Hand Washing Behavior A mong School Children In Sekolah Kebangsaan Sultan Abdullah, Kuantan, Pahang

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Abstract

Absenteeism school children are usually related to respiratory and gastrointestinal disease as children are more susceptible to be infected with dangerous bacteria and viruses. Therefore, hand washing is the single most important measure to prevent the spread of infection. School children should be taught and stressed about the importance of hand-washing.

This cross-sectional study was held in Sekolah Kebangsaan Sultan Abdullah, Kuantan, Pahang. The participants were school pupils aged 10 to 12 years old and data was obtained from questionnaires and observation to evaluate their hand washing techniques. The main objective of this study was to know their hand washing behaviors and techniques as well as to understand the conditions that affect hand-washing behaviors in school.

Overall, it can be concluded that 86 of the students in Sekolah Kebangsaan Sultan Abdullah (49.7%) had proper hand washing behavior. Age (P=0.001), individual intention (P<0.001), perceive control (P=0.008) and attitude (P=0.008) were found to have association with hand washing behavior. In addition, it was found that 40.8% of the respondents were having correct hand washing techniques. Overall, the results of this study will help in promoting better hand washing behavior and techniques among school children particularly as it is the best way to prevent from infections which can lead to increase number of morbidity and mortality.

Introduction

Hands are the major mode for infectious diseases, mainly for those living and working in close proximity to one another (White, et al., 2003). As with hospitals, college dormitories and other extended care facilities, schools also have significant predisposing factors for microbial cross-contamination and transmission (Lopez-Quientero, Freeman & Neumark, 2009). Infectious disease is easily spread in school setting due to the close contact between individuals. Transmission of disease can occur in schools through the air (airborne), by exposure to droplets or other body fluids, and by direct contact with contaminated people or surfaces. Close environments, doorknob, table desks and other inanimate objects in schools serve as vehicles of transmission that contribute to increased rates of infection among school children. Some viruses and bacteria can survive between 20 minutes and two hours on high use surfaces, including cafeteria tables, doorknobs and desks (Bolas, 2009)

Based on the 2000 Malaysian census, which showed a total population of 23.27 million with 33.3% under the age of 15 years, there would be nearly two million episodes of diarrhea annually among Malaysian children (Lim, 2007). Recently, many schools all around the world including Malaysia had been closed for a period of time due to H1N1 or influenza A transmission (The Star, 2009; Bernama, 2009). Therefore, "an ounce of prevention is worth a pound of cure." This golden word now is relevant as in the past as it plays particular importance for today.

Problem Statement

Although it has been 150 years passed since Semelweis demonstrated the effectiveness of hand-washing in preventing nosocomial infections, there is still lack of compliance among school children in performing hand-washing. The proper hand washing behavior is not constantly performed; as there are only 8-28% of school-aged children who comply with correct hand-washing techniques (Rabie & Curtis, 2006).

Objectives of the Study

This study has one general objective which was:
1. To assess hand washing behaviors among school children and to understand the conditions that affect hand-washing behaviors in school.

Conclusion

This study discovered that about half of the school children in Sekolah Kebangsaan Sultan Abdullah, Kuantan, Pahang has proper hand washing behavior. Moreover, it was found that age was associated with hand washing behavior. It also discovered that proper hand washing behavior decreased with increasing of age. Most of students from standard three have proper hand washing behavior compared to students from standard 5.

In addition, this study found out that intention has strong association with hand washing behavior. Here, students who have a good intention will perform a proper hand washing behavior. Both attitudes and perceive control were found to have strong association with intention to perform proper hand washing behavior. Besides, insufficient soap, sinks and time were found to be the external factors that affect hand washing behavior among the students.

Proper hand washing only is not enough to prevent infections. The correct hand washing techniques need to be emphasized to prevent the school children from detrimental diseases.

In order to ensure proper hand washing behavior and correct hand washing techniques, hand washing promotion need to be incorporated into the school curriculum. Here, teachers and school nurses play crucial roles in ensuring the school children to practice complete hand washing practice. Moreover, it is important for teachers and school nurses to shape positive intention and attitude to practice proper hand washing techniques like preparing interesting reminders and motivators in bathrooms and school canteens.

Recommendations

1. Schools should provide more continuous education and promotion on proper hand washing behavior and correct techniques must be done in the schools to reduce the absenteeism and lost days at school.
2. Schools also should provide comfortable and user-friendly environment in canteen and washrooms or toilets such as preparing grouped hand washing sinks units with adequate soap and tissues to encourage the students better hygienic habits.
3. Malaysia should support and participate in Global Hand Washing Day every 15th October by organizing mass campaign to the community especially the school children. This will increase the awareness of all the community to hand wash using soap properly and to foster change behavior at the necessary level.

Study design

The study used quantitative method of cross-sectional within a period of time. The study is economical and easy to manage especially for the undergraduate students who are facing time constraints and limited of various sources. This study was conducted at Sekolah Kebangsaan Sultan Abdullah in Kuantan, Pahang. This place was chosen due to easy access as it located near IIUM Jalan Hospital Campus and availability of subjects relevant to this research topic.

