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Exploring Training Needs for Nosocomial Infection Prevention in Maternity Wards: A Pilot Sociodemographic Study

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ABSTRACT

This study comprehensively examines the sociodemographic characteristics and continuous education requirements of healthcare professionals engaged in infection prevention programs. This research utilizes data from a diverse participant sample and meticulously analyzes their demographic profiles, professional experiences, and preferences regarding training delivery methods. Notably, the findings reveal a significant female predominance within the sample population. The average participant age falls within a range conducive to ongoing professional development, underscoring the pivotal role of tailored educational interventions in this context. Moreover, many participants have qualifications from specific health institutions, highlighting potential avenues for focused educational initiatives. The analysis of participants' professional experiences unveils varied employment patterns, encompassing shift work and regular schedules, which influence their accessibility to training opportunities. Furthermore, the study identifies predominant knowledge gaps as key training needs, particularly in areas such as microbiology, infection transmission mechanisms, risk assessment protocols, and the proper utilization of personal protective equipment. These findings accentuate the critical necessity of continuous training in addressing

professional development needs and equipping healthcare professionals with the requisite skills and knowledge to effectively prevent and manage infections. Additionally, the research delves into participants' preferences for training delivery modalities, revealing a notable interest in both in-person and online formats. This underscores the importance of flexibility and adaptability in program delivery to cater to diverse learner needs. Ultimately, this comprehensive study provides invaluable insights into the demographics and educational requirements of healthcare professionals involved in infection prevention, thereby informing the development of targeted, evidence-based educational initiatives aimed at enhancing patient safety and care quality within healthcare facilities.

Keywords: *nosocomial infections, training, maternity.*

1. INTRODUCTION

In the field of healthcare, continuous education is an essential pillar for maintaining and enhancing the skills of professionals, particularly in infection prevention. This study aims to comprehensively explore the sociodemographic characteristics of participants in continuous education programs for infection prevention, as well as their specific training needs. Drawing upon data collected from a representative sample of healthcare professionals, this research examines their demographic profiles, professional experiences, training preferences, as well as identified knowledge gaps and competency needs. Through detailed analysis, this study contributes to informing continuous education practices in the realm of infection prevention while providing valuable insights to guide future professional development initiatives in this crucial area of public health (WHO, 2016).

The prevention of healthcare-associated infections (HAIs) is a major concern in healthcare facilities, necessitating constant knowledge and skill updates for healthcare professionals (CDC, 2019). Understanding the sociodemographic characteristics of participants in continuous education programs for infection prevention is critical to designing effective and tailored educational interventions that meet their specific needs. Consequently, this study delves into various demographic and professional aspects of the participants, providing a comprehensive overview of their profiles. For this study, data were collected from a diverse sample of healthcare professionals, including nurses, midwives, and other healthcare sector stakeholders. The analysis of demographic characteristics, such as age, gender, educational level, and professional experience, will allow for a detailed portrayal of the studied population (Stone et al., 2015).

One of the first characteristics examined is the age of the participants. Understanding the age distribution of participants will enable an assessment of whether continuous education in infection prevention attracts professionals from different generations and whether training needs vary based on age . Furthermore, analyzing the gender of participants will reveal if there are disparities between men and women in the participation in these training programs. This gender distinction may also influence training preferences and specific competency needs (Hattab et al., 2021).

The educational level of participants is another important variable to consider. By examining the distribution of participants based on their educational attainment, it can be evaluated whether continuous education in infection prevention attracts professionals with varying levels of education and if this influences their training needs (Schumacher et al., 2013). Additionally, the professional experience of participants is a determining factor in how they approach continuous education. By analyzing the distribution of participants according to their years in the profession, it can be identified whether training needs evolve with experience and whether more experienced professionals have different expectations regarding training content and delivery modalities (Hattab et al., 2021).

