

# Handwashing application in student of Sekolah Dasar Negeri 24 Sungai Raya with activity book method

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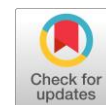
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## ABSTRACT

Infectious diseases usually contracted through hand-to-hand contact include the flu and the common cold and illnesses associated with Salmonella and E.coli bacteria. The expected outcomes through this PKM activity are to help elementary school children in implementing clean living behaviour programs by implementing handwashing with soap through unique and exciting activities so that elementary school-aged children know and can wash their hands properly, increase awareness will wash hands, and increase knowledge to elementary school children. The method used in this program is the educational media method using an activity book. The results obtained from this activity are the publication of an activity book with an ISBN and provide an understanding of the importance of washing hands and practising handwashing programs using soap for school-age children. Applying Handwashing with Soap (CTPS) with the activity book method can increase knowledge, attitudes and behaviour about washing hands properly using soap and running water.



## KEYWORDS

Activity book  
CTPS  
Handwashing



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## 1. Introduction

Clean and Healthy Life Behavior (PHBS) is a health behaviour that is carried out with awareness. Family members or families can help themselves in the health sector and play an active role in health activities in the community. One of the PHBS is washing hands, where washing hands is the initial action that we must do in carrying out daily activities [1]. By washing our hands, our activities related to hands can be said to be clean. This handwashing effort must be implemented from an early age [2]. According to Sedekia et al, knowledge alone is not sufficient to influence long-term changes in handwashing behaviour in school-age children [3]. Several studies have shown a correlation between the role of teachers, media, and methods in increasing awareness of the importance of handwashing and reducing the incidence of disease. PHBS needs to be accustomed as a daily activity in life, whether at home or school, starting from within the family and modelling at school every day so that PHBS will form healthy behaviour for children. The benefit of developing clean and healthy living behaviour from an early age is that children will have a healthy lifestyle later in life. This means that children accustomed to clean and healthy living behaviour are not easily lost at the next stage of development. In addition, if children already have a healthy lifestyle, they will be free from attacks of various kinds of diseases that often occur, such as coughs/colds, spots or tuberculosis, diarrhoea, fever, measles, ear infections, and skin diseases because of their poor hand hygiene. School-age children have a higher risk of infection due to their immature immune systems [4]. Data obtained from the Center for Disease Control (CDC) in the United States shows 10,080 deaths, with more than 80% of deaths due to diarrhoea. In South Asia, namely India, there are 0.4 million children who die in one year due to diarrhea [5]. In clean and healthy conditions, various abilities possessed by children will be explored and can be appropriately developed so that children can grow and develop optimally [6].

One of the places where children get sick is at school. Schools have a significant predisposition to transmission factors of microorganisms and the possibility of cross-contamination, such as the environment and transmission media [7]. Given that school-age children are children who are prone to disease [8]. An easy and effective way to avoid disease outbreaks is to wash your hands correctly and adequately. Without guidance on how to wash hands properly, it will affect their health and absenteeism from school, putting them at a disadvantage in education [9]. Washing hands using soap effectively removes dirt and dust attached to the skin surface [10]. Several studies on handwashing have been carried out to determine the effectiveness of hand hygiene programs in schools using teacher pilot patterns, instructional tutorials on handwashing, and using media (posters, provision of soap/hand sanitizer) [11]. An interesting method is needed so that children want to do PHBS in washing their hands using soap, which is handwashing educational media. Activity books are alternative educational media that can be used. This activity book is generally aimed at children, which contains interactive content such as games, puzzles, quizzes, pictures to colour and other elements that involve writing and writing/or image. The purpose of implementing this PkM using activity book is to implement PHBS behaviour by washing hands with soap (CTPS), providing an understanding of the importance of washing hands and practising handwashing programs using soap for school-age children, raising the attitude of washing hands before carrying out activities to increase knowledge, attitudes and behaviour about washing hands properly using soap and running water. Contributions to this PkM are implementing PHBS behavior by washing hands with soap (CTPS), providing an understanding of the importance of washing hands and practicing handwashing programs using soap for school-age children, raising the attitude of washing hands before carrying out activities, increasing knowledge, attitudes, and behaviors about washing hands properly using soap and running water to students of SDN 24 Sungai Raya.

## 2. Method

The PkM Team is a synergy of two lecturers with different expertise, namely the head of the PkM team, Dina Yuspita Sari, S.Si., Apt, M.Si with expertise in Chemical and Pharmaceutical Technology, and a member of the PkM team, Ratna Widyasari, M. Farm-Klin., Apt with expertise in clinical pharmacy. This was made in accordance with the PkM program recommendations in order to maximize the quality of the activities carried out and in accordance with the PkM team's expertise/field of knowledge. This activity was held on 16-17 February 2020 by involving three students of Akademi Farmasi Yarsi Pontianak as a team. The partners involved were SDN 24 Sungai Raya, represented by the Deputy Principal of SDN 24 Sungai Raya.

