Evaluation of Education and Training in Good Hygiene Practices among Health Professionals: A Cross-Sectional Study in Moroccan Hospitals

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Abstract

The education and continued training of healthcare professionals in good hygiene practices (GHP) is a key element in the fight against the risk of infection in public hospitals. The aim of this study is to evaluate the education and training of healthcare workers in GHP. Method: A cross-sectional study was carried out at the Sidi Kacem provincial hospital center using a questionnaire validated by Cronbach’s Alpha test with a score of 0.786 to collect a maximum of information. The Chi-square test was used to compare and correlate categorical variables. Any p-value less than 0.05 is considered statistically significant. Results: our study concerned 126 healthcare professionals, 84.1% of the professionals questioned showed that they had not received continuous training on hand washing, 96% of the professionals questioned expressed their need to receive training on wearing and changing gloves, 61.9% stated that they had not received training on the prevention of nosocomial infections. Females were more likely to wash their hands than males, with a significant p-value of \( p = 0.011 \). In terms of seniority, we found that care workers with more than 10 years’ experience were more respectful of this washing than the other categories, with a p-value of \( p = 0.024 \). Our results show that there is a huge lack of continuous training on GHP, which affects the quality of care at hospital level.

Keywords: Evaluation of Education and Training, Good Hygiene Practices, Cross-Sectional Study, Healthcare Professionals, Nosocomial Infections
1. Introduction

Global healthcare faces constant challenges, such as the growing demands of today’s more informed patients. The challenges posed by technological change and innovation in healthcare are increasingly present, not to mention the emergence of new pathologies, which has led to new research and a new level of knowledge. Faced with these developments, and in order to achieve the main objective of quality care, international health organizations recommend strengthening the skills of health professionals, by devising strategies to develop their knowledge through educational sessions and continuing training (Berrada et al., 2015).

The education and training of healthcare professionals is an essential part of the healthcare system in order to guarantee quality services for patients and to reduce as far as possible the risk of infection, which manifests itself for patients in the form of nosocomial infections, an international health problem with a high mortality and lethality rate (El Rhazi et al., 2007).

The role of continuing education and training in promoting good practice in the management of infectious risks on the front line is well established. Indeed, the safety of the care provided in healthcare establishments depends to a large extent on the level of training provided to healthcare staff in this area. It is therefore essential to ensure that all categories of staff working in healthcare establishments receive solid, regularly updated training in the management of healthcare-associated infectious risks (Roshan et al., 2020).

Continuing education is defined as an ongoing learning process, planned to improve the knowledge, attitudes and skills of healthcare professionals after their initial training. It is now recognized that theoretical training has little impact, or at most a limited impact over time. The priority should therefore be on practical education in gestures, techniques and methods. Education in people skills, attitudes, is also essential because it helps to internalize correct behaviours (Mohit et al., 2019).

Several studies carried out by the WHO show the importance of good hygiene practices in preventing infectious diseases and consequently in reducing the global mortality rate from these infections. However, they also highlight the potential risk of inadequate training of healthcare professionals in GHP, which can lead to the opposite results, so trainers must be qualified, competent and have extensive experience in the field, with the aim of providing quality training that leads to optimum results in terms of preventing infectious risks (Elouakfaoui et al., 2022).

Education of healthcare professionals in good hygiene practices is an essential pillar of the preventive approach against nosocomial infections. These practices represent a set of actions and approaches aimed at preventing infection by eliminating micro-organisms through practices such as hand washing, hydro-alcoholic hand rubbing, wearing and changing gloves during care, compliance with asepsis practices, etc. Healthcare staff must always be educated about care safety and informed of the importance of these simple but essential steps in preventing the risk of infection (Eugène et al., 2020).

It is in this context that we are carrying out this cross-sectional study to assess the knowledge and skills of healthcare professionals concerning good hygiene practices, as well as their compliance with these practices when providing care, using a pre-established questionnaire validated with Cronbach’s alpha test with a score of 0.786.

