

## Research on Significance, Present Situation and Countermeasures of Spreading Seven-Step Washing Technique in Colleges and Universities

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### Abstract

Seven-step washing is a relatively mature hygiene method that can remove residual bacteria from hands. It has been widely mentioned in the prevention and control of COVID-19 in China, but it has not been fully and skillfully mastered by the general public. Colleges and universities are under great pressure from epidemic prevention and control. If the seven-step washing technique can be popularized, the pressure of epidemic prevention and control can be effectively alleviated in terms of short-term performance. In terms of long-term effect, it is also an inevitable requirement for promoting healthy China strategy and building a strong public health system. It is feasible for colleges and universities to promote seven-step washing techniques, but at present, no consensus has been formed in promoting seven-step washing techniques, and most colleges and universities still stay in the stage of knowledge publicity. It is suggested to continue to create a good campus atmosphere for the promotion of seven-step washing technique, incorporate the study of seven-step washing technique into the regular college entrance education system for freshmen, promote the involvement of medical staff in the study of seven-step washing technique, and strengthen the unified leadership of the promotion of seven-step washing technique in colleges and universities.

**Key words:** University; Seven-step washing technique; Epidemic prevention and control

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### 1. THE ORIGIN OF THE SEVEN-STEP WASHING TECHNIQUE

#### 1.1 The Earliest Method for Removing Germs Was Medical Method

The seven-step washing technique is a medical washing technique. The earliest use of surgical washing can be traced back to the mid-19th century, when Semmelweis, an obstetrician at a hospital in Vienna, Austria, observed puerperal fever and discovered that doctors' contaminated hands and equipment were transmitting deadly "poisons" to women. He began to explore ways to prevent the spread of "poisons" by hand washing. But his work was not taken seriously at the time, and he was sent to an insane asylum for it. But his opponents are also coming to appreciate the value of hand-washing before surgery. This is related to the development of health services during the Crimean War, such as the reduction of the death rate of wounded and sick soldiers by improving sanitary conditions. In 1883, the British surgeon who invented sterilizing surgery Named Semmelvis as the pioneer of sterilization. Since then, the hand-washing methods of medical staff have been constantly improved and perfected.

#### 1.2 In The Process of Dealing With Regional and Global Infectious Diseases, Washing Techniques in TCM Are Gradually Promoted to the Common People

With the development of industrialization, urbanization and globalization, the flow of trans-regional and trans-national people and goods is accelerating, and the ravages of infectious diseases have aroused widespread concern from all walks of life. In this context, on the one hand, international standards related to hand washing have

been paid attention to and gradually improved; On the other hand, the improved standardized medical washing techniques began to be promoted to the general public. On October 13, 2005, the World Health Organization (WHO) started the world Handwashing Day, calling on people to strengthen their awareness of hygiene through hand washing and prevent infection of infectious diseases. In 2008, the public Private Partnership for Handwashing with Soap, an international health action group, launched Global Handwashing Day, which calls on countries to observe handwashing with soap on October 15 and every year thereafter. However, countries or international organizations have not formulated uniform standards for how ordinary people should wash their hands correctly for a long time, and the World Health Organization can only make recommendations but is not capable of enforcing a certain hand washing method. The requirements for hand washing within the medical community also vary from subject to subject.

### **1.3 Over the Past Decade, China Has Actively Explored and Promoted Six-Step or Seven-Step Washing Techniques**

Since the 21st century, China has experienced SARS, bird flu, hand, mouth and foot disease and other infectious diseases. In the process of dealing with these infectious diseases, health education has been popularized and more and more people are aware of the importance of hygiene. In 2009, when China was fighting the A (H1N1) flu, proper hand washing was placed in the first place to prevent the attack of the A (H1N1) virus, but there was no clear requirement that ordinary people must master six-step or seven-step washing techniques. The Ministry of Health formulated and promulgated the Standard WS/T313-2009 for Hand Hygiene of Medical Staff, which standardized six-step washing techniques and illustrated with pictures. It was implemented on December 1, 2009, making it an industry standard. At the same time, according to the method provided by the World Health Organization to promote Chinese six-step washing children's songs in kindergartens, the medical community also began to discuss seven-step washing techniques. Compared with the six-step method, the seven-step method has one more step for wrist cleaning, which was originally designed for arm exposure in summer. In April 2016, the World Health Organization recommended the six-step wash, emphasizing that it was superior to the THREE-step wash recommended by the U.S. Centers for Disease Control and Prevention in reducing bacteria on the hands of health care workers. On November 26, 2019, the National Health Commission of the People's Republic of China issued the Manual Hygiene Standards for Medical Staff WS/ T313-2019, replacing WS/ T313-2009, which further standardized and refined the six-step washing techniques, and added appendix C legend of wrist hand washing, namely, standardized the seven-step

washing techniques. The new industry standard released by the health commission is set to come into force on June 1, 2020, but the promotion of the seven-step washing technique has accelerated since the COVID-19 outbreak, and not just for medical workers. Obviously, over the past decade or so, Chinese health authorities have been leading the world in promoting and popularizing hand hygiene, which is one of the important reasons why China has been able to make great achievements in responding to COVID-19.

