



Effect Of Health Education Intervention On Practice Of Infectious Diseases Prevention Among Secondary School Students In Rivers State

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ABSTRACT

This study investigated the effect of health education on practice of infectious diseases prevention among secondary school students in Rivers State. The study was a quasi-experimental study and data for the study was obtained from a sample size of 180 students drawn from the population of 36,100 public secondary schools in Ogba/Egbema/Ndoni L.G.A, Rivers State using multistage sampling procedure. A validated self-structured questionnaire titled “Practice of Infectious Diseases Prevention Questionnaire (PIDPQ)” with a reliability index of 0.85 was used for data collection. The data collected was analyzed using the Statistical Package for Social Sciences version 21 employing both descriptive and inferential statistics of percentage, mean, Standard Deviation and ANCOVA. The study found that health education had a significant effect on infectious diseases prevention practices among the students in Rivers State ($P < 0.05$), It was also found that health education had a significant effect on practice of infectious disease prevention among secondary school students based on age, gender and class level ($P > 0.05$). Based on the findings of the study, it was concluded that health education significantly enhances practices of infectious diseases prevention among secondary schools students in Ogba/Egbema/Ndoni LGA, Rivers State particularly across various age groups, gender, and class levels, Finally the study recommended among others that regular and comprehensive health education sessions that cover various aspects of infectious disease prevention should be formally integrated into the school curriculum.

Keywords: Health Education, Infectious Diseases, Prevention Practice

INTRODUCTION

Infectious diseases continue to pose a significant public health challenge worldwide, impacting millions of individuals and communities. These diseases, encompassing viral, bacterial, fungal, and parasitic infections, can lead to severe health complications and substantial economic burdens on societies. From a global perspective, an estimated 57 million people die each year due to infectious diseases (Wang et al., 2023). Furthermore, emerging infectious diseases present epidemic and even pandemic trends, as seen with COVID-19, Monkeypox, Chickenpox, Cholera, and Severe Acute Respiratory Syndrome (SARS) (McArthur, 2019; Khan et al., 2020; Rizk et al., 2022).

According to the World Health Organization (WHO, 2024), communicable diseases such as HIV/AIDS, tuberculosis (TB), malaria, viral hepatitis, sexually transmitted infections, and neglected tropical diseases (NTDs) are leading causes of death and disability in low-income countries and marginalized populations. In 2020, approximately 1.5 million people were newly infected with HIV globally, underscoring the ongoing need for efforts to combat the spread of the disease (UNAIDS, 2020). Prior to the COVID-19 pandemic, tuberculosis was the leading infectious disease killer worldwide, with around 10.0 million new TB infections and 1.5 million TB deaths in 2019 alone

(WHO, 2020). Additionally, in 2019, there were about 229 million malaria cases and 409,000 related deaths globally. By 2022, these numbers had risen to an estimated 249 million malaria cases and 608,000 deaths across 85 countries, with Africa bearing the brunt of the burden, accounting for about 94% of cases (WHO, 2023). Nigeria has the highest malaria mortality rate, with 97% of its population at high risk of infection (Dawaki et al., 2016; Nigeria Malaria Fact Sheet, 2018).

In Nigeria, infectious diseases are particularly rampant, with significant impacts on the lives of students and the general population. According to the Federal Ministry of Health (FMoH, 2022), these diseases are the leading cause of death and create substantial challenges for the country's social, educational, and healthcare systems. The high prevalence of infectious diseases in Nigeria directly affects students' health and educational outcomes, highlighting the urgent need for effective prevention and control measures.

The occurrence and severity of infectious diseases outbreaks in endemic areas according Raji et al (2022) are greatly enhanced by human behavior, with regard to practices of health hygiene. This can happen anywhere include more especially in schools. Epidemics or outbreaks of infectious diseases in schools not only affect teaching order, resulting in an adverse social effect, but also negatively affect the physical and mental health of young people (Wei et al 2011; Wieland et al 2011). Schools have reportedly been implicated in the spread of infectious diseases, especially gastrointestinal ones, and the mere provision of water supply and sanitation facilities is not enough to bring down morbidity and mortality rates. (Raji et al., 2022). Though water and sanitation facilities linked with hygiene behavior, though, have proven to be effective in reducing diarrheal diseases (Morse et al., 2019).