2. Methodology

2.1 Study design

Over a period of 6 months, we conducted a cross-sectional study at the Sidi Kacem provincial hospital to assess the knowledge and skills of health professionals in good hygiene practices acquired during continuing education sessions.

We chose to carry out this study in the provincial hospital of Sidi Kacem in view of the high rate
of nosocomial infections detected in another study, which was around 23%. This hospital also meets the health needs of more than 60% of the population of the Rabat-Salé-Kénitra region. This model region contains the capital of Morocco Rabat, is considered to be a typical example of all the regions of the country, it is representative the results found are almost similar in other regions of the country.

2.2 Study setting and population

The Sidi Kacem provincial hospital center meets the health needs of the entire population of the province, estimated at 740,000 inhabitants according to the latest population census in 2018. The province of Sidi Kacem occupies an important place in the Rabat-Salé-Kénitra region of Morocco, covering an area of around 6,000 km², and is strategically located in relation to the other provinces. This study is being carried out as part of the effort to prevent the risk of infection in hospitals by assessing the knowledge and skills of healthcare professionals in terms of good hygiene practices. The study is being carried out over a period of 6 months between the beginning of January and the end of June 2020. Our survey population was made up of health professionals at the Sidi Kacem Hospital, including 126 healthcare workers, doctors and nurses.

2.3 Sampling method

To ensure that our sample was homogeneous and representative, no selection criteria were taken into consideration, since all the health professionals at the provincial hospital were involved in the survey, so that our results would be reliable.

2.4 Data collection instrument

With regard to the data collection tools, a questionnaire was drawn up and divided into themes and validated with Cronbach’s Alpha test, which gave a score of 0.786. The questionnaire was formatted in such a way as to simplify the response method for care staff, in order to gather as much information as possible on knowledge of good hygiene practices.

A multidisciplinary team was formed, comprising 10 health professionals: doctors, nurses and hospital hygiene managers. Several meetings were organized with the aim of drawing up a questionnaire containing all the dimensions of GHP, as well as specific questions to establish correlations between the variables.

2.5 Data collection method

A multidisciplinary team well educated in the survey method and the objective of the study was recruited to collect information from the staff surveyed using the pre-test questionnaire in a control sample representing 10% of the total sample.

This team is expected to visit the hospital departments carrying out the questionnaire every day to meet the healthcare staff and explain the aim of the study, its utility for the healthcare staff and how to complete the questionnaire. While the questionnaire was being completed, a member of the team was on hand to provide any clarifications or explanations.

2.6 Statistical analysis

The information collected from the questionnaire was analyzed using SPSS version 20 software, and descriptive statistics were produced in percentage form for the categorical variables. The chi-square test was used to compare and correlate categorical variables. Microsoft Excel version 2016 was used to draw up a number of tables. For correlation results, any p-value less than 0.05 is considered statistically significant.
2.7 Ethical considerations

Our study was validated by an ethics committee at the level of the provincial health delegation, and authorized by the hospital director. The confidentiality of the information collected and the anonymity of the participants were guaranteed. The survey team was educated in ethical procedures such as respect for professional secret, security of information collected and anonymity, etc. The consent of all staff surveyed was solicited and respected.

3. Results

3.1 Socio-demographic characteristics of participants

Our cross-sectional study by questionnaire was carried out on a total population of 126 healthcare professionals with the following characteristics: The distribution of participants by sex showed that 66.66% were women, while 32% were men. The majority of professionals (66.66%) were nurses, while 18.25% were doctors and 15.07% were health technicians. With regard to marital status, 56.34% of healthcare professionals were married, while 43.65% were single. 28.57% were aged between 21 and 30 years, 37.30% between 31 and 40 years, and 34.12% between 41 and 63 years. With regard to experience in the civil service, the majority 49.20% had worked for more than 10 years, 30.01% had between 5- and 10 years' experience, while only 20.63% had less than 5 years' experience (Table 1).