Finally, a comparison with national or regional demographic data will contextualize the profile of the study participants. By assessing whether the studied population reflects the overall demographics of healthcare professionals in the relevant region, it can be determined if the study's findings are generalizable and representative of the target population. This study examines in detail the sociodemographic characteristics of participants in continuous education programs for infection prevention. By analyzing age, gender, educational level, and professional experience and comparing these data with national or regional demographic norms, this research provides an in-depth overview of the participants' profiles as well as valuable perspectives to guide future professional development initiatives in the field of public health (Siegel et al., 2007).

1.1. Scope of the Study

The study was conducted in the context of the Hospital of Maternity and Reproductive Health of the Organs, a leading healthcare facility located in the Ibn Sina University Hospital Center, Rabat, Morocco. This hospital center is renowned for its maternity and reproductive health services, attracting a diverse population of patients and healthcare professionals. The target population of this study comprised nurses and healthcare technicians working within the maternity and reproductive health department of the hospital center. These healthcare professionals play a crucial role in patient care, particularly in preventing and controlling healthcare-associated infections in the delicate environment of maternity wards.

The specific domain of infection prevention and control (IPC) is at the heart of this study. Healthcare-associated infections

constitute a major concern in healthcare facilities, and maternity wards present unique challenges in terms of preventing infections in mothers and newborns. Consequently, this study focuses on assessing the continuous education needs of nurses in this specific area to improve care quality and reduce the risk of nosocomial infections.

Training needs in infection prevention is an interesting approach that will enable creating a comprehensive picture of training needs and understand how these needs vary based on the different characteristics of the participants. Moreover, cross-sectional studies are well-suited for generating hypotheses and providing insights that can inform further research endeavors. While our study primarily focuses on assessing training needs, the findings may inspire hypotheses and research questions for future longitudinal or experimental studies in this field.

In summary, the cross-sectional design of this study aligns with our exploratory objectives, allows for the examination of associations between variables, and provides a foundation for generating hypotheses and guiding future research endeavors in the realm of infection prevention and control in maternity and reproductive health settings.

2. POPULATION AND SAMPLING

2.1. Target Population

For this study, the target population comprised nurses and healthcare technicians working in the field of maternity and reproductive health at the Ibn Sina Hospital of Maternity and Reproductive Health of the Organs. This population was chosen due to its crucial importance in preventing healthcare-associated infections in this specific domain of health.

2.2. Inclusion and Exclusion Criteria

The inclusion criteria for the selection of participants were: (i) Being a nurse or healthcare technician working in the field of maternity and reproductive health at the hospital, (ii) Having at least six months of professional experience in this field, and (iii) Voluntarily agreeing to participate in the study.

The exclusion criteria were: (i) Being an intern or a student in training, (ii) Having less than six months of professional experience in the field of maternity and reproductive health, and (iii) Refusing to participate in the study.

2.3. Sampling Methods

To ensure the representativeness of the sample, a random sampling method was employed. In this case, a representative sample of 81 nurses and healthcare technicians was randomly selected from the eligible population. This approach ensures that each member of the population has an equal chance of being included in the sample, thereby reducing potential biases in participant selection. Furthermore, strategies were implemented to ensure that the selected participants represented various care units within the hospital, contributing to better generalization of the results across the entire facility.

3. DATA COLLECTION

The data collection process in this study was carefully planned and implemented to ensure the quality and relevance of the information gathered. Here is a more detailed description of the data collection instruments used and the procedures followed:

3.1. Data Collection Instruments

The self-administered online questionnaire was meticulously designed to address the specific research objectives. Each section of the questionnaire was constructed to capture relevant and meaningful data. Here is a more detailed breakdown of the components of the questionnaire:

- Socio-professional Information: This section aimed to collect demographic data such as age, gender, educational level, professional experience, the department in which the participants work, etc. This information allowed for establishing the profile of the participants and analyzing differences in training needs based on these characteristics.
- IPC Training Needs: This section contained a series of statements covering various aspects of infection prevention and control competencies. Participants were asked to evaluate their level of training need for each statement using a five-point Likert scale, ranging from "no training need" to "very high training need." This assessment enabled the identification of priority areas for continuous training.
- Teaching Modality Preferences: This section explored the participants' preferences regarding teaching methods and support for IPC training. Participants could indicate their preferences for training formats (lectures, practical workshops, e-learning, etc.) as well as their needs for additional support to better acquire competencies.