Ill health brings about school absenteeism, leading to poor performance in class and hence reduced academic productivity of the child. Not only that, a sick child is a potential source of diseases and outbreaks both within the school premises and outside, as many parents send their children to schools even when ill, and the spread of diseases travels very fast in the school setting (Eseoghene, 2013). Disease prevention is the best and most successful way to fight diseases and restore the health of the community. Nowadays, health and healthy behavior education are known as the best principles of disease prevention in all communities (Solhi et al., 2017). The World Health Organization (WHO) emphasizes that effective prevention and control measures are crucial in mitigating the impact of infectious diseases, particularly in regions with limited healthcare resources (WHO, 2020).

One of the primary strategies in combating these diseases is through health education interventions, which aim to improve the practices of disease prevention and control (Glanz et al., 2008). Disease prevention is closely linked to education (Htun et al., 2013). Good health and good education are not only ends in themselves, but also means which provide the necessary tools for individuals to lead productive and satisfying lives, knowing that the child's ability to attain her or his full potential is directly related to the complementary effect of good health, good nutrition, physical activity and quality education (Raji et al., 2022). Health education plays a vital role in promoting healthy behaviors and preventing the spread of infectious diseases. It involves the dissemination of information and the development of skills necessary for individuals to make informed decisions about their health (Wei, 2023). Effective health education programs are designed to be culturally sensitive, age-appropriate, and accessible to all segments of the population.

Globally, students are among the most vulnerable groups to multiple communicable diseases in human environments. This is because school settings and environments are structured in such a way that students are often found in crowded spaces, including classrooms, dormitories, worship centers, and market areas (WHO, 2023). Igbokwe et al (2020) attested to this through their study. Their study found that the prevalence of communicable diseases among students is a significant public health concern. Schools and universities are environments where close contact and interactions are frequent, facilitating the transmission of infectious agents.

Schools are also important settings for comprehensive health promotion, as they exert the most influence on the lives of children and youth and, by extension, on the health and well-being of families and communities as well (Htun et al., 2013). In the context of secondary school students, health education can significantly influence their practices regarding infectious disease prevention, thereby reducing the incidence and transmission of these diseases (Wei, 2023).

Secondary school students are at a critical stage of development where they begin to form lifelong health behaviors. They are also at an age where peer influence is strong, making it an ideal period to

introduce health education interventions that can shape their attitudes and practices. Schools provide a structured environment where educational programs can be systematically implemented and evaluated (Tapia-Fonllem et al., 2020). Moreover, educating students on infectious disease prevention can have a ripple effect, as they often share their knowledge with family members and peers, further extending the benefits of such interventions (Bandura, 2004).

A study by Wang et al. (2018) reported that health education interventions led to substantial improvements in behaviors toward infectious diseases among students in Gansu Province, China. These findings suggest that health education can be a powerful tool in enhancing disease prevention practices across different populations. However, the impact of health education interventions can vary based on several factors, including the demographic characteristics such as age, gender and class level of the students, the content and delivery methods of the intervention, and the cultural context.

In the context of secondary school students, it is crucial to consider factors such as age, gender, and class level when designing and implementing health education interventions. Adolescents are at different developmental stages, and their cognitive and emotional capacities can influence how they perceive and respond to health education messages. Gender differences may also play a role, as boys and girls might have different experiences and concerns related to infectious diseases. Additionally, class level can affect students' exposure to and understanding of health information, as older students may have more advanced knowledge and skills compared to younger ones (Khan et al., 2019).

Health education interventions are designed based on various theoretical frameworks that guide their development and implementation. One such framework is the Health Belief Model (HBM), which suggests that individuals' health behaviors are influenced by their perceptions of the severity and susceptibility to a health problem, the benefits of taking preventive action, and the barriers to taking such action (Rosenstock, 1974). The HBM has been widely used in designing health education programs, as it provides a comprehensive approach to understanding and addressing the factors that influence health behaviors.