## **2. THE SIGNIFICANCE OF PROMOTING SEVEN-STEP WASHING TECHNIQUES IN COLLEGES AND UNIVERSITIES**

### **2.1 The Promotion of Seven-Step Washing Techniques Can Help Teachers and Students in Colleges and Universities Improve Their Ability to Prevent Epidemics and Reduce the Risk of Infection**

Compared with the nationwide resumption of work and school, the resumption of universities in 2020 is obviously more cautious, and the schedule is the last one. The most important thing is that teachers and students are all over the country and even abroad. Despite the fact that the global epidemic has not been brought under substantial control, the number of imported cases in China has not been interrupted. In January 2021, there were domestic infections caused by imported cases in Hebei, Liaoning, Heilongjiang, Jilin and other provinces, many of which were highly contagious, and the pressure of epidemic prevention and control is still very high. Crowded in colleges and universities, places closed, liquid, and seasonal easy to cause the common cold, fever, epidemic prevention and control difficulty increases, and social awareness is extremely high, therefore, epidemic prevention and control work of colleges and universities is a battle, to "the risk to be larger, the problems to be heavier, the much more difficult to some", "responsibility to protect people, don't forget the education of this". In order to do a good job of "protecting" and "educating" during epidemic prevention and control, a very important method is to standardize the hand-washing of teachers and students, ensure the effect of hand-washing, and reduce the risk of contact and infection. Promoting seven-step washing for medical professionals is an effective epidemic prevention and control measure.

### **2.2 Promoting the Seven-Step Washing Technique Can Help Establish and Improve the Health Education System**

Strengthening health education and fostering good health habits are also necessary for implementing healthy China strategy and building a strong public health

system. It can be seen that the promotion of seven-step washing technique in colleges and universities is also the responsibility of health administrative departments, health functional departments and medical staff in colleges and universities. College students are a very special group, once they master the correct hand washing habit, it will affect parents and relatives in the short term, and will definitely affect the next generation in the long run. Moreover, through learning the seven-step washing technique, it can also produce spillover effect, help to stimulate the consciousness and initiative of college students to learn the knowledge of prevention and health care, enhance the ability of self-rescue and mutual rescue, so as to help the development of patriotic health movement in the new era.

### **3. THE STATUS QUO OF PROMOTING SEVEN-STEP WASHING TECHNIQUES IN UNIVERSITIES**

#### **3.1 It Is Feasible to Promote Seven-Step Washing in Colleges and Universities**

As mentioned above, the National Health Commission released the new standard and legend of the seven-step washing technique before the outbreak of COVID-19. After the outbreak of COVID-19, various propaganda pictures and videos of the seven-step washing technique, which are easy to learn, have been widely circulated, providing very convenient conditions for the popularization of knowledge. And most colleges and universities have affiliated hospitals, with the promotion of seven-step washing techniques of professional and technical personnel. Therefore, the key to the promotion of the seven-step washing technique in colleges and universities lies in implementation, that is, how to transform knowledge into daily behavior norms.

#### **3.2 At Present, no Consensus Has Been Reached in Promoting Seven-Step Washing Techniques in Colleges and Universities**

From a theoretical perspective, since the outbreak of COVID-19, many monographs on epidemic prevention and control in colleges and universities have been published in China, but the promotion of seven-step washing techniques is rarely mentioned. Some papers investigated the effectiveness of seven-step washing health education in some colleges and universities, and found that most of the observed subjects did not master the correct hand washing methods, such as short washing time, and the procedures did not meet the requirements. From the practical point of view, most universities have improved their hand-washing facilities during the preparation period for resuming school, and some have added basins in canteens and other places, which has the

realistic conditions to promote the seven-step washing technique. Although the practical conditions of promoting the seven-step washing technique are better than most countries outside the region, even many developed capitalist countries, because the educational administrative departments have not issued mandatory tasks and norms for washing technique, the emphasis of colleges and universities in specific implementation is different. Some universities in Beijing, Tianjin and Hebei province attach importance to the promotion of seven-step washing technique among college students. For example, washing basins are added near the canteen, schematic diagram of seven-step washing technique is posted above the basin, and propaganda demonstration videos of seven-step washing technique are played in some public places. Some colleges and universities in North China, such as those in Shandong province, attach importance to the special role of medical staff and trade unions in epidemic prevention and control, and have mobilized medical staff to make a demonstration video of seven-step washing technique and put it up on the Internet for teaching and administrative staff to learn. After the resumption of classes in 2020, due to the long-term control of the epidemic in China, with the exception of a few imported diseases, there are few confirmed cases in China and no infections in universities. Therefore, most universities are not enthusiastic about promoting seven-step washing techniques.

