

Assessment of Personal Hygiene Attitudes among Primary School Pupils in Umbada Locality, Khartoum state (2018-2020), Sudan

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Abstract

Background: Personal hygiene is the behaviors that must be practiced in daily life, starting from morning to sleep time to protect our health.

Objectives: The current study aimed to assess personal hygiene attitudes among Primary School Pupils in Umbada Locality, Khartoum state, Sudan (2018-2020).

Materials and methods: An observational interventional study was conducted besides a pre- & post-assessment was done. Pre-test and post-test intervention was used to determine the practices of hygiene among primary school Pupils in some selected schools of Umbada locality Alaemir unit. The targeted populations were primary school Pupils in Government schools only. The study populations were the pupils in the Primary public schools by a total number of 37850 Pupils (grade 5, grade 6 and grade7) distributed among 180 public primary schools in the locality. The sample size consisted of (800) pupils during the period of the study. A pre- and post- questionnaire was carefully prepared, tested and directed to the pupils. It covers pupil's age, sex, and the classroom., source of water supply and latrine in the house there, and to obtain data regarding knowledge, attitudes, and practices (as regards personal hygiene in both pre and post intervention phases. Data was analyzed using Statistical Package for Social Sciences SPSS Computer Program Version (19.0).

Results: The study revealed that the overall attitude of pupils, about personal hygiene was increased from 45.8% to 54.2 % after intervention of health education sessions.

Conclusion: Health education has a significant role in promoting attitude of school pupils regarding personal hygiene. The need for more health education concerning personal hygiene to ensure that all children learn at an early age how to protect themselves and others from preventable exposure to illness and other hazards related to poor hygiene. This can be carried out through formal (as a part of the curriculum) and informal health education messages.

Keywords

Personal hygiene, Umbada locality, Khartoum, Attitude

INTRODUCTION

Hygiene is derived from the name of the antique Greek deity of beneficial living-Hygeia. However, hygiene refers to the set of practices linked to conserving of health and healthy living (Khinda et al., 2016). It involves the usual washing of the body (bathing), washing the hands when essential, washing ones' clothing, washing the hair, brushing the teeth, cutting the nails, and caring for the gums (International Scientific Forum on home hygiene, 2011). Children are predominantly vulnerable to the neglect of necessary personal hygiene (Postma et al., 2004). Personal hygiene in a straight-line aid in disease prevention and health promotion (Basavanthappa, 2008). The hygiene practices are prejudiced by social, familial and individual factors the children's knowledge and attitudes towards hygiene (Postma et al., 2004). In a study conducted in Senegal, reasons given for not washing hands included stubbornness (not wanting to follow what adults say), laziness, the rush to go to breaks, the time it takes away from playing, and the dirt and smell of the toilets (Water and Sanitation Program, 2015). In 2009, researchers reported that 62% and 31% of all deaths in Africa and Southeast Asia, in that order, are caused by communicable disease (Curtis et al., 2009). This tendency is mainly distinguished in developing countries where acute respiratory and intestinal infections are the primary causes of morbidity and mortality among young children (World Health Organization, 2015). In Egypt, although children mortality rates have been reduced in current years, yet, diarrheal diseases still account for 12% of deaths in children <5 years of age. Insufficient sanitary circumstances and poor hygiene practices play chief roles in the increased impact of communicable diseases within these developing countries. According to the population census in Egypt (2014), 32.1% were children in the age group zero to fourteen years. They are actual groundwork of our society as healthy children will be healthy and strong adults who can dynamically contribute to the developmental activities of a nation (Vivace et al., 2010). This study aimed to assess of personal hygiene attitudes among Primary School Pupils in the Umbada Locality, Khartoum state, Sudan (2018-2020).

MATERIALS AND METHODS

Study design

An Observational interventional study was conducted where a pre- and post- assessment was done. Pre-test and post-test were used to determine the knowledge, attitude and practices of hygiene among primary school Pupils in some selected schools of Umbada locality al emir unit. The targeted population was primary school Pupils in Government schools only.

Study area

The study was conducted in Umbada locality al emir unit among primary school Pupils in Government schools during the academic year 2018-2019 at the beginning of the school year.

Study Population

The study population was primary schools' pupils in Umbada locality.

Inclusion criteria

Primary school pupils in aged (11 to 16 years old), those lived in the study area from 5th to 7th grade in Government schools only in study area al emir unit umbada locality

Exclusion criteria

Pupils younger than, (11 years old), and above than, (16 years old) 1st to 4th grade and pupils in 8th grade in schools of study, and pupils in primary privet schools not included.