### 2.1. Approach method

Based on identifying priority problems of partners that have been agreed with the PkM Team, several approaches to problem-solving can be carried out by the methods used: socialization, education, training, and program assistance. The programs will be evaluated by assessing the target's ability to understand and practice; (1) To introduce PHBS by washing hands using soap using 7 (seven) steps of washing hands to elementary school-age children, by providing counseling and workshops on washing hands using soap and running water and hand sanitizer. Through this activity, elementary school students immediately practice CTPS; (2) To attract children's attention to wash their hands is by using interactive and exciting media, namely activity books. By using an activity book, elementary school students are invited to be directly involved in working on the activity sheets contained in each chapter in the activity book. The creation, compilation, design of the book to the issuance of ISBN and HKI and the printing process takes approximately five months.

### 2.2. Implementation of PkM

- Preparation and Socialization; the implementation method in this PkM program that will be implemented is a series of stages arranged systematically. The preparation stage begins with the preparation of activity books, registration of book publishers, requests for ISBN submissions, the printing of activity books, and the management of Intellectual Property Rights (HKI). The activity

was continued with the preparation of the Partner's Declaration of Willingness; request permission from the competent authority to carry out activities in the target primary school; to socialize the program to the students and classroom teachers; prepare for the preparation of materials and activity plans; and purchase and preparation of equipment needed to support the implementation of these activities.

- Implementation; the main topics that we will include: the benefits of washing hands, the dangers of not washing hands, the causes of not washing hands, and the application of proper handwashing using soap and running water. The method used in this program is the educational media method using an activity book made as attractive as possible so that objects can be happy and accept and practice handwashing activities every day, both at school and home. The activity book method contains interactive content, such as games, pictures to colour, puzzles, quizzes, and other elements involving writing and pictures.

### 2.3. Evaluation

The purpose of this activity is to observe the results based on the response of the target regarding the application of handwashing for elementary school children with the activity book method whether it is of interest and understood by the target, which is then used as a reference for the sustainability of this program. Fig 1 is a block diagram of the PkM implementation method.

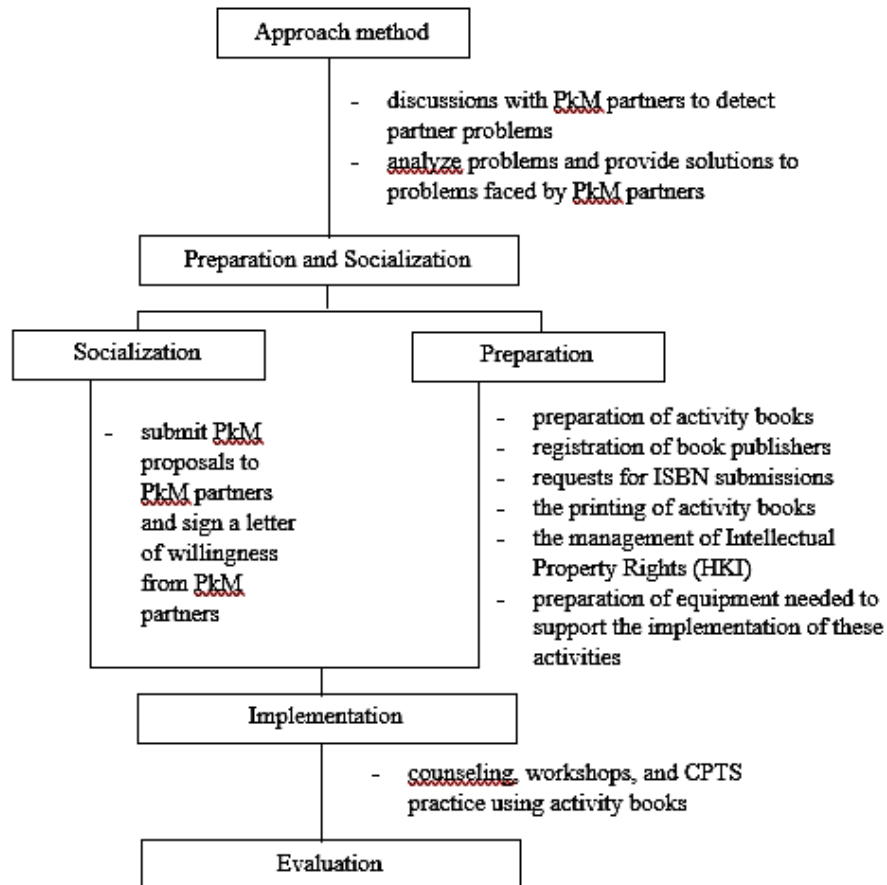


Fig. 1. Block diagram of PkM implementation method

### 3. Results and Discussion

The community service activity (PkM) program "Implementation of Handwashing for Children at the 24 Sungai Raya State Elementary School, Kuala Dua Village, Sungai Raya District, Kubu Raya Regency with the Activity Book Method" was carried out on February 2020. The activity could be assessed

