enough fear of catching a disease, you know, do not know, then you have to be very careful, I guess. (E6)

Question, huh? I would have to prevent. Suddenly I go there, I'm thinking about helping each other and I end up contaminating. (E4)

Look at it as I do not have as much fear as well [...]. I think if we are careful and do not, not often. (E9)

Not only was the fear of becoming infected reported, as well as the fear of transmitting a disease to the patient from cross-transmission.

 [...] So, I'm afraid so, over, contaminating the person know? Type sterile, thus [...]. Sometimes I'm not afraid of me, but I am afraid of infecting the patient, right?. (E10)

This fear remained evident after hospital practice, identified in reports of concern for patient safety at the expense of their own safety.

I'm more worried about me infecting the patient. I'm more worried about it. (E1)

So we, is [...] regarding our security is assured enough we know, had no [...] many problems [...] but I was mad about missing stuff for clients, understand, to their protection, not only ours. That irritated me a bit. (E7)

It was found that the fear of being contaminated is also related to the "fear of the unknown", since many do not know the dynamics hospital and how to protect themselves from infections.

So, because we have, as I speak [...] fear of the unknown, you know, so I think it's this fear that I have, because I do not know how that is the practice, it may be that when I see in practice that nothing is spoken, huh? (E8)

The safety in the provision of care was related to confidence in the use of PPE and practices that permeate the biosafety, such as adherence to standard precautions. However, prior to the first practice hospital hand hygiene was mentioned by only one respondent as a precaution.

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I believe that coming, using the right equipment and everything; I do not think I'll get sick [...] If that happens then I'll feel normal could have happened even outside the hospital. (E1)

I think the standard precaution, that is, eh, mask, glove, lab coat and everything we learn before going to the hospital. [...] Let me see... Besides it, contact precautions. (E7)

The experience of hospital practice provided students the perception that biosecurity measures are effective actions to control transmission of microorganisms. From the practice, respondents had more confidence in the PPE and precautions to prevent infectious diseases.

It is given to, to learn as it is the practice, [...] also came to see just how important, too, if you keep making follow all technical, do use all the equipment correctly [...] (E3)

Of the respondents, five responded directly to patients with known infectious diseases that may be transmitted and reported tranquility in providing assistance, with no change in the relation student/patient. However, there was the concern of the students with the correct use of PPE.

Ah, for me too it was like another patient, only to have all the guidance, is to take a little more care is so, if to do something is, if it was messing with some sharp pierce. But it is the same procedure that is for someone else, and then was normal. (E3)

The calm in dealing with patients with infectious diseases has not occurred since the beginning of the practice, and it is evidenced by the student speaks E6. The teacher, when reporting the presence of a patient with HIV, at first, the students do not have volunteered to take care of the patient.

 [...] Then we got scared to death of her (the teacher) choose us because we do not yet know how to deal with right ... Gives afraid of us doing some wrong procedure and wrong in us, huh? Not only patient, but wrong with ourselves, then I got scared, huh? (E6)

In this research, three respondents experienced situations of risk of exposure to biological material. The circumstances experienced bother these scholars, however, did not cause trouble, nor interfere in assisting the user.

Highlights the situation experienced by a student, in which small amount of biological material from a HIV positive patient touched his skin intact. This student, in an interview prior to practice reported not to be afraid of the risk of contamination. However, he notes that despite being careful, is also vulnerable
to exposure, claiming that this opened space for reflection of the risk inherent in their profession.

Oh, I think so, well, a little weakened know! I was so sure, so that nothing would happen, but anything that's going to affect me, so professionally. (E9)

♦ Precipitating factors of safety in hospital care

Students mentioned before venturing into the health service, the consolidation of knowledge and mastery of teachers on the theme would allow them to feel safer for a possible contact with patients with infectious disease.

The teachers, classes, make everything clear, you have to do. (E6)

Yeah, she [teacher] said so in a way, I do not know, she spoke in a way so safe that has a safety for us, you know! (E9)

However, there were reports that confidence only comes from practice, since despite the university contribute to the theory and simulations in laboratories, in the camp would be real resources to live this experience.