Table 1: Socio-demographic characteristics of participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>84</td>
<td>66.66%</td>
</tr>
<tr>
<td>Male</td>
<td>42</td>
<td>33.33%</td>
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<tr>
<td>Total</td>
<td>126</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between 21 and 30</td>
<td>36</td>
<td>28.57%</td>
</tr>
<tr>
<td>Between 31 and 40</td>
<td>47</td>
<td>37.30%</td>
</tr>
<tr>
<td>Between 41 and 63</td>
<td>43</td>
<td>34.12%</td>
</tr>
<tr>
<td>Total</td>
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<td>100%</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
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<td></td>
</tr>
<tr>
<td>Married</td>
<td>71</td>
<td>56.34%</td>
</tr>
<tr>
<td>Single</td>
<td>55</td>
<td>43.65%</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Category</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td>84</td>
<td>66.66%</td>
</tr>
<tr>
<td>Doctor</td>
<td>23</td>
<td>18.25%</td>
</tr>
<tr>
<td>Health technician</td>
<td>19</td>
<td>15.07%</td>
</tr>
<tr>
<td>Total</td>
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<td>100%</td>
</tr>
<tr>
<td><strong>Global experience</strong></td>
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<td></td>
</tr>
<tr>
<td>Less than 5 years</td>
<td>26</td>
<td>20.63%</td>
</tr>
<tr>
<td>Between 5 and 10</td>
<td>38</td>
<td>30.01%</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>62</td>
<td>49.20%</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.2 Hand washing education for healthcare professionals

Hand washing is a key factor in the process of fighting infection, as it enables the micro-organisms present in the hands to be partially eliminated. Healthcare professionals must wash their hands before and after each treatment as part of their daily work in the field of care, and ongoing education on hand washing with these different types of training must be provided in every hospital establishment to raise awareness among carers of the seriousness of the risk of infection and the importance of this simple gesture in the preventive process.

In our questionnaire study, almost all of the professionals questioned (84.1%) said that they had
not received ongoing education on handwashing, while only 15.9% said the opposite. In this category, the question was asked about the level at which you had received this education, and the majority (76%) replied that they had received it by self-education, 16% said that they had received it in initial education, while only 8% replied that they had received it in ongoing education. Regarding the need for training, 100% of the participants expressed the need for ongoing education on handwashing. This may indicate that healthcare staff want to improve their professional practices by acquiring new knowledge and techniques through these training courses. (Table 2).

Table 2: Hand washing education

<table>
<thead>
<tr>
<th></th>
<th>Numbers</th>
<th>Percentage</th>
<th>Valid Percentage</th>
<th>Cumulative Percentage</th>
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</thead>
<tbody>
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<td>20</td>
<td>15.9</td>
<td>15.9</td>
<td>15.9</td>
</tr>
<tr>
<td>No</td>
<td>106</td>
<td>84.1</td>
<td>84.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>100.0</td>
<td>100.0</td>
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</tr>
</tbody>
</table>

3.3 Evaluation of continuing education for healthcare staff on nosocomial infections

Nosocomial infections are an international public health problem, responsible for a significant number of deaths and health complications, some of which are serious. Preventive measures are the only means of combating these infections, through actions such as frequent hand washing and disinfection, the use of sterile equipment, the wearing of gloves, staff education and patient awareness, and ensuring a healthy and clean hospital environment through cleaning and disinfection procedures and other measures.

In our study, the majority of participants (61.9%) declared that they had not received any education on the prevention of nosocomial infections, whereas only 38.1% of respondents said the opposite, including 57% who had received in self-education, 29% who had received in continued education and 14% who had received in initial education.

Concerning educational needs, 84% of the professionals questioned declared that they needed education on the prevention of nosocomial infections, while only 16% expressed no desire to receive ongoing education. With regard to training on hospital waste management, over half 54% of participants said they had never received training on this subject, while 46% said they had already received such training, probably through self-education (Table 3).

