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Urogenital Hygiene Education for Children with Special Needs Through Educational Information Communication Activities for Teachers and Educational Personnel at President Special Need Children

R. Ruhdiat [1*], S. Ryan[2], I. Nucky[3]
President University
Corresponding Author: R. Ruhdiat rudi.ruhdiat@president.ac.id

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A B S T R A C T

This community service activity aims to improve the knowledge, skills, and attitudes of teachers and educational staff in maintaining genitourinary hygiene in children with special needs (ABK). The activity was held on Tuesday, October 30, 2025, in the Activity Room at President University, involving 20 participants. The method used was communication, information, and education (KIE) through lectures using PowerPoint and educational posters. Evaluation was conducted using a pretest-posttest design. The results of the activity showed an increase in participants' understanding of urogenital hygiene principles and infection prevention. This activity contributed to increasing the capacity of educators in supporting the health of children with special needs

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INTRODUCTION

Children with special needs (CSN) are a group of children who have differences in physical, mental, and social abilities, requiring a special approach to education and health. Genitourinary hygiene issues in CSN are often a major concern because motor and communication limitations can make it difficult to maintain personal hygiene.

Increasing the knowledge of teachers and educational staff regarding urogenital hygiene is very important to prevent urinary tract infections and improve the quality of life of children. Therefore, health education activities through an information, education, and communication (IEC) approach are needed.

Activity Design

This community service activity uses a quasi-experimental design with a one-group pretest–posttest approach. In this design, participants' knowledge levels are measured before and after the educational intervention to observe the changes that occur after the outreach activity.

This approach was chosen because it is effective in public health education activities to evaluate the impact of interventions in a relatively short period of time. In this design, all participants were given a pretest to measure their initial knowledge of genitourinary hygiene in children with special needs. Participants then took part in Communication, Information, and Education (KIE) activities, which included interactive lectures, the use of PowerPoint presentations, and educational posters. After the educational activities were completed, participants were given a post-test using the same instrument to measure their increased knowledge and understanding.

A comparison between the pre-test and post-test scores was used as an indicator to assess the effectiveness of the health education activities that had been carried out.

Activity Flow Chart

The following is the flow of community service activities carried out:

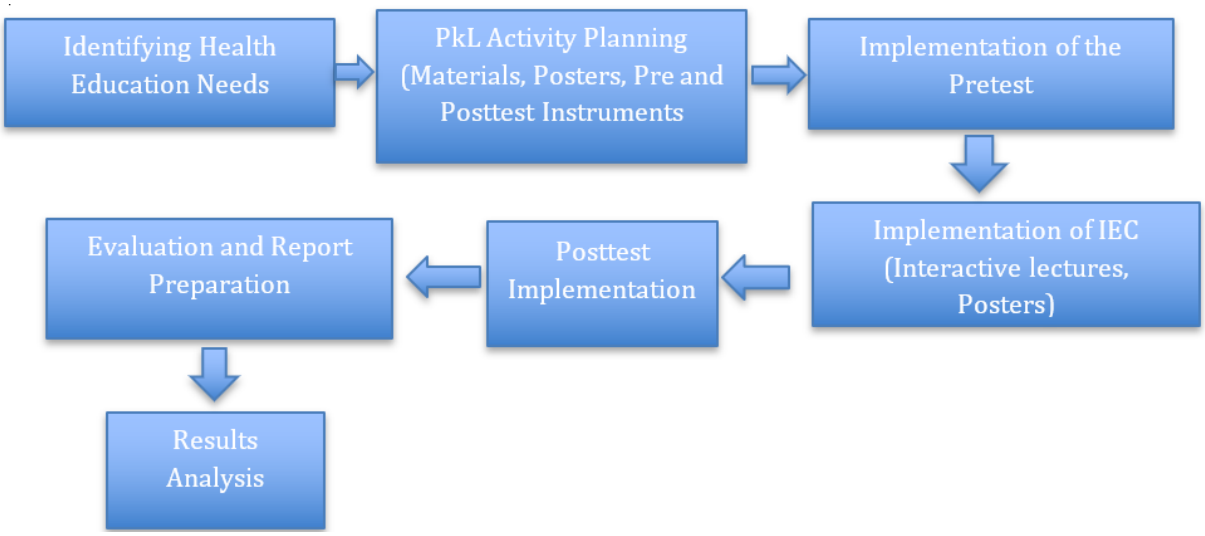


Figure 1. Activity Flow Chart

This flowchart illustrates the process of activities from the preparation stage to the evaluation of the results of community service activities.