#### **3.3 Most Universities Still Stay at the Knowledge Propaganda Level in Promoting Seven-Step Washing Techniques**

After the outbreak of the epidemic in Shijiazhuang, Hebei province in 2021, some colleges and universities that have not yet had a holiday strengthened the propaganda of promoting the seven-step washing technique for college students, but the overall effect was not very obvious. According to interviews with college students in Beijing, Tianjin, Hebei and North China, there are still many college students who have not even developed the habit of washing their hands regularly, let alone the seven-step washing technique; College students generally feel that the seven-step washing technique is too time-consuming and complicated to master in a short period of time. There are even doubts about its effectiveness, with most saying it is not suitable. This shows that the actual effect of this kind of soft propaganda is not high at present. In order to make college students strengthen the understanding of the importance of the seven-step washing technique, overcome the fear of difficulties in learning and practice, and develop good health habits, colleges and universities should improve the propaganda method on the basis of in-depth research, and from the general knowledge propaganda stage to the concrete strengthening implementation stage.

## **4. COUNTERMEASURES AND SUGGESTIONS FOR PROMOTING SEVEN-STEP WASHING TECHNIQUES IN COLLEGES AND UNIVERSITIES**

### **4.1 Continue to Create a Good Campus Atmosphere to Promote Seven-Step Washing Techniques**

In addition to the improvement and construction of handwashing facilities, the awareness rate of seven-step washing should be greatly improved, necessary posters and text instructions should be posted, propaganda videos should be regularly broadcast in public places, and relevant text pictures and video materials should be included in the campus APP of students. In the form of college students like to continue to increase the intensity and frequency of publicity, is conducive to enhance college students' awareness of the importance of seven-step washing techniques, so as to produce the desire to learn and practice. For example, using the popular song "Little Apple" to make "wash hands song" is helpful to mobilize the enthusiasm of college students. The popularization of basic knowledge is a prerequisite for self-study of college students. Once some students consciously and actively learn seven-step washing techniques, there will be a group effect.

### **4.2 The Seven-Step Washing Technique Should Be Incorporated Into the Regular College Entrance Education System for Freshmen**

The seven-step washing method was added to the training and propaganda content in the freshman training course, and the assessment rules were stipulated to require college students to quickly develop good health habits. Some scholars in western countries have long called for compulsory education intervention to improve the awareness of the importance of hand washing and the knowledge, practice and skills of hand washing among college students. However, due to the disadvantages of the system, it has not been recognized and implemented by the educational administrative department. Judging from China's response to the epidemic, it has institutional advantages to carry out the seven-step washing training among freshmen, which is also an inevitable requirement for establishing and improving the health education system and cultivating qualified college students. This requires a unified understanding of education administrative departments, formulate relevant regulations and implementation rules, so that colleges and universities carry out.

### **4.3 Promote Medical Staff to Intervene in the Seven-Step Washing Technique Learning of College Students**

Although the seven-step washing technique is simple and easy, it is the industry standard for medical staff,

and its learning guidance and evaluation work cannot be separated from professional medical staff. The intervention of professionals can also enhance the seriousness and consciousness of college students' study. There are many ways for medical staff to intervene, such as on-site guidance, online q&a, and jointly organizing knowledge and skills competitions of seven-step washing techniques for college students with students' Office and other units. Colleges and universities can formulate relevant implementation methods according to the specific situation, encourage medical workers in colleges and universities or hire medical experts outside the school to conduct training on washing techniques for college students. The training contents can be from simple to profound, and the methods can be flexible and diverse. This is the most important link to promote the seven-step washing technique.

### **4.4 Strengthen the Unified Leadership of Promoting Seven-Step Washing in Colleges and Universities**

College education is a systematic project, which needs to mobilize the forces of all aspects. First of all, the educational administrative departments of colleges and universities should have a unified understanding and incorporate the seven-step washing technique into the overall epidemic prevention and control work. Second, the party committees of colleges and universities should fully recognize the importance of promoting seven steps washing technique and urgency, raise its status in epidemic prevention and control, lead to the power of the various functional departments of colleges and universities to form seven steps in all the teachers and students staff hand washing of the resultant force, promote propaganda department, student work department, hospital, logistics department and the various teaching unit, etc. The depth of cooperation. Thirdly, the teaching work units of colleges and universities are directly responsible for the promotion and implementation of the responsibility units, should take the initiative to provide convenience for the school promotion work, and strengthen the daily management and supervision of the promotion work. Among them, counselors should take the lead in setting an example to master and develop correct hand washing methods.

To sum up, colleges and universities have better knowledge and technical personnel conditions to promote the seven-step washing technique. At present, extensive publicity work has been carried out, and hardware construction has followed up, but there is still a certain distance from popularization and implementation. Fully tapping and giving full play to the initiative of all forces in colleges and universities, innovating and promoting the seven-step washing method is an inevitable requirement for the normalization and long-term epidemic prevention and control, as well as the due significance of

establishing and improving the health education system. The overall success of China's epidemic prevention and control work is largely related to the attention paid to standardizing washing methods and other national health education work. In the future, this work should be further strengthened.

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