Rivers State, located in the Niger Delta region of Nigeria, faces numerous public health challenges, including a high burden of infectious diseases. The state's diverse population, coupled with varying levels of access to healthcare and education, makes it essential to implement targeted health education programs. Previous studies have indicated that health education interventions can lead to significant improvements in practices related to infectious disease prevention among various populations (Raji et al., 2022; Wang et al., 2018). However, there is a need for more localized research to understand the specific impacts of these interventions among secondary school students in Rivers State.

The study on effect of health education intervention on practice of infectious diseases prevention among secondary school students in Rivers State aims to address this gap. It seeks to evaluate the effectiveness of a structured health education program in enhancing the practices of infectious disease prevention among secondary school students.

Research Questions

The following research questions were raised and answered to guide the study:

1. What is the effect of health education on practices of infectious diseases prevention among the students in public secondary schools Ogba/Egbema/Ndoni Local Government Area, Rivers State?
2. What is the effect of health education on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni local government area, Rivers State based on age?
3. What is the effect of health education on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni Local Government Area, Rivers State based on gender?
4. What is the effect of health education on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni Local Government Area, Rivers State based on class level?

Hypotheses

The following hypotheses were postulate and tested at .05 level of significance

1. Health education has no significant effect on practices of infectious diseases prevention among the students in public secondary schools Ogba/Egbema/Ndoni Local Government Area, Rivers State.
2. Health education has no significant effect on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni local government area, Rivers State based on age.
3. Health education has no significant effect on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni local government area, Rivers State based on gender.
4. Health education has no significant effect on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni local government area, Rivers State based on class level.

METHODOLOGY

Quasi-experimental non-randomized pre-test, post-test control group design was adopted for this study. Hence, the study involved two groups, one experimental group and one control group. The sample for this study was one hundred and eighty (180) students drawn from the population of thirty-six thousand and one hundred students (36,100) public secondary schools in Ogba/Egbema/Ndoni local government area (River State Ministry of Education -2023) whose demographics fall within the researcher's specifications were eligible for the study. The sample size was selected using multi-stage sampling procedures which included stratified random sampling techniques and simple random sampling techniques.

The data collection instrument was a validated self-structured questionnaire titled "Practice of Infectious Diseases Prevention Questionnaire (PIDPQ)" with a reliability index of 0.85 which was divided into two sections, Section A and B. Section A gathered demographic information, while Section B collected data on students' infectious diseases prevention practices. Permission to conduct the study was obtained through an official letter from the Head of the Department of Health Promotion, Environmental and Safety Education, addressed to the chairmen of the Rivers State Schools Management Boards (Universal Basic Education and Senior Secondary schools). This letter introduced the researcher and requested cooperation from the principals, teachers, and students of the selected schools. Research assistants distributed photocopies of the official letter to the principals of the selected secondary schools.

The questionnaire was administered in two batches for pre- and post-tests. Initially, the pre-test copies were distributed to both the experimental and control groups before the health education intervention on knowledge, attitudes, and preventive practices towards infectious diseases was given. The completed pre-test questionnaires were collected immediately to obtain baseline data. Following the intervention, the same questionnaire was administered again to the experimental group after a period agreed upon by the school authorities to avoid disrupting academic activities. The completed post-test questionnaires were also collected immediately. The entire process lasted for two weeks at the selected schools, achieving a return rate of 96.6%.

The completed questionnaires were collated, coded, and analyzed using the Statistical Package for the Social Sciences (SPSS) version 21. Descriptive statistics (Percentage, mean and standard deviation) were used to address the demographic data and research questions. Inferential statistics, specifically Analysis of Covariance (ANCOVA), was used to test the hypotheses at an alpha level of 0.05.