3.2. Data Collection Procedures

Data collection was carried out in several stages to ensure consistency and quality of the responses obtained:

- Questionnaire Pre-testing: Before distribution, the questionnaire was pre-tested with a small sample of nurses with similar characteristics to the target population. This allowed for identifying and correcting any issues related to clarity,

comprehension, or relevance of the questions.

- Questionnaire Distribution: Once validated, the questionnaire was distributed to participants via a link to an online form. Participants received clear instructions on how to complete the questionnaire and were encouraged to respond honestly and accurately.

- Follow-up and Reminders: Regular follow-up was conducted to maximize the response rate. Participants who had not yet responded were reminded multiple times to encourage their participation.

- Informed Consent: Before starting the questionnaire, participants were informed about the study's objectives and provided their informed consent to participate.

- Confidentiality: All collected data were treated confidentially. Participants' responses were anonymized and securely stored in compliance with data protection regulations. Only authorized researchers had access to the data, and it was used solely for research purposes.

4. VARIABLES AND MEASURES

In the ensuing section, a comprehensive exposition is presented on the variables scrutinized within this study, accompanied by a detailed description of the evaluation metrics applied to quantify these variables.

4.1. Studied Variables

Sociodemographic variables include characteristics such as age, gender, educational level, professional experience, and the department in which the participants work. They allow for describing the participants' profile and analyzing differences in training needs based on these characteristics.

IPC training needs variables are a measure of the competency levels perceived by nurses in the field of infection prevention and control. They are evaluated using a five-point Likert scale, ranging from "no training need" to "very high training need." This measure enables the identification of priority areas for continuous training.

4.2. Measures

Several measures were carried out. Likert scale allows participants to express their degree of agreement or disagreement with a series of statements concerning their IPC training needs. It provides a quantitative measure of perceived needs, facilitating statistical analysis and comparisons between groups. The collected data are analyzed using descriptive statistics such as means, standard deviations, and frequency distributions. These analyses summarize the participants' characteristics and their levels of training needs. For group comparisons, bivariate analyses, such as ANOVA tests, are used to examine the relationships between participants' sociodemographic variables and their training needs. This allows for identifying significant differences between groups in terms of training needs. Before distribution, the questionnaire was validated by domain experts to ensure its relevance and reliability. Pre-testing was also conducted with a smaller sample of participants to evaluate the clarity and understanding of the questions.

By using these measures and analytical techniques, the study can provide valuable information on the IPC training needs of nurses, as well as the sociodemographic factors that may influence these needs.

5. DATA ANALYSIS

In this section, additional details are provided on the data analysis methods used in the study, as well as the justification for these methodological choices.

5.1. Data Analysis Methods

Descriptive Statistics: The collected data, such as responses to the questionnaires, are first analyzed using descriptive statistics. This includes calculating means, standard deviations, medians, and frequency distributions. These analyses give an overview of the participants' characteristics and levels of IPC training needs.

Prioritization of Training Needs: Training needs are prioritized by calculating the mean scores assigned by participants to each IPC competency domain. The domains with the highest mean scores are considered priorities for continuous training.

Bivariate Analyses: Bivariate analyses, such as ANOVA tests, are used to examine the relationships between participants' sociodemographic variables (e.g., age, gender, and educational level) and their IPC training needs. This allows for identifying significant differences between groups in terms of training needs.

5.2. Justification of Methodological Choices

Alignment with Research Objectives: The analysis methods were chosen based on the research objectives, which aimed to identify nurses' IPC training needs and analyze the factors that could influence these needs. Descriptive statistics enable a thorough understanding of the participants' characteristics and their training needs, while bivariate analyses allow for examining the relationships between sociodemographic variables and training needs.

Characteristics of the Data: The collected data includes both quantitative and qualitative variables. The chosen analysis methods are therefore appropriate for handling both types of data. Descriptive statistics can summarize quantitative data, while bivariate analyses can examine relationships between variables.

