JTS

The Journal of Transdisciplinary Studies, 8(1): 85-93, 2024
https://doi.org/10.22685/JTS.2024.8.1.085

Education Operation Research on Infectious Disease Prevention and Management: Focus Group Interview*

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ARTICLE INFO

Article history:
Received 17 April 2024
Revised 19 April 2024
Accepted 24 April 2024

Keywords:
Educational content,
Educational duration,
Educational target,
Focus group interview,
Infectious disease prevention

ABSTRACT

This study was conducted with well-aging education experts as focus group participants to develop an educational program for infectious disease management, and to grasp the basic content needed for educational operation. The participants of this study were 6 professionals responsible for educating the elderly in welfare centers who agreed to participate in the study. The focus group interview was conducted online using ZOOM with the 6 participants as one group for approximately 1 hour and 30 minutes. According to the research results, the participants stated that no education had been provided related to infectious disease prevention, and there had been a lot of guidance focusing on coping strategies as COVID-19 spread. As for 'Infectious Disease Management Education Content', the participants responded that education is necessary on basic content such as hand washing, mask usage, body hygiene management, laundry and waste management, and environmental sanitation management. Regarding 'Infectious Disease Management Education Target and Duration', the participants stated that education on infectious disease management should be implemented first for the elderly, disabled, and children who are vulnerable to infections. Most agreed that twice a year, about 50 minutes each time, would be appropriate for the duration of infectious disease management education. The research results suggest that, departing from the existing focus on response measures, a foundation could be established that reflects the educational elements needed in actual educational settings.

1. Introduction

In recent years, the world has experienced several outbreaks of infectious diseases, posing a serious challenge to public health. Pandemics like COVID-19, in particular, have imprinted the

* This work was supported by the Ministry of Education of the Republic of the Korea and National Research Foundation of Korea (NRF-2020S1A5C2A04092504).

importance of infectious disease risk and prevention and management on a global scale (Kintrilis et al., 2023; Macaraan, 2022). This experience has highlighted the ongoing attention and response to infectious diseases as an essential task.

The re-emergence of infectious diseases and the potential emergence of new infectious diseases are always present. In this reality, strengthening the response capabilities of individuals and communities is very important. Diseases like MERS, as examples, can lead to serious mental health problems beyond simple physical illness, leaving aftereffects such as depression, anxiety disorders, and sleep disorders. The mental stress caused by infectious diseases can lead to psychiatric problems, as studies have reported (Lee et al., 2016; Zhi et al., 2020). The prolongation of COVID-19 has led to psychological anxiety and guilt even among those diagnosed and quarantined, despite being victims (Lee et al., 2020; Jung, 2020). Healthcare workers and civil servants involved in responding to COVID-19 also need care related to mental and emotional stability due to the anxiety of being exposed to infectious diseases and the experience of being excluded by others (Lee, 2021). In this context, not only participants in infectious disease response but also the general public face significant mental burdens, including anxiety, guilt, and even social exclusion (Shin et al., 2020; Vacaras et al., 2023). These psychosocial issues require a comprehensive approach along with infectious disease management.

Previous studies have emphasized that the level of individual knowledge and response capabilities is very important for infection prevention at the time of an infectious disease outbreak (Hassan et al., 2023; Orji et al., 2023). It has been reported that education in preparation for infectious diseases is effective in reducing infection rates within the community. Additionally, understanding social perceptions and attitudes towards infectious diseases needs to be strengthened (Moon, 2020). Infectious diseases can re-emerge at any time, and there is also the possibility of existing infectious diseases mutating and occurring. This situation demands the necessity of accurate knowledge about infectious diseases and the importance of responsibility for infection prevention and management, but to date, tailored education on infectious diseases is insufficient, and related research has mostly been conducted after the pandemic outbreak (Lee, 2020; Oh, 2020).

This study aims to develop an education program for infectious disease prevention and management by conducting focus group interviews with well-aging education experts. Through this, the general public can acquire the knowledge and skills to effectively prevent and manage infectious diseases and seek ways to minimize the psychological and social problems caused by infectious diseases. The data obtained in this process will be used as important basic data for developing future strategies for infectious disease response and educational programs.

2. Research Methods

2.1 Research participants

The participants of this study were 6 professionals responsible for educating the elderly in welfare centers who agreed to participate in the study. The participants were conveniently extracted through social workers at the welfare centers who could participate in this study's survey and the subjects

were experts with more than five years of experience in well-aging lectures. The focus group interview was conducted in January 2024, and the 6 participants were grouped together. The interview was conducted online using ZOOM for about 1 hour and 30 minutes. Prior to the interview, written consent was obtained from the research participants, and it was explained that the interview content would be anonymous and confidential and not used for purposes other than research. Additionally, the consent of the research participants was obtained to record the interview content. The participants were 3 women (50.0%) and 3 men (50.0%), Regarding work experience, 1 person (16.7%) had less than 5 years, 2 people (33.3%) had between 6 to 9 years, and 3 people (50.0%) had 10 years or more. The geographical distribution of the participants included 2 from Gyeonggi Province (33.2%), 1 from Gangwon Province (16.7%), 1 from Daejeon Metropolitan City (16.7%), 1 from Seoul (16.7%), and 1 from Incheon Metropolitan City (16.7%) (Table 1).