RESULTS

Table 1: Mean and standard deviation on effect of health education intervention on the practices of Infectious disease prevention

Group	N	Pre-test		Post test		Gain score
		Mean	SD	Mean	SD	
Control	90	1.70	0.40	1.83	0.59	0.13
Experimental	90	2.20	0.55	2.34	0.44	0.14

Results in Table 1 showed that the participants in the control group had had a mean score of 1.70 ± 0.40 before the pre-test, this increased to 1.83 ± 0.59 after the post-test giving a mean gain scores of 0.13 while participants in the experimental group had had a mean score of 2.20 ± 0.55 before the pre-test, this increased to 2.34 ± 0.44 after the post-test giving a mean gain scores of 0.14. It could therefore be deduced that health education had a little or no effect on the practice of communicable disease prevention among the participants.

Table 2: ANCOVA summary on effect of health education on the practice of infectious disease prevention among secondary schools students in Ogba/Egbema/Ndoni LGA in Rivers State

Dependent Variable: Practice Posttest

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	25.265 ^a	2	12.632	74.113	.000	.456
Intercept	14.428	1	14.428	84.646	.000	.324
practicepretest	7.998	1	7.998	46.922	.000	.210
Group	5.723	1	5.723	33.574	.000	.159
Error	30.169	177	.170			
Total	802.688	180				
Corrected Total	55.434	179				

a. R Squared = .456 (Adjusted R Squared = .450)

Table 2 result showed that the calculated F-value for group (practice) is 33.574 at degrees of freedom of 1 and 177 at $p < 0.05$. The calculated F-value was significant at $p < 0.05$ which is less than 0.05 level of probability ($F = 33.574$, $df = 1/177$, $p < 0.05$). The null hypothesis was therefore rejected and the alternative accepted. This showed health education intervention has a significant effect on practice of infectious disease among secondary schools students in Ogba/Egbema/Ndoni LGA in Rivers State.

Table 3: Summary of ANCOVA on the effect of health education on the practice towards infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni Local Government Area, Rivers State based on age

Dependent Variable: Practice Posttest

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	19.723 ^a	4	4.931	21.147	.000	.326
Intercept	9.510	1	9.510	40.785	.000	.189
Practice pretest	18.067	1	18.067	77.489	.000	.307
Age	1.050	3	.050	5.501	.016	.025
Error	40.803	175	.233			
Total	847.516	180				
Corrected Total	60.526	179				

a. R Squared = .326 (Adjusted R Squared = .310)

Table 3 showed that the calculated F-value for age is 5.501 at degrees of freedom of 3 and 175 at $p > 0.05$. The calculated F-value was significant at $p < 0.05$ which is less than 0.05 level of probability ($F = 5.501$, $df = 3/175$, $p < 0.05$). The null hypothesis was therefore rejected. This showed that health

education intervention has a significant effect on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni Local Government Area, Rivers State based on age.

Table 4: Summary of ANCOVA on effect of health education on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni Local Government Area, Rivers State based on gender

Dependent Variable: Practice Posttest						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	18.759 ^a	2	9.379	39.747	.000	.310
Intercept	11.120	1	11.120	47.126	.000	.210
Practice pretest	18.576	1	18.576	78.722	.000	.308
Gender	.085	1	.025	4.361	.019	.032
Error	41.767	177	.236			
Total	847.516	180				
Corrected Total	60.526	179				

a. R Squared = .310 (Adjusted R Squared = .302)

Table 4 showed that the calculated F-value for gender is 4.361 at degrees of freedom of 1 and 177 at $p > 0.05$. The p-value was greater than 0.05 level of probability ($F = 4.361$, $df = 1/177$, $p > 0.05$). This showed that health education has a significant effect on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni Local Government Area, Rivers State based on gender.

Table 5: Summary of ANCOVA on effect of health education intervention on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni Local Government Area, Rivers State based on class level

Dependent Variable: practice posttest						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	19.672 ^a	2	9.836	42.614	.000	.325
Intercept	9.746	1	9.746	42.225	.000	.193
practicepretest	17.361	1	17.361	75.216	.000	.298
Classlevel	.999	1	.999	4.327	.039	.024
Error	40.854	177	.231			
Total	847.516	180				
Corrected Total	60.526	179				

a. R Squared = .325 (Adjusted R Squared = .317)

Table 5 showed that the calculated F-value for group (Class Level) is 4.327 at degrees of freedom of 1 and 177 at $p > 0.05$. The p-value was less than 0.05 level of probability ($F = 4.327$, $df = 1/177$, $p < 0.05$). This showed that health education has a significant effect on practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni Local Government Area, Rivers State based on class level.