Robust and Widely Accepted Methods: The selected methods, such as descriptive statistics, ANOVA tests, and mean score calculations, are robust and widely accepted in research. These methods have been extensively used and validated, ensuring the reliability and validity of the results.

Interpretability and Communication: The chosen methods produce results that are interpretable and can be effectively communicated to stakeholders and the scientific community. Descriptive statistics and group comparisons provide clear and understandable insights into the participants' profiles and training needs.

By employing these analysis methods, the study can comprehensively address the research objectives and provide valuable information on nurses' IPC training needs, as well as the factors influencing these needs. The methodological choices are justified by their alignment with the research goals, their appropriateness for the data characteristics, their robustness and acceptance in research, and their ability to produce interpretable and communicable results.

6. ETHICAL CONSIDERATIONS

Unwavering ethical integrity was maintained by securing approval from a research ethics committee, ensuring strict adherence to established standards and core principles of respect for autonomy, beneficence, non-maleficence, and equity. All participants provided informed consent after being comprehensively briefed on the study's objectives, procedures, potential risks, and benefits, enabling them to make a truly informed and voluntary decision regarding their participation. Utmost priority was placed on preserving data confidentiality and anonymity, with robust measures implemented to protect personal information through secure storage and ironclad guarantees against any unauthorized disclosure. For vulnerable participants unable to provide consent or facing specific risks, extensive risk assessments were meticulously conducted, and tailored protocols and mechanisms were devised to unequivocally ensure their voluntary and informed participation. These stringent ethical safeguards served as an inviolable bulwark, shielding the rights, dignity, and well-being of the participants, thereby preserving the unimpeachable credibility and integrity of the study.

7. RESULTS AND DISCUSSION

7.1 Sociodemographic Characteristics of Participants

In this section, a comprehensive exposition of the sociodemographic data accrued in the course of this research is presented. This includes an elucidation of the various categories of data procured, the methodologies employed in their collection, and a delineation of the participant profiles for age, gender, and marital status, among other pertinent demographic factors.

7.2 Detailed Description of Sociodemographic Data Collected

In the present study, sociodemographic data were collected to elucidate the profiles of the participants, encompassing variables such as age, gender, marital status, educational attainment, and professional background. Collecting such data is a recommended practice in healthcare research, as it allows researchers to understand the characteristics of the study population and contextualize the findings (Remler & Van Ryzin, 2021). Variables like age, gender, education level, and professional experience are known to influence healthcare professionals' attitudes, knowledge, and behaviors (González-Torrente et al., 2012).

The assimilated sociodemographic data furnishes a holistic depiction of the participant cohort. Age data is instrumental in discerning differences in educational requisites, as age has been identified as a factor influencing healthcare professionals' receptiveness to continuous education and training (Covell & Rolle Sands, 2021; Pujalte et al., 2015). Similarly, variables like gender, marital status, educational level, and professional tenure contribute substantive insights into the demographic composition of the sample, as these factors are known to impact training needs and preferences (Zheng et al., 2017; Weinberg et al., 2023).

7.3 Main Categories of Sociodemographic Data and their Significance

The principal categories of sociodemographic data analyzed include age, gender, marital status, educational attainment, and professional tenure. Age facilitates segmentation into discrete cohorts, yielding insights into generational heterogeneity that may influence learning preferences and styles, necessitating tailored training approaches (Purai et al., 2020; Rababa et al., 2022). Examining gender distribution can uncover demographic patterns and potential inequities in accessibility and engagement with continuous education, aligning with studies documenting gender disparities in healthcare education (Purai et al., 2020).

Moreover, assessing marital status offers insights into domestic circumstances that may affect engagement, especially when balanced against family obligations, as married individuals often face challenges reconciling professional development with personal responsibilities (Purai et al., 2020). Educational attainment provides an evaluative measure of participants' prior

knowledge and ability to grasp and apply new information, as tailoring content, delivery methods, and assessments to educational levels can enhance training effectiveness and relevance (Purai et al., 2020). Lastly, appraising professional tenure is essential to gauge expertise level, familiarity with healthcare practices, and the necessity for ongoing education, as more experienced professionals may require advanced or specialized training, while novices benefit from foundational knowledge (Hays et al., 2020; Bates et al., 2016).