These results clearly explain the high rate of nosocomial infections detected during a hospital study, which was 23%, given that the majority of professionals had not received training in the prevention of these infections. The fact that they expressed a need for this type of training may indicate the seriousness of the infectious situation in hospitals, which can affect even healthcare professionals.

Table 3: Education on the prevention of nosocomial infections

<table>
<thead>
<tr>
<th></th>
<th>Numbers</th>
<th>Percentage</th>
<th>Valid Percentage</th>
<th>Cumulative Pourcentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>48</td>
<td>38.1</td>
<td>38.1</td>
<td>38.1</td>
</tr>
<tr>
<td>No</td>
<td>78</td>
<td>61.9</td>
<td>61.9</td>
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</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

3.4 Evaluation of continuous education for carers on wearing and changing gloves

Gloves are medical devices used to provide twofold protection, protecting patients against germs and protecting carers from patients’ biological fluids. They help to prevent the risk of infection. Continuous education on the importance of wearing and changing gloves during care is an essential factor in the fight against nosocomial infections. In our study, the majority of participants (80.2%)
said that they had never received education on wearing and changing gloves, while only 19.8% said the opposite. But in this category only 10% had received continuous education on this subject and 90% said that it was through self-education. Whereas 96% of the professionals questioned expressed their need for education in the wearing and changing of gloves (Table 4).

These results indicate that healthcare professionals are aware of the ongoing development of procedures and techniques in the context of safe care, and that the old techniques they have received are sometimes ineffective or may give opposite results, which is why they have expressed a desire to receive ongoing training to learn about new healthcare procedures and techniques, knowing that patients have become more aware and more exigent through the rapid development of media.

### Table 4: Education on wearing and changing glove

<table>
<thead>
<tr>
<th></th>
<th>Numbers</th>
<th>Percentage</th>
<th>Percentage valide</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
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<td>Oui</td>
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<td>19.8</td>
<td>19.8</td>
<td>19.8</td>
</tr>
<tr>
<td>Non</td>
<td>101</td>
<td>80.2</td>
<td>80.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

3.5 *Evaluation of continuous education for carers on compliance with asepsis practices*

Asepsis practices are defined as a set of gestures and practices carried out in a well-defined way to prevent the risk of infection. Despite wearing gloves and washing hands, failure to comply with these asepsis rules can lead to nosocomial infections. In our survey, the majority (84.12%) of healthcare workers confirmed that they had not received any continuous education on compliance with asepsis practices, and 15.87% said the opposite. However, 100% of participants expressed a need for such education (Table 5).

These results show that the basic training of healthcare professionals in asepsis practices is still insufficient, and needs to be supplemented by ongoing training, confirmed by the fact that all professionals would like to receive training in new asepsis methods and procedures.

### Table 5: Continuing education on compliance with asepsis practices

<table>
<thead>
<tr>
<th></th>
<th>Numbers</th>
<th>Percentage</th>
<th>Valid Percentage</th>
<th>Cumulative Percentage</th>
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</thead>
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<td>15.87</td>
<td>15.87</td>
<td>15.87</td>
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<tr>
<td>Non</td>
<td>106</td>
<td>84.12</td>
<td>84.12</td>
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</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>100.0</td>
<td>100.0</td>
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</tr>
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</table>

3.6 *Evaluation of continuous education for hydro-alcoholic hand disinfection of carers*

Hydro-alcoholic hand disinfection is a reflex that every healthcare professional should have in order to avoid the transmission of germs either to the patient or to the carer. Continuous education of healthcare professionals on this subject should be carried out periodically in health establishments to prevent nosocomial infections and fix these gestures in the memory of carers to become a natural reflex that staff do before and after each treatment. In our study, 85.71% of the professionals questioned confirmed that they had not received continuous education on hydroalcoholic hand disinfection, whereas only 14.28% said they had, but almost all of them had done so by self-education, and 100% of the participants expressed their need to receive training on this subject.