Table 1. General characteristics of the research subjects

Contents		N	%
Gender	Male	3	50.0
	Female	3	50.0
Age	Under 29	1	16.7
	30-39	3	50.0
	40 and over	2	33.2
	Average age	35.0(29~42) years old	
Level of education	Bachelor	6	100.0
Geographical distribution	Daejeon	1	16.7
	Gangwon	1	16.7
	Gyeonggi	2	33.2
	Incheon	1	16.7
	Seoul	1	16.7
Work experience	5 years or less	1	16.7
	6-9 years	2	33.2
	10 years or more	3	50.0
	Average work experience	10.8(4~17) years	

2.2 Question development

To develop questions for the focus group interview targeting education experts, the questions were initially written based on a literature review related to the research topic. The initial questions were reviewed for validity by two professors of nursing who had conducted related research, and one professor of health and welfare, and were revised and supplemented.

The questions presented for this study were: ‘Has your institution conducted education on infectious disease prevention and management for the local community?’, ‘How does your institution provide information on infectious disease prevention and management to the local community?’, ‘Please mention everything that you think is necessary as educational content for infectious disease prevention

and management', 'Who do you think should be the priority targets for infectious disease prevention and management education?', 'Please mention the total educational duration and duration per session that you think is appropriate for operating an infectious disease prevention and management education program', 'Does your institution plan to operate an education program for infectious disease prevention and management?' The researcher also conducted related additional questions during the focus group interview.

2.3 Data analysis

For data analysis, field notes taken during the interview were carefully reviewed, and the recorded interview content was transcribed. The transcribed content was read several times to analyze and extract meaningful content. Common elements were described by consulting the opinions of co-researchers.

3. Results

3.1 Current status of education on infectious disease management

The first topic of the research results, 'Current Status of Education on Infectious Disease Management', revealed that the research participants stated that education related to infectious disease prevention had not been conducted, and there had been a lot of guidance focusing on coping strategies as COVID-19 spread.

> "Well-being, health promotion, and chronic disease management have been the main focus, so we haven't been regularly educating or practicing anything related to infections. It really struck me during this experience with COVID-19 that there should be a curriculum for this..."

> "Specifically regarding education, there hasn't been any education concerning infectious diseases... Even in well-aging education, there has been no education carried out related to infectious diseases as far as I know..."

> "We have also matched the timing of COVID-19 to conduct education on infectious disease prevention and management... Guidelines come down from local governments. Once these guidelines reach facilities, we provide guidance accordingly..."

> "When the COVID-19 crisis broke out, a lot of guidance was focused on coping strategies..."

Information on infectious disease prevention and management was delivered to the targets through text messages, using SNS such as KakaoTalk and Instagram, posting information on the welfare center's website, and attaching posts within the welfare center. Additionally, there were responses that content was delivered through operating the institution's YouTube channel, producing and distribut-

ing videos, and through regular newsletters.

> "First, we produced a flyer and distributed it in the welfare center's lecture hall and information desk, and posted it on the website. We used SNS such as the welfare center's KakaoTalk and Instagram and sent text messages to everyone..."

> "We targeted the welfare center members and sent text messages about methods for preventing and managing infectious diseases, and operated the institution's YouTube channel... We posted information on Instagram and the welfare center's website. And within the institution, we promoted through attaching posts..."

> "We sent text messages and KakaoTalk messages to the elderly, and made welfare calls to vulnerable groups..."

3.2 Educational content on infectious disease management

The second topic of the research results, 'Educational Content on Infectious Disease Management', revealed that the research participants stated that education is necessary on basic content such as hand washing, mask usage, as well as body hygiene management, laundry and waste management, and environmental sanitation management. Additionally, counseling or program operation for emotional support was also deemed necessary.

> "Looking at the elderly, many wore masks so long that the color changed due to the high cost of masks in the beginning. So, that's actually not good for hygiene... And basic immune enhancement and physical health education are important, as well as depression prevention education, mental health is also considered important, so such education is necessary, and cleanliness and disinfection methods for infection prevention are important too..."

> "How to wear masks correctly, how often masks should be replaced, the correct way to wash hands, covering hands when coughing in public places, such education is directly related to preventing infectious diseases and is important. But commonly available education tends to assume that everyone already knows these basics, so it gets omitted, or sometimes the terminology can be a bit difficult..."