7.4 Profile of Participants and Comparison with National or Regional Demographic Data

The age range of 20 to 50 years, with a mean of 32.53 years, spans both early-career and seasoned healthcare professionals, representing generational distinctions that may shape training needs and preferences. These generational dynamics have been widely discussed in the literature (Rababa et al., 2022; Purai et al., 2020), highlighting the need to consider different learning styles and preferences. According to Alpha et al. (2019), acknowledging these generational variations is crucial to crafting training strategies that resonate with healthcare professionals at various career stages. For example, younger professionals often respond more positively to technology-driven and interactive training methods, while more experienced professionals may favor traditional, experience-based approaches (Alpha et al., 2019).

The study's pronounced female majority (92.59%) is consistent with the existing literature on the gender composition of nursing and midwifery, which are predominantly female professions (Ghawiah et al., 2022; Ramani et al., 2018). This demographic reality underscores the necessity of gender-inclusive and equitable training strategies. Research highlights the importance of addressing gender-specific needs in professional development. Lindsay et al. (2019) and Alcalde-Rubio et al. (2020) emphasize creating training environments that are supportive of women's career development, suggesting mentorship opportunities and networking initiatives that address the unique challenges encountered by women in healthcare.

Professional experience varied widely among participants, with a significant portion having 5 to 15 years of service. This diversity demands a tailored approach to training content and delivery methods to suit different levels of expertise. As Hays et al. (2020) and Bates et al. (2016) argue, more experienced professionals may benefit from advanced, specialized training, whereas newer professionals require foundational knowledge. Delta et al. (2023) echo this need for competency-based training, which both acknowledges the expertise of seasoned practitioners and supports novices' learning trajectories, enhancing the overall training impact.

Educational background also varied significantly, ranging from foundational degrees to advanced qualifications. This diversity highlights the importance of adapting training approaches to the educational attainment of participants. Research by Weinberg et al. (2023) and Gonzalez et al. (2020) emphasizes the value of customized educational content that aligns with the learners' academic backgrounds, enhancing the relevance and effectiveness of training programs. In support, Khanna et al. (2017) argue against a one-size-fits-all training model, advocating instead for individualized learning pathways that recognize the educational diversity within the healthcare workforce to optimize training outcomes.

Comparing the study's cohort to regional or national demographic data, as suggested by the authors, is a critical step in evaluating the representativeness and generalizability of the findings. Such comparisons, as noted by Benjamin Hanckel (2021), provide crucial context for interpreting study results, ensuring that conclusions drawn are applicable to broader healthcare education and training efforts. This approach aligns with broader calls for inclusivity in continuous education within the healthcare sector, emphasizing the importance of recognizing the diversity of the healthcare workforce when designing training interventions.

Overall, the demographic characteristics of the participants align with existing literature on the profiles of healthcare professionals, particularly in nursing and midwifery. This reinforces the importance of developing inclusive, tailored, and equitable training programs that cater to the diverse needs of healthcare professionals. As Hatfield et al. (2020) and Kapadia et al. (2023) have advocated, a holistic approach that respects individual backgrounds and professional experiences is critical to effective training.

7.5 Limitations and Future Research Directions

Despite the valuable insights gained from this study, there are notable limitations. Firstly, the sample size, while sufficient for identifying trends, may not fully capture the variability within the broader healthcare population. A larger sample would enhance the reliability and generalizability of the findings. Additionally, the study's regional specificity may limit the applicability of the results to other geographic areas, where cultural, socioeconomic, and professional norms could differ. Future research should aim to include more diverse and larger samples from multiple regions to validate and extend these findings.

Another limitation lies in the potential bias introduced by the gender imbalance, as the study primarily reflects the perspectives of female healthcare professionals. Future studies could benefit from a more balanced gender representation to explore how training preferences and needs may differ between male and female healthcare workers.