Data Analysis Method

The data obtained from the pretest and posttest results were analyzed using descriptive analysis to see changes in participants' knowledge levels before and after the educational activities. Participants' scores were calculated based on the number of correct answers out of a total of 20 questions covering aspects of knowledge, skills, attitudes, and genitourinary hygiene.

These scores were then categorized into three levels of interpretation, namely good, sufficient, and poor, based on the range of values specified in the assessment instrument. The distribution of pretest and posttest scores was then presented in tables and graphs to facilitate interpretation of the results.

A comparison between the pretest and posttest results is used to assess the increase in participants' knowledge after participating in the educational activity. An increase in the number of participants in the higher knowledge category and a decrease in the number of participants in the low knowledge category are indicators of the success of the health education program implemented.

This analysis aims to provide an overview of the effectiveness of Communication, Information, and Education (KIE) methods in improving participants' understanding of the importance of maintaining genitourinary hygiene in children with special needs.

IMPLEMENTATION AND METHODS

This community service activity was held on Tuesday, October 30, 2025, at the President University Activity Room. The activity was attended by 20 participants consisting of teachers, technicians, and administrative staff at President University. Participants were selected because they play an important role in the educational environment and interact directly with children with special needs in their daily activities, making the improvement of health literacy related to personal hygiene highly relevant.

The implementation of the activity was designed in several stages to ensure that the educational process was systematic and measurable. The first stage was a pretest, which aimed to determine the participants' initial level of knowledge about assisting children with special needs and the importance of maintaining genitourinary hygiene. The pretest was conducted using a questionnaire consisting of 20 questions covering the participants' knowledge, skills, and attitudes towards personal hygiene practices for children with special needs.

The second stage was the delivery of educational material through interactive lectures. The material was delivered by lecturers from the Faculty of Medicine using PowerPoint presentations and educational posters designed by students as part of the learning activities. The material covered the importance of urogenital health in children with special needs, principles of personal hygiene, prevention of urinary tract infections, and the role of teachers and caregivers in helping children maintain personal hygiene.

The next stage is an interactive discussion between the presenter and participants. In this session, participants are given the opportunity to ask questions and share their experiences and challenges in assisting children with special needs in an educational environment. This discussion aims to strengthen participants' understanding and provide practical solutions that can be applied in daily assistance activities.

The final stage is a post-test, which is conducted after the presentation of material and discussion are complete. The post-test uses the same instrument as the pre-test to evaluate the increase in participants' knowledge and understanding after participating in the educational activity. The results of the comparison between the pre-test and post-test are then analyzed to assess the effectiveness of the community service activities that have been carried out.

Through this series of activities, it is hoped that participants will not only gain increased knowledge, but will also be able to apply the information.