as going well. Activities are carried out according to the schedule that has been prepared. The target of the action is students of SDN 24 Sungai Raya, with the target participants being 2nd-grade elementary school students, totalling 29 people Fig. 2. Maintaining hand hygiene can be motivated by social perception of behaviour, which is more acceptable than scientific knowledge. Interventions that target students' social norms are more effective in improving the determinants of hygiene and, ultimately, hygiene practices, one of which is handwashing [12]. Hand washing should be viewed as an essential behaviour that can reduce disease transmission but not as a primary definitive strategy. The environment, supporting media and handwashing habituation strategies are necessary conditions for optimal handwashing practices [13]. According Amon, the handwashing movement with soap is the only health intervention that is the cheapest (cost-effective) compared to the results obtained [14]. Washing hands with water alone is more common, but it has proven ineffective in maintaining health than washing hands with soap. Using soap in washing hands is effective because it can clean hands from dirt, dust and possible microorganisms. To measure access to these essential cleaning services, the availability of water and soap in the surrounding area, including schools, is crucial [15]. Based on research by Rosen et al., to encourage the interest of school-age students in getting used to washing hands, the use of innovative edutainment-based media with the Entertainment-Education (EE) approach involves delivering educational messages through entertainment-based mechanisms to deliver educational messages in an engaging way that can result in behavioural and social change [16]. The understanding of the application of handwashing with soap using the activity book as edutainment-based media can be seen from the practice of washing hands using soap and running water according to the seven steps of washing hands. It can be seen from the children's ability to follow the activity guidelines and activities in the activity book. Students were very enthusiastic about listening to the presentation and were very excited about doing/performing the activities in the activity book and practising hand washing using soap and running water. According to Ambarwati, behaviour based on knowledge will be more lasting than behaviour that is not based on knowledge [17]. The availability of handwashing facilities and infrastructures, such as handwashing facilities, running water, hand soap, and hand wipes, strongly supports the success of the handwashing application program.



**Fig. 2.** Implementation of handwashing activities using the activity book method

The increase in understanding and practice of washing hands after this activity was carried out was caused by students being actively involved directly in the practice of washing hands and doing exercises and activities in the activity book. Information in the form of sentences accompanied by pictures and practice activities causes the information conveyed to be easier for students to understand. Ministry of Health data, people only remember 20% of what they see and only 30% of what they hear, but 70% of what they see or hear. As part of PHBS, washing hands with soap is one way to realize a healthy life that must be done [18]. Knowledge is the result of "knowing" and occurs after someone has sensed a specific object. Knowledge or cognition is a fundamental domain for forming one's actions, including participation in an activity [19]. One of the things that affect knowledge is information. The ease of obtaining information helps accelerate someone to acquire new knowledge. Data can be conveyed through many methods, one of which is through an activity book. This is in accordance with Watson et al. research that the use of theory-based information media in interventions designed to target game-based motives

and curiosity through the motor and sensory stimulation uses innovative tools to increase knowledge and habits of washing hands with soap in children. School-age children are considered adequate [20].

The goal to be achieved from the application of handwashing using soap is to increase knowledge, understanding, and application of hand washing so that it is expected to apply the knowledge that has been obtained in PHBS practice by having the behaviour of washing hands using soap and running water in daily life. According to the Kementerian Kesehatan RI, individual behaviour is related to knowledge and attitude factors. Behaviour also concerns the cultural dimension in the form of a system of values and norms. Pharmacists have great potential to change the method of values and standards related to the application of hand washing, especially for elementary school-aged children. In addition to the above factors, the application of handwashing to elementary school-age children is strongly influenced by the availability of handwashing facilities, such as hand washing equipment and informative, exciting and innovative communication and information media, one of which is an activity book. This activity book is a type of book that contains interactive content, such as games, puzzles, quizzes, pictures to colour and other elements that involve writing and images related to the application of hand washing. By involving students in these activities, students are expected to know the source of germs (bacteria, viruses, particulates) that come from the environment; know and practise proper handwashing steps; knowing when to wash hands; knowing that by washing their hands, they can avoid disease, so they can increase awareness and discipline in washing hands with soap to children.

#### 4. Conclusion

Our study shows that the application of handwashing in the school environment using activity books is designed to target knowledge-based motives, games, and curiosity through innovative activity book components. The enthusiastic attitude of students provides evidence that the selection of media and educational methods based on education using this activity book can effectively improve the practice of washing children's hands at school and at home, as well as in public facilities. We believe that the application of handwashing with the activity book method can be a promotional medium for implementing PHBS by washing hands with soap (CTPS).

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