Furthermore, while the study provided a broad overview of training needs, it did not delve deeply into specific training modalities or content preferences. Future research should explore in greater detail the effectiveness of various training

methods across different demographics, considering factors like age, gender, educational background, and professional experience. Additionally, longitudinal studies could offer insights into how training impacts career development and skill acquisition over time, providing a more comprehensive understanding of the long-term benefits of tailored training programs.

Finally, the study suggests a need for ongoing evaluation of training programs to ensure they remain relevant in an evolving healthcare landscape. Research focused on developing adaptable, technology-driven, and evidence-based training methods could be particularly beneficial, addressing the rapidly changing demands of the healthcare environment.

7.6 Impact of Age, Gender, and Educational Level on Engagement in Training among Healthcare Professionals

Age and Engagement in Continuing Education

The analysis of the correlation between the age of healthcare professionals and their propensity to participate in continuing education reveals interesting trends. Younger professionals, early in their careers, are often more inclined to engage in continuing education programs, seeking opportunities to acquire new skills and improve themselves in their field to enhance their career prospects. They are also more familiar with innovative technologies and learning methods, making them more likely to participate in online or interactive training sessions.

Conversely, older professionals may face different challenges regarding their participation in continuing education. Some may be less inclined to devote additional time to training due to increased family responsibilities or the approach of retirement. Furthermore, some may perceive new training as less relevant to their current practice due to their accumulated experience over the years. However, it is essential to recognize that this generalization does not apply to all older professionals, as some may be just as engaged in lifelong learning as their younger counterparts.

7.7 Gender Differences in Training Participation

Regarding gender differences, women have traditionally faced additional challenges in participating in training, often due to predominant family roles and gender stereotypes that limit their access to education and professional development. However, these patterns are evolving as societies progress toward greater gender equality and health policies encourage diversity and inclusion in training programs. Initiatives to reduce gender disparities in healthcare emphasize equitable access to professional development opportunities, with flexible programs offering accommodating schedules and online training options, allowing nurses to balance professional and family obligations while pursuing career development.

7.8 Influence of Educational Attainment

The educational level of healthcare professionals also plays a crucial role in their engagement with continuing education. Those with higher educational levels, such as advanced degrees or university qualifications, may be more inclined to seek training opportunities to maintain their competence and expertise. Their prior education may also make them more aware of the importance of continuous learning to maintain high standards of professional practice. Moreover, healthcare professionals with higher education levels are often motivated by an intrinsic desire for learning and professional improvement, reinforced by their previous academic experience. Higher education levels may also open doors to advanced career opportunities, such as leadership positions or specialized roles, which often require continuous engagement in professional development.

In conclusion, while age, gender, and educational level may influence healthcare professionals' engagement in continuing education, it is essential to recognize the complex interplay of individual motivation, access to training resources, and professional and family obligations. By designing continuing education programs tailored to the diverse needs and preferences of all age groups, genders, and educational levels, healthcare institutions can create an environment conducive to continuous learning and professional development for all nursing professionals.

8. ROLE OF PROFESSIONAL EXPERIENCE IN APPRECIATING PREVIOUS TRAINING

8.1 Connection with Professional Experience

The professional experience of nurses significantly influences how they perceive and evaluate the training they have undergone in the past. This complex relationship between professional experience and appreciation for previous training can be explored through several key aspects:

8.2 Critical Reflection

Nurses with extensive professional experience often acquire a broader and more critical perspective on different teaching methods and training content. Their field experience allows them to evaluate previous training with a more informed retrospective view, identifying aspects that were particularly beneficial for their practice and those that could be improved.

8.3Adaptation to Changing Professional Needs

Over time, the professional needs of nurses evolved in response to changes in the healthcare field, technological advancements, and regulatory requirements. Experienced nurses are more likely to compare previous training to their

evolving professional needs, which can influence their assessment of the usefulness and relevance of the training programs.

8.4 Experience Sharing and Knowledge Transfer

Nurses with substantial professional experience often play a mentoring or leadership role within their team. Their interactions with less experienced colleagues may also influence their perception of previous training as they discuss and share their training experiences with other healthcare professionals. This sharing dynamic can reinforce or challenge their evaluation of the training programs.