 [...] I think it has to be the same experience. Here we have a theoretical basis, huh? I think it’s making stage, is putting his hands on there you go, you will see how it is. (E2)

After the first practice, the students recognized that the experience in practice, along with the support teachers were responsible for increased security in the actions performed.

 [...] After we learned thus cope up with the needle, thus these things, you talk, you see it is not so complex, because in class you think everything is complex, huh? (E6)

And again, you know, the teacher stood the whole time, you know, so, you have a security think bigger, huh? As're doing. (E4)

I see it has changed a lot so I feel more secure because of this, because you have had an experience that showed that it is not so hard, huh? (E10)

Respondents further understand that acquiring more knowledge about biosecurity measures increases security against the hospital practice and this is a way to acquire scientific basis for their actions and behaviors, corroborating the statements of some students, prior to hospital practice.

 [...] Study know! Be dominating that area, we will now be dominating the care process, the ways to prevent it. (E10)

Also, I think we have to get practice to take care of these patients later, huh? To gain confidence in the EPI, the same folks, huh? (E8)

Another aspect that would bring more security to the practice is the development of strategies for coping with fear in order to provide better conditions for dealing with their feelings.

Work more with the psychological, using everything correctly, properly, I think there will not be any problem, because I think it’s more the psychological, even, huh? (E8)

Also, opportunity to connect with patients with infectious diseases during practice also enabled increased security.

 [...] We even assisted a patient HIV positive; I did not take care of him directly, but would have no problem taking care. It was very quiet. (E5)

When I learned that he had tuberculosis, I was more afraid of me so close, but he was very nice, very friendly, so I went the same way. (E11)

Thus, although some students have not had the opportunity to attend to patients with infectious diseases, the stories shared by students who have had this contact helped them feel more secure against a future situation that was similar.

 [...] She [student] did, too, did vacuum it, bathed in the bed, spoke has no problem and she said, Oh, quiet look after him, so that she was watching him the other day as well ah, okay, huh? (E6)

♦ The influence of experience in the care

Before the first hospital activity, it was noted that the practice would be a predominant factor for building trust, and there are reports that the students believed that the practice during graduation was able to increase the safety and reduce the fear facing the care of people with infectious diseases.

The idea that the practice would be a potentiator of experienced security was almost unanimous for these.

I imagine it to be over early, so the stage [...]. If you get just right guard over your work you will not have problem with that. (E7)

In a single speech identifies the possibility of practical experience negatively alter existing fear in which only reduce the fear that the living practice was positive:

If all goes well the experience, nothing happens, okay, I'll be reassured, [...]. but if anything happens, an accident, then I'll get through so you know, I'll be afraid. (E2)
After the first experience, all students realize that they have become more prepared for the upcoming activities, including contact with infectious diseases.

So I think even decreased fear of contamination of some diseases. (E5)

However, there were reports that the contact with patients with infectious diseases is insufficient and that there was still safe to watch these individuals, even after the first hospital practice.

[…] Because I have not treated anyone with hepatitis, with AIDS, so I still have a little fear. (E11)

DISCUSSION

Among the practices of professional nursing predominate manual activities (immunization, curative collection for exams, tracheal suctioning, hygiene and medication administration), which may explain the greater exposure of these professionals to occupational risks.

The inattention and carelessness are seen as contributing factors to the occurrence of accidents with biological material. In one study found that nursing workers who suffered occupational accidents reported as the main cause inattention (48,1%), followed by neglect (26,6%) and patient agitation (11,2%).

When it comes to undergraduate students, still adds up to inexperience and anxiety as factors contributing to the occurrence of accidents, since the situation assessment and supervision that are subject to corroborate the emergence of stress and anxiety.

The use of PPE is taken as a measure of safe and efficient protection for both patients and for one who is providing care, having the function of protecting the skin, mucous membranes and clothing that contact with biological material, acting as primary prevention of contact blood and body fluids.

The guidance on exposure to biological material and immunization is required once the students begin their healthcare degree, since the subject may be unknown by the students at that time. It is important that the academic institution to raise this issue regardless of the strategies used to prepare the student for work in prevention and health promotion, both for himself and for the patient, from a conscious action and transformative.