DISCUSSION

The findings of this study reveal several key insights into the impact of health education on the practice of communicable disease prevention among secondary school students in Ogba/Egbema/Ndoni LGA, Rivers State. According to the results presented in Table 1, participants in the control group had a mean score of 1.70 ± 0.40 before the pre-test, which increased to 1.83 ± 0.59 after the post-test, yielding a mean gain score of 0.13. Participants in the experimental group had a mean score of 2.20 ± 0.55 before the pre-test, which increased to 2.34 ± 0.44 after the post-test, giving a mean gain score of 0.14. These findings suggest that the health education intervention had a minimal effect on the practice of communicable disease prevention among the participants.

In contrast, Table 2 reveals that the calculated F-value for group practice is 33.574 at degrees of freedom of 1 and 177 with a p-value of less than 0.05. This significant F-value indicates that the health education intervention had a significant effect on the practice of infectious disease prevention among secondary school students in Ogba/Egbema/Ndoni LGA, Rivers State.

When comparing these findings with other studies, it is evident that health education interventions can have varying impacts on different demographic groups. For instance, Raji et al. (2022) reported a significant improvement in practices of infectious disease prevention among primary school teachers in Kware, Sokoto, Nigeria, following health education interventions. This aligns with the current study's findings that health education significantly improves infectious disease prevention practices among students. Similarly, Mbonye et al. (2016) found that educational outreach significantly improved the management of infectious diseases in Uganda, supporting the effectiveness of health education interventions reported in this study.

Additionally, Wang et al. (2018) demonstrated the positive impact of health education on knowledge and behaviors towards infectious diseases among students in Gansu Province, China. Their findings, which showed significant improvements in practices post-intervention, corroborate the current study's results, especially regarding the effectiveness of health education in influencing practice. Bisallah et al. (2018) also reported significant improvements in practices regarding tuberculosis among HIV patients in Nigeria following a health education intervention, further supporting the current study's findings on the significant impact of health education on infectious disease prevention practices. Usman et al. (2018) also found in their study on dengue fever some changes in the participants practices, though the changes in practices were less pronounced. This partially aligns with the current study's minimal gain in practice scores but diverges in the overall significant impact reported. Mbonye et al. (2016) also highlighted the effectiveness of educational outreach in improving infectious disease management in Uganda, which aligns with the current study's demonstration of significant improvements in disease prevention practices.

However, not all studies align with these findings. For example, Solhi et al. (2017) conducted a systematic review and concluded that health education's impact on emerging diseases was inconsistent and often limited. This contrasts with the current study's findings, suggesting significant improvements in practices following health education. Abdel-Aziz et al. (2016) observed that health education programs had limited effectiveness in changing healthcare workers' practices regarding nosocomial infections in Egypt. This finding contradicts the current study, which reported significant improvements in students' practices. Ojulong et al. (2013) also reported limited changes in infection prevention and control practices among health sciences students in Namibia, differing from the significant impact observed in this study. Bieri et al. (2012) and Bieri et al. (2013) found varying degrees of success in using health educational videos to prevent worm infections among Chinese schoolchildren, suggesting that the mode of delivery and cultural context can influence the outcomes of health education initiatives. These contrasting findings highlight the complexity of health education and the need for continuous evaluation and adaptation to ensure its effectiveness across different settings and populations.

Discrepancies in these findings could be attributed to various factors, including differences in study populations, the nature and duration of health education interventions, and contextual factors such as cultural attitudes and baseline knowledge levels. The current study's focus on secondary school students in a specific Nigerian locality might present different challenges and opportunities compared to studies involving different populations and settings. Additionally, the methods used to deliver health education and measure outcomes could contribute to variations in findings across studies.