Conceptual Framework

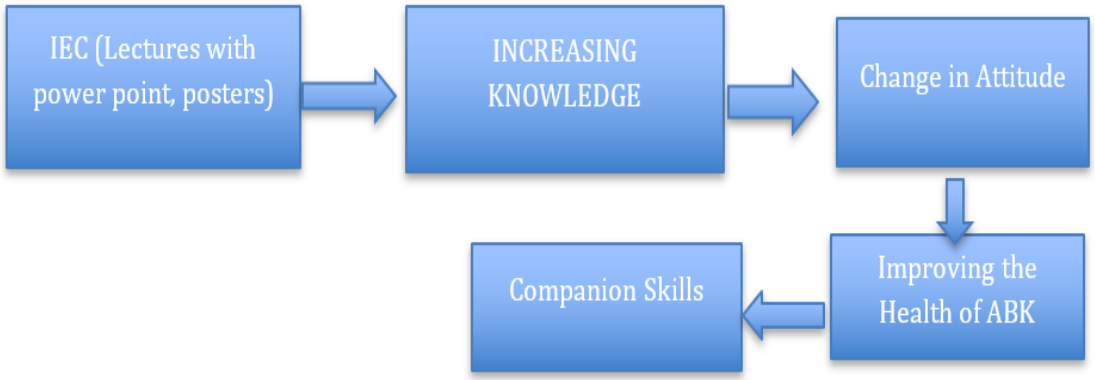


Figure 2. Conceptual Framework

RESULT AND DISCUSSION

Evaluation Results

The results showed an increase in participants' understanding after the educational activity. Most participants experienced an increase in their knowledge scores regarding genitourinary hygiene in children with special needs.