Thus, information about biohazard accidents may culminate in prevention strategies for students, helping them to change behavior on these risks. These questions were noted by participants in this study, who see the approach to the topic of infectious diseases and prevention of these classes as a factor contributing to the physical and emotional safety during hospital practice.

Moreover, the reports of the students participating in the study demonstrate the need of experiencing these hospital practice to solidify the theoretical knowledge, which is in agreement with reports that experience and knowledge about patient care in isolation are essential to that students are less exposed to the risk of contamination, it is essential that students are able to consolidate knowledge and apply it in the scenarios of health practices.

In a study of integrative literature review using descriptors such as nursing, tuberculosis and students, found that most studies found aimed to assess the knowledge of university students about the means of transmission and prevention of tuberculosis, as well as the index infection among students by the bacillus that causes the disease.

Parallel to this, they found, in the same study that the lack of health professionals dealing with TB patients about the disease is a contributing factor to the contamination of the students during practice in hospitals or health units.

With that, it identifies the need for knowledge of infections by students is relevant and confirms the need to be prepared to deal with situations where the risk of contagion make relevant, in order to contribute to the services and the safety of both the student and the professional and patient.

Unlike another study, in which it was found that the fear of contagion risk of HIV interfered in the relationship and communication between the patient and majoring in nursing, was observed in the respondents indicated that there was no influence on the care provided to patients with infectious diseases, even in situations of imminent risk, as narrated by E9. Parallel to this, the use of PPE contributed to the development of safety during servicing.

The incorporation of the concept of biosecurity is essential for all persons present in the hospital environment, whether they are professionals, visitors or patients.

It appears from this study that contacts with the patient generated greater security these students about the concepts of biosafety, enabling the consolidation of theory with practice. The experience of professional practice was instrumental in introducing the

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concept of biosecurity, students and makes them aware of their relevance.

Are the practical experiences that allow students to see the importance of standards for safety and team. Therefore, introducing nursing students on the practice field as soon as possible and more frequently is essential for them to become professionals able to ensure adherence to the recommended precautions within the team which will be responsible.

In this perspective, the more reliable the student takes on care of individuals with an infectious disease, your child should be afraid to maintain this contact, which could be observed in the present study, since the patients who had contact with an infectious disease increased student confidence before this scenario, while the fear of contact was reduced. However, it is understandable that some students need more time and contact the practice to feel safe during the care of patients, being an individual process.

Considering this aspect, it is during practice that the student has the opportunity to hone and develop their skills, whose techniques are developed in conjunction with the scientific learning, being that it is from the action that this improvement is achieved.

It is noteworthy that even for those who do not experience direct contact, the account of others is very valuable as a way of learning, as found in this study. This is because from the sharing of stories that allows the other part of the experience, knowing well the feelings involved in a situation which is not experienced. Although it was considered only the first hospital practice to collect data in this article, there is the perception of this first time in preparation for future experiments, including contact with infectious diseases.

With this, the first academic hospital practice was very important to the emotional maturity of the respondents, and they feel safer to care for patients with infectious diseases, reporting greater tranquility for this assistance. This is how the hospital practice may be valuable to allow the student experience situations that put in touch with reality on this everyday environment.

**CONCLUSION**

The first contact with the hospital practice was important not only to consolidate knowledge started at graduation, as well as to improve techniques and to encourage contact with the dynamic hospital. Thus, providing greater safety on the theme “infectious diseases” and realizing the importance of using PPE and safety equipment, physical and emotional, and educate students about the need to adopt standard precautions.

The contact with patients with infectious diseases decreased fear and anxiety and sharing these experiences attenuated the insecurity of other students. The student-patient relationship was not influenced by the presence of infectious disease capable of transmission.

It is understood, therefore, as essential to stimulate early this contact, within the limits of the students, but providing opportunities for experiences that allow the incorporation of concepts and attitudes in professional practice in order to ensure a safe and humane care, minimizing the anxiety generated by student unknown.

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**REFERENCES**


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