Sample and Sampling Method

Samples were selected from two classes from each standard 3, 4 and 5 pupils from Sekolah Kebangsaan Sultan Abdullah, Kuantan, Pahang. The two classes were chosen because all of the students can read and understand Bahasa Melayu and English. The samples were chosen using convenient sampling method, Questionnaire were distributed to all of the respondents for all the six classes to determine their hand washing behavior and factors that influencing their hand washing behavior. Then, an observation session was conducted to these students to evaluate their hand washing techniques one by one.

Data Analysis

Data collected were analyzed using Statistical Package for Social Science) version 12.0. Descriptive statistics were used to organize and summarized the data. Further selections of method to analyze data were further recommended by biostatistician.

Result

Table 1: Demographics Data of Respondents

Variables	Total (N)	Variables	Frequency	(%)
Gender	169	Male	80	47.3
Age	169	Female	89	52.7
Parent's Income or	149	9	47	27.8
Socioeconomic	145	10	58	34.3
Status Level	149	11	64	37.9
Father's Educational		Low	67	45.0
Level		Medium	47	31.5
		High	35	23.5
Mother's Educational		Low	20	13.8
Level		Medium	99	68.3
		High	26	17.9
		Low	16	10.7
		Medium	96	64.4
		High	37	24.8

Figure 1: Hand Washing Behavior among School Children in SK Sultan Abdullah, Kuantan

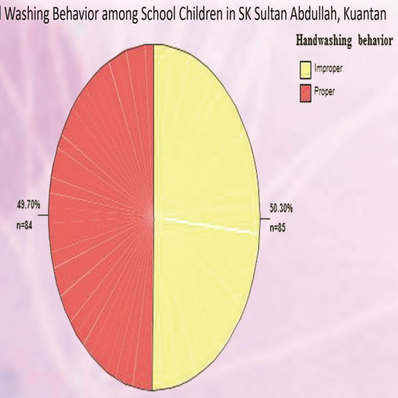

Table 2: Association between Age and Hand Washing Behavior

Variables	N=169	Mean of Age	SD	df	P value
Hand Washing Behavior	85	10.31	0.802	167	0.001
Improper	84	9.89	0.761		
Proper					

*Independent t-test, t=3.434, P=0.001

Table 3: Association between Demographic Data and Hand Washing Behavior

	Variables	N	Hand washing Behavior		Total	df	P value
			Improper	Proper			
Gender	Male	169	41	39	80	1	0.814
	Female		44	45	89		
Parents'	Low	149	32	35	67		
Income	Medium		22	25	47	2	0.911
Level	High		18	17	35		
Father's	Low	145	12	8	20		
Education	Medium		49	50	99	2	0.492
al Levels	High		11	15	26		
Mother's	Low	149	9	7	16		
Education	Medium		47	49	96	2	0.856
al Levels	High		18	19	37		

* Chi-Square Test

Figure 2: Student's Individual Intention

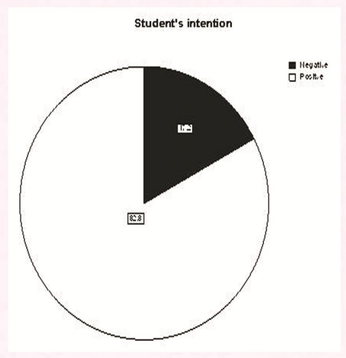

Figure 3: Hand Washing Techniques among School Children in SK Sultan Abdullah Kuantan, Pahang

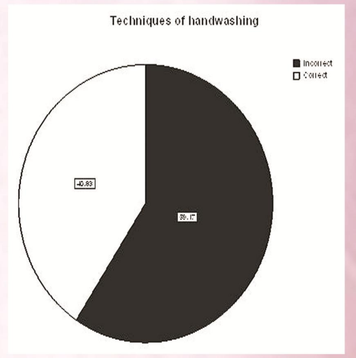

Table 4 : Association between Individual Intention and Hand Washing Behavior

Variables		Hand washing Behavior		Total	df	P value
		Improper	Proper			
Hand Washing Intentions	Negative	28	1	29	1	<0.001
	Positive	57	83	140		

*Chi-Square Test

Table 5: Association between Perceived Control, Attitudes, and Subjective

Variables		Hand washing Intentions		Total	P value
		Negative	Positive		
Perceive Control	Negative	5	4	9	0.008
	Positive	24	136	160	
Attitude	Negative	7	9	16	0.008
	Positive	22	131	153	
Subjective Norms	Negative	2	6	8	0.627
	Positive	27	134	161	

*Fisher Exact Test

Table 6: Hand Washing Steps among

Hand Washing Steps	Frequency and Percentage	
	No	Yes
Lather hands with soap thoroughly	2 (1.2%)	167 (98.8%)
Rub palms	1 (0.6%)	168 (99.4%)
Rub each fingers between fingers	65 (38.5%)	104 (61.5%)
Scrub nails on palms	46 (27.2%)	123 (72.8%)
Rub back of hands and between fingers	43(25.4%)	126 (74.6%)
Wash with sufficient clean water	1(0.6%)	168 (99.4%)
Dry hands with tissue and clean cloth	4(2.4%)	165 (97.6%)

N=169

Figure 3: Hand Washing Techniques among School Children in SK Sultan Abdullah Kuantan, Pahang

Variables		Hand Washing Behavior		Total	df	P value
		Improper	Proper			
Hand Washing Techniques	Incorrect	53	47	100	1	0.397
	Correct	32	37	69		

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