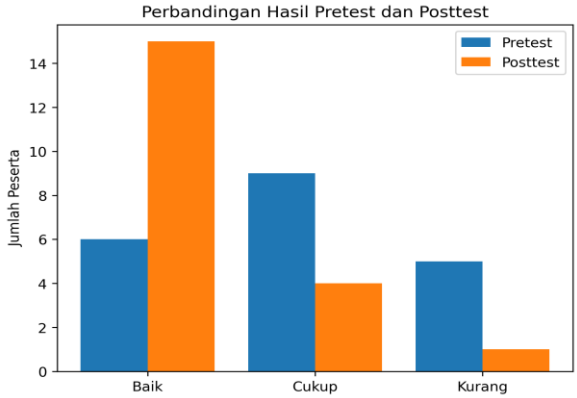


Figure 3. Comparison Graph of Value Increases

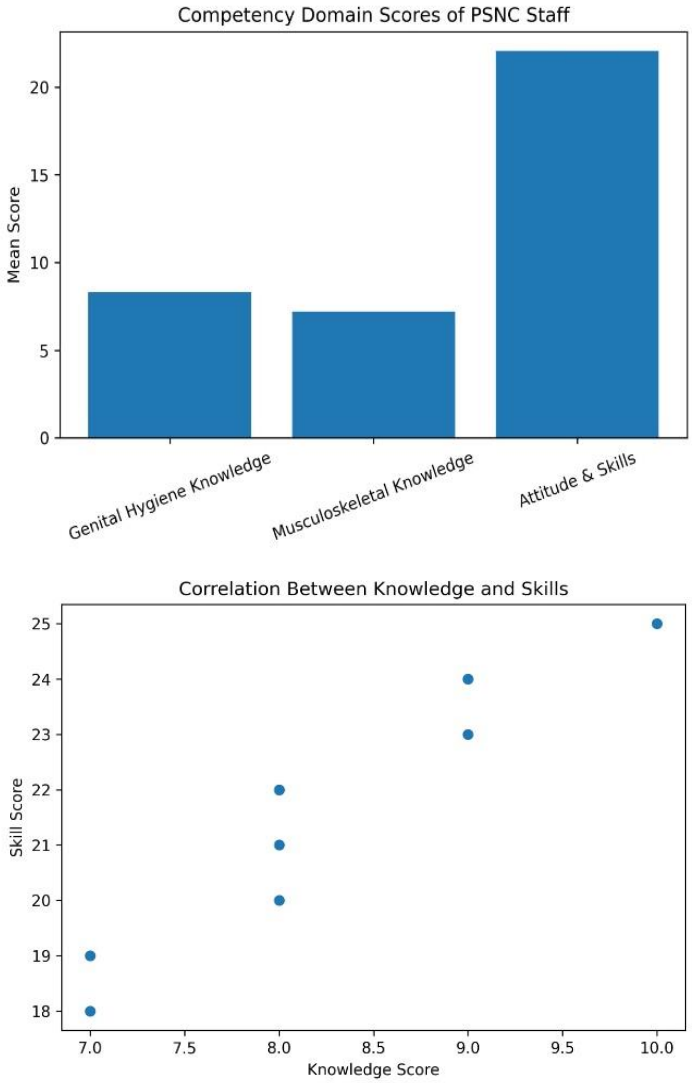
Table 1. Pretest–Posttest Analysis

Category	Pretest (n)	Posttest (n)
Good	6	15
Just	9	4
Minus	5	1

The results of the evaluation of the health education activity on genitourinary hygiene in children with special needs (ABK) were analyzed by comparing the pretest and posttest scores given to 20 participants in the activity. The assessment categories were divided into three levels, namely good, fair, and poor. Based on the pretest results, most participants were in the adequate category, namely 9 people (45%), followed by 6 people (30%) in the good category, and 5 people (25%) in the poor category. These findings indicate that before the outreach activity was carried out, most participants already had a basic understanding of ABK assistance and personal hygiene, but their level of knowledge was still not optimal. After the implementation of Communication, Information, and Education (KIE) activities through lectures, the use of PowerPoint media, and educational posters, there was a significant increase in the post-test results. The number of participants in the good category increased to 15 people (75%), while the fair category decreased to 4 people (20%), and the poor category decreased to only 1 person (5%). This change in score distribution shows an increase in the participants' level of understanding after participating in the education activity. The most significant increase occurred in the good category, which increased by 45% from the initial condition. Conversely, the category experienced a 20% decrease, indicating that most participants who previously had limited knowledge successfully improved their understanding after participating in the outreach activities. These results show that the KIE education method, combined with visual media and interactive discussions, is effective in increasing the knowledge and understanding of teachers and educational staff regarding the importance of maintaining genitourinary hygiene in children with special needs. This increase in knowledge is expected to contribute to improving the quality of assistance and health care for children with special needs in the educational environment. Overall, the results of the pretest-posttest analysis show that the community service program that was implemented successfully achieved the objectives of the activity, namely to increase participants' health literacy related to urogenital hygiene and the role of caregivers in preventing infections in children with special needs.

CONCLUSION AND RECOMMENDATIONS

Communication, Information, and Education (CIE) methods are one of the approaches widely used in public health promotion to improve health knowledge, attitudes, and behaviors. This approach emphasizes the systematic delivery of information through effective communication, the use of educational media, and direct interaction between facilitators and participants.



Figures 4. Mean Score and Correlation Graphs for Knowledge and Skills

DISCUSSION AND RESULT

The results of community service activities show a significant increase in participants' knowledge levels after the implementation of health education on genitourinary hygiene in children with special needs. Based on the results of the pretest–posttest analysis, the number of participants in the good knowledge category increased from 30% to 70%, while the poor knowledge category decreased from 25% to 5%. These findings indicate that educational interventions through the Communication, Information, and Education (KIE) approach are effective in improving participants' understanding of personal hygiene practices and the prevention of urinary tract infections in children with special needs.

These results are in line with health promotion theory, which states that increasing knowledge is an important initial stage in the process of changing health behavior. In the Knowledge–Attitude–Practice (KAP) model, health education plays a role in increasing individuals' knowledge, which in turn influences their attitudes and health practices in daily life. This model explains that changes in health behavior usually begin with an increase in knowledge through a systematic and continuous educational process.

Additionally, the results of this activity can also be explained through the Health Belief Model (HBM), which emphasizes that a person's health behavior is influenced by their perception of vulnerability to disease, the severity of the disease, and the benefits of preventive measuresThrough health education activities, participants gained an understanding of the risk of urinary tract infections in children with special needs and the importance of maintaining genital hygiene. This increased understanding can motivate participants to implement better preventive behaviors when accompanying children in educational settings.

The health promotion theory-based educational approach has also been proven effective in various previous studies. Health education interventions designed based on behavioral change theory can improve individuals' ability to manage their health and enhance their quality of life. Other studies show that health education programs can significantly improve knowledge, attitudes, and health practices, especially when accompanied by engaging learning media and interaction between facilitators and participants.

In the context of this activity, the use of KIE methods through interactive lectures, PowerPoint presentations, and educational posters provides visual and verbal stimulation that helps participants understand the material more easily. Visual media has been proven to improve information retention because participants not only receive information verbally but also through illustrations that facilitate understanding of health concepts. Systematically designed health education can also improve public health literacy and encourage individuals to make better decisions in maintaining their own health and that of others.