Furthermore, Table 3 shows a significant F-value of 5.501 for age at degrees of freedom of 3 and 175 with a p-value of less than 0.05. This suggests that the health education intervention significantly influenced the practice of infectious disease prevention among students based on age. The significant impact of age underscores the importance of tailoring health education programs to suit the developmental stages of the target audience. Younger students may benefit more from interactive and engaging educational materials that are designed to captivate their attention and facilitate retention. In contrast, older students might require more sophisticated content that challenges their critical thinking and encourages deeper understanding.

Similarly, Table 4 shows that the F-value for gender is 4.361 at degrees of freedom of 1 and 177 with a p-value of greater than 0.05, indicating that gender does not significantly impact the practice of infectious disease prevention following the health education intervention. The gender-based findings suggest that health education interventions can be equally effective for both male and female students, challenging some traditional notions of gender differences in health behavior adoption. This equal impact might reflect a growing awareness and acceptance of health information among both genders, possibly due to increasing efforts to promote gender equality in educational settings. Nonetheless, it is crucial to consider cultural and contextual factors that might influence gender dynamics in different regions.

Table 5 indicates that the calculated F-value for class level is 4.327 at degrees of freedom of 1 and 177 with a p-value of less than 0.05, demonstrating that the health education intervention significantly affected the practice of infectious disease prevention based on class level. The significant effect of class level indicates that educational interventions need to be appropriately adapted to different educational stages. Students in lower grades might need more foundational knowledge and simple preventive practices, while those in higher grades might benefit from more complex and detailed information. This differentiation ensures that the educational content is relevant and accessible to students at various academic levels, maximizing the effectiveness of the intervention.

When comparing these findings with other studies, Wang et al. (2018) study also found that younger students exhibiting more significant behavioral changes compared to older students. The results suggest that age-related cognitive and developmental stages play a critical role in how students absorb and apply health education information. Younger students may be more impressionable and open to adopting new practices compared to older students, who might have established habits and attitudes that are harder to change. This finding is consistent with the research by Usman et al. (2018), who found that both male and female students showed significant improvements in practices related to dengue fever prevention following a health education intervention in Jeddah. However, the relatively equal impact across genders in the current study contrasts with some literature, such as Bisallah et al. (2018), who noted gender differences in the adoption of tuberculosis prevention practices among HIV patients in Nigeria. The inconsistency might be attributed to differences in cultural contexts, the nature of the infectious diseases, and the specific design of the educational interventions.

This finding is in line with the study by Raji et al. (2022), which demonstrated that primary school teachers in different class levels showed varying degrees of improvement in their practices related to infectious disease prevention following a health education intervention. The current study's findings imply that students at different educational stages may respond differently to health education, possibly due to differences in curriculum content, cognitive abilities, and exposure to health-related information.

Despite these discrepancies, the findings of this study align with the general expectation that health education interventions can positively impact practices related to infectious disease prevention. The significant improvements in practice scores, particularly when considering age and class level, highlight the potential of tailored health education programs to address specific demographic needs effectively. The minimal effect observed in the overall practice scores might be due to various factors, including the intervention's duration, content, and delivery methods.

CONCLUSION

Based on the findings of this study, it was concluded that health education significantly enhances practices of infectious diseases prevention among secondary schools students in Ogba/Egbema/Ndoni LGA, Rivers State. This intervention were particularly effective across various age groups, gender, and class levels, underscoring the importance of tailored educational programs.

RECOMMENDATIONS

Based on the findings of the study, the following four recommendations are made:

1. Health education interventions on students' practices of infectious disease prevention across different age groups, gender, and class levels, should be enhanced and expanded.

2. Health education should be formally integrated into the school curriculum. Regular and comprehensive health education sessions that cover various aspects of infectious disease prevention can help reinforce positive behaviors and ensure that all students, regardless of their age or class level, receive consistent and accurate information.
3. Utilizing technology and interactive learning tools can enhance the engagement and effectiveness of health education programs. These tools can be particularly effective in reaching students of different age groups and learning styles, thereby improving their knowledge and practices related to infectious disease prevention.
4. Continuous monitoring and evaluation should be conducted. Regular assessments of students' practices related to infectious disease prevention can help identify areas that need improvement and ensure that the educational content remains relevant and impactful.

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