In terms of compliance with the use of hydroalcoholic products for hand hygiene, 29.4% of healthcare professionals surveyed use hydroalcoholic friction for hand disinfection, while 34.9% of those surveyed do not use these products. On the other hand, 35.7% of professionals do not always use hydroalcoholic products (Table 6).
Table 6: continuous education for hydro-alcoholic hand disinfection

<table>
<thead>
<tr>
<th>Valid</th>
<th>Numbers</th>
<th>Percentage</th>
<th>Valid Percentage</th>
<th>Cumulative Percentage</th>
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</thead>
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<td>14.28</td>
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<tr>
<td>Non</td>
<td>108</td>
<td>85.71</td>
<td>85.71</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>100.0</td>
<td>100.0</td>
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</tr>
</tbody>
</table>

4. Discussion

Continuing education can be seen as a type of learning, either theoretical or practical, that complements initial training to help healthcare professionals consolidate their skills and acquire new knowledge for safe, quality care throughout their careers (Gizaw et al., 2022).

Continuous education has several objectives: to ensure the quality and safety of care by motivating staff; to develop the ability of care providers to adapt to the variability of resources, such as new equipment or scarcity of some materials; to keep abreast of new technologies and protocols in the field of care; and to introduce a spirit of health economics by rationalizing the use of resources. Initial training is always incomplete, and it is the role of continuous education to cover the weak points (Habib et al., 2019; Aziz et al., 2023).

Healthcare professionals need to be aware of the importance of continuous education throughout their careers, which has become an obligation given the development of advances in health and the introduction of new materials and methods of treating pathologies. This requires adaptation on the part of healthcare professionals, as well as reinforcing the skills of healthcare staff in order to provide high-quality preventive or curative services as part of continuous improvement (Manun et al., 1997).

This education needs to be carried out in an appropriate way to achieve these objectives. It can be carried out by a professional qualified or managerial staff trained in the subject of education, or by professional associations or pharmaceutical companies. Education can be provided in a variety of ways, including standard presentations, conferences, guides, advertisements and other methods (Elouakfaoui et al., 2022).

Several studies have shown that, in the majority of cases, this education is ineffective and needs to be strengthened and improved for it to achieve the objectives. To achieve this, every hospital needs to set up a continuing education unit and recruit competent, experienced professionals. This unit must research local education needs using a number of methods, including the resources available and the obstacles, and use this data to draw up an educational program with a well-defined timetable and clear objectives, as well as introducing evaluation and monitoring tools to ensure that the results are sustainable (Pittet et al., 2000; Aziz et al., 2023).

The survey was organized in such a way that all hospital staff were involved, which gave us a 100% participation rate. This probably reflects the wisdom, respect and responsibility of staff with regard to these evolving surveys for the well-being of patients. From these results, we can say that more than half of the staff interviewed have more than 10 years’ experience in either the civil service or hospital services. This gives us an idea of the maturity of the participants, which reflects positively on the reliability of the data collected.

The impact of hand washing on the prevention of nosocomial infections no longer needs to be demonstrated; it is an essential act to ensure the quality of care. In our study, the majority of healthcare professionals indicated that they had not received any continuous education on hand washing, and all of them expressed the need for further education (Basurrah et al., 2006; Pittet et al., 1999).

The study also showed that 14.3% of participants did not wash their hands before and after care. With regard to the correlation between the variables, we found that women were more likely than men to wash their hands, with a significant p-value of p= 0.011. For seniority, we found that caregivers with more than 10 years’ experience were more likely to wash their hands than other categories, with
a p value of p=0.024. Several international studies have addressed the issue of continuous education on hand washing, such as:

The study by Mohammad Gholami et al (2014) at Najmieh Subspecialty Hospital, Tehran, Iran. The study found an overall rate of compliance with hand washing by doctors and nurses of 36%. The minimum and maximum rates were 17.2% and 82.1% respectively on entering and leaving the wards. According to the results of the study, there is a significant relationship between the level of education, the workstation and the rate of bodily injuries and the rate of compliance with hand washing. No significant relationship was observed between gender, age, experience and the rate of serious injury. Based on the results of the current study, it is recommended that educational programs be planned with an emphasis on improving compliance with hand washing by healthcare professionals (Mohammad et al., 2014).