In addition to increasing knowledge, interactive discussions in this activity also play an important role in the adult learning process. In Social Cognitive Theory, social interaction and shared learning experiences can improve individual understanding through observation, discussion, and exchange of experiences. This approach helps participants connect the material presented with the practical experiences they encounter in assisting children with special needs in educational settings.

Overall, the results of this activity show that a health education approach based on health promotion theory can improve participants' health literacy in a relatively short time. The increase in knowledge gained through educational activities is expected to contribute to better changes in caregiving behavior, particularly in helping children with special needs maintain personal hygiene and prevent urinary tract infections.

In this community service activity, the KIE method was applied through interactive lectures, the use of PowerPoint media, and educational posters designed by students. The results of the pretest–posttest evaluation showed a significant increase in participants' level of understanding after participating in the educational activities. The increase in the knowledge category from 30% to 75% indicates that the educational approach used was able to improve participants' health literacy regarding genitourinary hygiene in children with special needs.

This finding is in line with previous studies showing that the KIE approach is effective in increasing public knowledge and awareness of health issues. KIE not only provides information, but also encourages changes in attitudes and behavior through a two-way communication process and the use of engaging learning media. Visual media such as posters and multimedia presentations have been proven to help participants understand complex health concepts in a simpler and more memorable way.

In addition, a lecture approach combined with interactive discussions provides opportunities for participants to share experiences and clarify information that is not yet understoodThis interaction is an important factor in the adult learning process, where participants not only receive information passively but also actively engage in the learning process.

In the context of inclusive education, increasing the knowledge of teachers and educational staff about the health of children with special needs is very important. Teachers have a strategic role as caregivers in the school environment who can help children maintain personal hygiene, detect early signs of health disorders, and provide simple health education to children.

Thus, the application of the ICE method in this community service activity can be said to be effective in increasing the capacity of educators and educational staff in supporting the health of children with special needs. Educational programs such as this also have the potential to have a long-term impact through changes in better mentoring behavior in the school environment.

Based on the results of the community service activities carried out in the Activity Room at President University on October 30, 2025, it can be concluded that health education activities using the Communication, Information, and Education (KIE) approach had a positive impact on increasing participants' knowledge and understanding of the importance of maintaining genitourinary hygiene in children with special needs (ABK). This activity was carried out using a one-group pretest-posttest design, allowing for the evaluation of changes in participants' knowledge before and after the educational intervention.

The results of the analysis showed an increase in the number of participants in the good knowledge category, from 6 people (30%) at the pretest to 15 people (75%) at the posttest. Meanwhile, the number of participants in the adequate and poor categories decreased after the educational activity. This indicates that delivering material through interactive lectures supported by PowerPoint presentations, educational posters, and interactive discussions can effectively improve participants' understanding.

The material presented not only emphasized knowledge about genitourinary hygiene, but also provided an understanding of the role of teachers and educational staff in assisting children with special needs in maintaining personal hygiene, preventing urinary tract infections, and recognizing early signs of health problems. With increased knowledge and awareness among participants, it is hoped that the practice of assisting children with special needs in educational settings can be carried out more appropriately and with a focus on the health and well-being of children.

In addition, this activity also shows that a KIE-based health education approach involving lecturers and students in the development of educational media can be a form of implementing the three pillars of higher education, particularly in the field of community service. The collaboration between academic staff and students contributes to the development of learning media that is communicative and easy to understand for activity participants.

Based on the results of this activity, several recommendations can be made. First, health education activities on personal hygiene and reproductive health for children with special needs need to be carried out continuously and structurally in educational environments. Second, there needs to be increased collaboration between educational institutions, health workers, and parents in efforts to comprehensively maintain the health of children with special needs. Third, similar community service activities can be developed with a wider range of participants and using more varied educational methods, such as practical training or simulations, so that participants' skills can be improved more optimally.

Thus, health education programs using the KIE method not only provide short-term knowledge improvement but also have the potential to provide long-term impacts in improving the quality of assistance and health of children with special needs in educational environments.

Health education activities using the KIE approach have succeeded in improving participants' knowledge and skills in maintaining genitourinary hygiene in children with special needs. This program can be a model for community service activities in educational environments.

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