> "How to manage laundry, how to wipe surfaces, this side needs to be educated in more detail. And guidance about nearby medical facilities is necessary..."

3.3 Target and duration of infectious disease management education

The third topic of the research results, 'Target and Duration of Infectious Disease Management Education', revealed that the research participants stated that education on infectious disease management should first be implemented for the elderly, disabled, and children who are vulnerable to

infections. Additionally, because habit formation from a young age is important, education targeting children is considered important. Most agreed that twice a year, about 50 minutes each time, would be appropriate for the duration of infectious disease management education. Other responses included that once a month for about 1 hour would also be suitable.

"I think the elderly and children should be the first priority. There are times when the needs of the elderly and children are similar..."

"Children need to be prioritized because habit formation from a young age is important. Elderly people are vulnerable, so they are sensitive to infections and should be prioritized..."

"The promotional effect and participation rate seem to be highest with twice a year..."

"I want to proceed with about 50 minutes each time in the first and second halves of the year. That's really the time you can focus..."

"I think the program team can operate it about once a month for about an hour..."

3.4 Operation of education on infectious disease management

The fourth topic of the research results, 'Operation of Education on Infectious Disease Management', revealed that the research participants all responded that they are willing to operate education on infectious disease management.

"We plan to proceed, planning to do it twice a year in the first and second halves of the year..."

"We intend to proceed with one hour each time in the first and second halves of the year..."

"Since we also manage volunteers, I think it would be good if volunteers also received education..."

"I also think it would be good to proceed with about an hour each time in the first and second halves of the year, with theory and practice..."

4. Discussion and Conclusion

The purpose of this study was to conduct focus group interviews with education experts to prepare basic data for developing an education program on infectious disease management.

According to the research results, the key topics regarding education on infectious disease management are firstly, the 'Current Status of Education on Infectious Disease Management', where the research participants stated that no education had been conducted related to infectious disease pre-

vention, and there had been a lot of guidance focusing on coping strategies as COVID-19 spread. Information on infectious disease prevention and management was mainly delivered through text messages, SNS utilization, posting information on the welfare center's website, and attaching posts within the welfare center. Meanwhile, it has been reported that the general public mainly obtains information about infectious diseases from the internet and mass media (TV, newspapers, internet) (Choi et al., 2019).

Secondly, 'Educational Content on Infectious Disease Management', where the research participants stated that education is necessary on basic content such as hand washing, mask usage, as well as body hygiene management, laundry and waste management, and environmental sanitation management (Park et al., 2020; Alzaatreh et al., 2024). Additionally, the need for program development to manage the psychological stress and fear of infectious diseases, which can cause psychological anxiety, depression, and helplessness during an outbreak, has been emphasized in previous studies (Spychała et al., 2023).

Thirdly, 'Target and Duration of Infectious Disease Management Education', where the research participants stated that education on infectious disease management should first be implemented for the elderly, disabled, and children who are vulnerable to infections. Most agreed that twice a year, about 50 minutes each time, would be appropriate for the duration of infectious disease management education. Compared to other age groups, the elderly have a higher mortality rate from infectious diseases such as COVID-19, and thus, experience higher levels of depression and anxiety due to intense social isolation (Santini et al., 2020). Vulnerable groups such as the elderly, disabled, and children feel a more serious sense of crisis and anxiety about their health during an epidemic, therefore, there is a need to enhance their level of knowledge about infectious disease prevention and management. Enhanced knowledge will positively affect their infectious disease management activities.

Fourthly, 'Operation of Education on Infectious Disease Management', where the research participants all responded that they are willing to operate education on infectious disease management. This result is thought to be due to the highlighted necessity and importance of individual prevention and management of infectious diseases due to the COVID-19 pandemic.

Through these research results, it can be confirmed that the education provided during the COVID-19 epidemic period was mainly focused on temporary coping strategies. This reveals the lack of systematic and continuous education programs, suggesting the need to establish a new educational foundation that reflects the actual elements needed in the education field, moving away from the focus on response measures. The research participants particularly view the elderly, disabled, and children as the main targets for education, and emphasized the need for the development of suitable educational programs for them. Additionally, the research participants proposed that education should be conducted twice a year for about 50 minutes each time, providing specific measures for the frequency and continuity of education. These suggestions indicate that effective management of infectious diseases requires education to be continuous, not sporadic.

This study has sufficient research significance in that it prepared basic data for developing an education program on infectious disease management. However, the limitation in generalizing the research results due to interviewing only a few education experts should be noted. Therefore, future research should involve a more diverse and larger number of research participants for in-depth verification to supplement the results.

Conflicts of Interest

No author has any other conflict of interest to declare.

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