Nosocomial infections represent a serious public health problem throughout the world, with a very high mortality and lethality rate. Prevention of these infections is the only effective means of combating them (Sonoiki et al., 2020; Elouakfouï et al., 2021). In our study, the majority of respondents (80.2%) stated that they had not received any education on the prevention of nosocomial infections. More than half the participants (56%) were familiar with the definitions of these infections, but the majority (75%) did not declare these infections for several reasons: fear of punishment, ignorance of declaration procedures, and fear of prosecution.

The study by Mohit Goyal and Dhruva Chaudhry in (2019) carried out in a tertiary care hospital in India on a total of 728 nursing students, on the impact of continuing education on the prevention of nosocomial infections. The results suggest that education and training programs have a positive impact on knowledge of prevention methods such as standard hygiene measures. This study highlighted the need for regular education and training programmes during the primary training period to retain knowledge of nosocomial infections and reinforce the principles of standard precautions and hand hygiene (Mohit et al., 2019).

There are several reasons why healthcare professionals should wear gloves: to protect patients from germs on their hands, and to create an additional barrier between the hands of carers and blood, biological products, secretions, excretions and mucous membranes. There are several indications for wearing gloves, for example: when there is a risk of exposure to blood or any other product of biological origin; in the event of contact with a mucous membrane or injured skin; during care if the hands of carers contain skin lesions; when handling soiled objects or touching visibly or potentially soiled surfaces (Anna et al., 2013; Sax et al., 2009). Gloves are put on just before treatment and removed immediately after treatment to avoid contaminating the patient’s environment. Hand hygiene is performed after removing the gloves. Changing gloves is essential to ensure quality care. They must be changed between two treatments, even for the same patient, and of course between two patients (Thiriet et al., 2011).

In our study, the majority of professionals surveyed (80.2%) stated that they had never received training on wearing and changing gloves. While 79% of the care workers surveyed did not always wear gloves during care and 7% of the professionals never wore gloves during care, for the correlation between the variables the survey showed that the female sex respects the wearing of gloves more than the male sex with a p value of around 0.021.

The study by Thiriet et al in 2011 in a hospital center in sedan the survey was carried out to assess the behaviour of the use and change of gloves during care practices the survey showed that only 30% of professionals use gloves during care and only 21% change the gloves between two patients. The study emphasized the importance of regular continuous education on the importance of wearing and changing gloves (Thiriet et al., 2011).

As asepsis practices represent a set of gestures and techniques that are essential in the practice of care in order to provide quality services and avoid the risk of infection. In our study, 84.12% of participants stated that they had not received any continuous education on aseptic practices, and 41% of care providers admitted that they did not always respect aseptic practices in their care because of work overload and lack of staff. Concerning the correlation between the variables, the study revealed
that professionals with more than 10 years’ experience and of the female sex respected these practices more than others, with a significant p-value of p=0.001.

A study carried out by Kabemba et al in 2018 at the general referral hospital in Moba, Democratic Republic of Congo, on compliance with asepsis practices. The survey detected several dysfunctions concerning compliance with asepsis practices, such as health professionals using the portal telephone inside the operating theatre, incorrect wearing of caps, masks and gloves; non-aseptic gestures when performing procedures; in postoperative care, 62% of nurses did not perform wound care aseptically, which led to 40.5% of operated patients developing surgical site infections. The study recommended continuous education in aseptic practices to reduce the rate of nosocomial infections (Kabemba et al., 2018).