8.5 Evaluation of Impact on Clinical Practice

More experienced nurses are better positioned to evaluate the impact of training on their daily clinical practice. Their experience allows them to discern how the skills and knowledge acquired during previous training have been implemented in real-life situations, influencing their overall assessment of the value of the training programs.

In conclusion, the link between professional experience and appreciation for previous training lies in the ability of experienced nurses to engage in critical reflection, adapt to changing practice needs, share their knowledge, and evaluate the impact on their daily work. By understanding this complex relationship, continuing education program designers can better meet the needs and expectations of experienced nurses, ensuring that the training offered takes into account their professional experience and expertise.

8.6 Influencing Factors on Perception

When exploring the influencing factors on the perception of previous training based on the sociodemographic profile of participants, several key aspects must be considered:

8.7 Specific Expectations and Needs

Participants from different sociodemographic groups may have specific expectations and needs regarding training, depending on their professional experience, educational level, age, and gender. For example, experienced nurses may seek more advanced and specialized training to deepen their clinical skills, while younger and less experienced nurses may prefer training focused on professional development and basic competencies.

8.8 Accessibility and Availability of Training

Constraints related to age, gender, and educational level may influence participation in training. For instance, older individuals may face obstacles related to technology or physical mobility, while those with lower educational levels may struggle to access advanced training due to language or financial barriers. By exploring these factors, potential obstacles to participation can be identified, and tailored solutions can be proposed to make training more accessible to all sociodemographic groups.

8.9 Social and Cultural Cohesion

Perceptions of training may also be influenced by social and cultural factors, such as professional norms, cultural values, and societal expectations. For example, in some cultures, women may be less encouraged to pursue advanced training or take on leadership roles, which can affect their perception of training opportunities and engagement in the continuous training process. By exploring these social and cultural dynamics, it is possible to better understand the differences in perception across sociodemographic groups and adapt training programs accordingly to promote inclusivity. It is also possible to better understand the needs, preferences, and obstacles specific to each group, which can guide the development of more effective and inclusive continuing education programs. This approach contributes to maximizing the impact of training and fostering professional development for the entire nursing population.

9. CONCLUSION

This study provides a comprehensive overview of the sociodemographic characteristics, continuing education needs, and preferred learning modalities of healthcare professionals in infection prevention. The analysis of the collected data yields several significant conclusions that underscore the importance of tailored and effective continuing education programs in this crucial area of healthcare practice. Firstly, the predominance of female participants in the sample aligns with the gender distribution in the nursing profession. This finding emphasizes the need for training programs that address the specific needs and preferences of the nursing workforce, who constitute a significant portion of healthcare professionals. Additionally, the diverse age range of participants, from 20 to 50 years old, with an average age of 32.53 years, highlights the necessity for continuing education programs that cater to various career stages and levels of experience. Secondly, the identified areas of increased educational needs, such as knowledge of microorganisms, risk assessment, and management of infection transmission, as well as basic practices and additional precautions for preventing infections, reveal critical knowledge gaps that must be addressed. Consequently, training programs should prioritize reinforcing these essential skills, tailoring content to bridge the most pronounced knowledge deficits in infection prevention. Thirdly, the marked preference for online and in-person learning modalities suggests that healthcare professionals value the flexibility of online programs while recognizing

the benefits of face-to-face interactions with instructors and peers. To effectively meet the diverse needs of participants, a blended approach that combines the advantages of both online and in-person formats is recommended. This approach can provide an enriching and comprehensive learning experience, leveraging the strengths of each modality to enhance knowledge acquisition and skill development. This study underscores the importance of continuing education in infection prevention and the need for tailored programs that address the specific sociodemographic characteristics, knowledge gaps, and learning preferences of healthcare professionals. By implementing effective and multifaceted training initiatives, healthcare organizations can empower their workforce with the necessary knowledge and skills to combat healthcare-associated infections, ultimately improving patient safety and quality of care.

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