

Nurses should be extremely diligent with handwashing as they are often exposed to many biohazards[2]. The practices were better among nurses who graduated from the Faculty of Nursing compared to those from either the Technical Institute of Nursing or the Nursing School. The percentage score of the availability of hand-hygiene equipment and supplies in the NICU under study was 73.6%. This is consistent with other studies that concluded that hand-washing facilities in developing countries were suboptimal; a lack of sufficient sinks and running water is not uncommon [15]. The current study illustrates that all participants washed their hands with the standard materials before initiating contact with patients, before manipulating medical devices or handling wound dressing, and after using the bathroom, toilet, or latrine. Moreover, the research conducted by O'Boyle et al. stated that nurses were unaware of their poor hand-washing practices given that the self-reported rates and the observed rates were vastly different [21]. This low adherence to proper hand-washing practices may be due to the lack of adequate equipment and supplies, absence of appropriate infrastructure, lack of support for a handwashing program (e.g., low priority for an organization, lack of active participation, lack of role models), and conflict between the need to provide care and the instinct for self-safety. Our results were similar to those of Sharma et al. who evaluated hand-washing behaviors among healthcare workers in Chandigarh Teaching Hospital and found a low baseline rate of hand-washing adherence in the NICUs [19]. Regarding hand-hygiene practices, the present work showed that the mean assessment score among the studied sample was 7.1 ± 1.2 and the mean percentage score was 64.2 ± 11.3 . Their findings revealed that 72 students (52.6%) washed their hands before interacting with patients, but the majority (94.9%) washed their hands afterwards[17]. The study by Labrague et al. found that 65.5% of their studied sample usually complied with washing their hands before interacting with patients, and most (93.1%) washed their hands immediately after dealing with any blood, bodily fluid, secretion, excretion, or waste substances [13]. The majority of nurses always washed their hands after each patient contact rather than before. This corroborates the findings of Erasmus et al. (2010), who stated that, despite clear guidelines and monitoring, hand-hygiene adherence of nurses in healthcare organizations remains unsatisfactory [20]. This conflicts with the results of Binbach et al. who found that even when medical students receive intensive hand hygiene education, compliance remains low; therefore, the completion of annual safety courses is encouraged [22]. Another study found that the level of knowledge of 152 physicians and 227 nurses on blood-borne infections in two randomly selected health regions in Kuwait was poorer in older participants [14]. Additionally, 163 physicians were investigated by Pittet et al. who studied hand-hygiene practices during routine patient care and found a 57% adherence rate [3]. A study in Philippines, for instance, evaluated 58 student nurses on their knowledge and degree of compliance regarding standard precautions in a government university, and found that younger nurses were able to acquire knowledge and improve behaviors for keeping up-to-date on these precautions [13]. These figures are lower than those declared by Lawal et al. (2018), who studied 113 nurses in a federal medical center in Nigeria and found that 68.8% of subjects washed their hands before contact with patients, and nearly all of them (99%) washed their hands after interacting with patients and after removing their gloves [16]. On the other hand, only 39.3% washed their hands after touching potentially contaminated objects or surfaces, 21.4 % after removing their gloves, and 17.9% after contact with patients or their

surrounding environments. With respect to the rating of nurses' handwashing behaviors, 7.1% followed the recommended practices consistently, while 75% usually complied with the recommended practices, and 17.9% required training and follow-up on these practices. This study revealed a statistically significant difference between nurses in class A, class B, and class C regarding hand-washing practices and nursing program attended. This agrees with the results of a study conducted in 10 wards in Ain Shams University Hospital that found the practice of appropriate hand-washing technique in 76.3% of their sample [11]. Though this work revealed that age is an insignificant factor for compliance with proper hand-washing. Moreover, a study in Kano investigated the situations of hand-washing among 137 medical and nursing students. Our study included 28 nurses working at the NICU, with an average age of 28.7 years. Other studies have concluded otherwise. This selective implementation could be explained by nurses wanting to protect themselves more than protecting their patients. This suggests that nurses prioritize their own safety over their patients' safety [18].