In our study, we observed that there is an enormous lack of continuous training in good hygiene practices at hospital level. Following our diagnosis, there are several reasons for this lack of continuous training: the absence of a continuous training unit at hospital level, the absence of a continuous training manager, the absence of a commitment by the director in terms of infectious risk management, which translates into the absence of a continuous training program with a clearly defined planning. Healthcare professionals express their need for these training courses, but they do not have the courage or the will to ask the administration to plan training sessions. We also noted the absence of a committee to combat nosocomial infections (CLIN), which is responsible for preventing nosocomial infections and planning preventive training. And to find out the causes of these dysfunctions, we interviewed the hospital director, who told us that the dysfunctions were due to the lack of a funding budget for continuing education and the shortage of health professionals. The current priority for the administration is to combat the COVID-19 pandemic, since the study was carried out in 2020 during the pandemic.

This lack of continuous training in good hygiene practices has a very harmful impact on several levels, as manifested by: an increase in the rate of nosocomial infections (NI). In another study, a 23% prevalence rate of NI was detected, and these infections have several consequences, for patients, this means the physical, psychological and social consequences, which can lead to death. For healthcare professionals, this means demotivation, loss of credibility, an increase in litigation cases, and the appearance of professional illness cases. For the establishment, it is an increase in the cost of care caused by prolonged hospitalization and brand image damage, plus the problems of health professional management due to work stoppages caused by professional illnesses, and contamination of the hospital environment by resistant germs, and many other consequences.

The diagnosis carried out through our study enabled us to highlight several practical recommendations to solve the problem of the absence of continuous training on GHP and the non-respect of these practices by health professionals such as:

- The hospital director must be aware of the problem and be committed to solving it.
- The creation of a continuing education unit at hospital level
- Recruiting the necessary staff for the unit and nominating a manager
- Training these staff in the correct methods and means of training, so that they can provide quality training.
- The unit manager must establish an annual training action plan on GHP, and the unit is also expected to provide patient awareness sessions on good hygiene practices.
- The administration must provide the material and technical resources needed for the unit to be operational, such as an equipped training room, offices for the managers, awareness-raising resources, etc.
- The administration must reserve a budget for improving the training unit.
- The creation of a committee to combat nosocomial infections (CLIN), with the nomination of committee members.
- The creation of an operational hygiene team (EOH) that works closely with the CLIN.
- The administration must provide the resources and equipment needed to guarantee the quality of care, such as gloves, hydro-alcoholic products, disposable equipment and
technical resources such as equipment for sterilization.

- Follow up and evaluate compliance with good hygiene practices by healthcare professionals after training.
- Healthcare professionals must be aware of their moral and physical responsibilities towards patients by working with a professional conscience and applying the rules of professional ethics.

Applying these recommendations helps hospital establishments in Morocco to work within standards, and to provide quality care in compliance with good hygiene practices. This will reduce the rate of nosocomial infections and minimize their impact on patients, healthcare professionals and health establishments. These recommendations enable us to begin a process of continuous improvement leading to hospital performance.

5. Conclusion

The aim of our cross-sectional study was to evaluate the education and training of healthcare professionals in good hygiene practices, carried out in the context of the prevention of nosocomial infections in hospitals, using a validated questionnaire. The study showed several significant results: 84.1% of the professionals questioned said that they had not received any continuous education on hand washing, 80.2% said that they had never received education on wearing and changing gloves, and 100% of the participants said that they needed training in asepsis practices, 7% of professionals never wore gloves during care, females were more likely to wash their hands than males, with a significant p-value of p=0.011. Professionals with more than 10 years’ experience and females were more likely to follow aseptic practices than others, with a significant p-value of p=0.001. These results show that there is a total absence of continuous education in good hygiene practices, even though the majority have expressed their need for such education. Managers must therefore plan continuous education sessions for healthcare professionals as part of an overall approach to combating the risk of infection.

References