Sample size

The target population is composed of 5 boys' schools, and 5 girls' schools, and one mixed school. Each was considered as a cluster. The sample size was determined using the following formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample Size

e= is a marginal error (d =0.05).

So, when it was applied in the equation as below:

$$n = \frac{37850}{1 + 37850(0.05)^2}$$

This resulted in a sample of 400 pupils (boys) and 400 pupils (girls) according to design effect (5th, 6th, 7th Grades)

Distribution of the Sample Size

The schools of boys and girls listed in two groups, group for boys' schools and the sample was selected according to the stratified sample. The sample includes public schools only and we exclude private schools and include classes from the fifth, sixth and seventh grades, and we exclude classes from the first to the fourth and also the eighth grade due to academic pressure and exams. The sample was chosen from 12 schools, five girls' schools, five boys' schools and two mixed schools. The data were collected from the students according to the stratified sample and according to what was reported by the World Health Organization, the lowest class has 25 students, this means 75 pupils from each girl's schools, 75 pupils from girls' schools and 50 pupils from mixed schools, meaning 25 pupils' are girl and 25 pupils' are boy.

Methods of Data Collection

A pre- and post- questionnaire was carefully prepared, tested and directed to the pupils it covers pupil's age, sex, and the classroom., source of water supply and latrine in the house there, and to obtain data regarding knowledge, attitude, and practices (KAPs) as regards personal hygiene in both pre and post intervention phases.

Interviewing Teachers

Teachers were interviewed regarding personal hygiene of their schools' pupils.

Observation Check List

The observation checklist was applied regarding pupils' personal hygiene practice.

Phases of the Study

The study is composed of three phases:

Phase I: Pre-intervention phase

In this phase questionnaires were directed to the pupils to obtain baseline data.

Designing Interventional materials

In this phase; interventional materials, methods and tools were developed and also training guide or manually designed for teachers and interventionists. A pamphlet was also designed by

researcher of the of health education regarding personal hygiene in addition to local materials designed by the researcher (see appendixes).

Training workshop for teachers

A training workshop for teachers was carried out to increase knowledge of the teachers towards personal hygiene to assist in improving practices, attitudes and knowledge of pupils towards Elements of personal health.

School health teachers from each school of the study received training course on personal hygiene (3) teachers.

Phase II: Interventional phase

Lectures

- Lectures presented on personal hygiene according to the following standards and criteria.
- One lecture per week for each school on personal hygiene for six months
- Any hasn't exceeded half an hour in time.
- Any lecture followed by a demonstration on proper personal hygiene techniques.
- Suitable coordination did by educational authorities in the locality for conducting such lectures.
- Ports were used in lectures.
- Manual of the training was applied to follow the guides of the training Manual.

Practical Demonstration

Practical demonstrations were conducted to improve skills of the pupils regarding personal hygiene (hand washing, Tooth brushing) as follows:

The time of any practical demonstrations has not exceeded 10 minutes.

- Source of water is used
- Plastic basins
- Soap
- Towels
- Pupils are encouraged to adopt proper hand washing.

Each school received one demonstration accompanied with the lecture for 24 demonstrations weekly on hand washing, Tooth brushing and all the skills of personal hygiene so the total numbers of all demonstrations for all schools of the study were 264 demonstrations.

Posters

Wall posters were fixed on the walls of the class of the school as reminders for the pupils inside and outside of the class (the poster designed and published by UNICEF and minister of health for health education purposes including written messages and images, new posters were fixed to replace the old ones when ruptured.

Also, local posters were designed by Health Promotion Department and approved by Ministry of Health.

Leaflets (pamphlets)

Leaflets designed by UNICEF and ministry of health were distributed to increase knowledge of the pupils regarding hand washing and Personal hygiene skills. Leaflets were distributed to all pupils regardless participated or not in the study, any pupil received leaflets. Hence, leaflets were revised by the interventionists to ensure that every pupil had Leaflet, about 20,000 leaflets distributed.

Peer education

Peer education is one of interventional means and methods to make pupils acquire a good and practice of personal hygiene skills, two peers were trained from each class to encourage the class to do proper practice of personal hygiene skills, peers played role of leaders, models and advisors. Peers were selected with the help of the teachers.

Songs

Electronic songs regarding hand washing produced by water sanitation program UNICEF and approved by Health Promotion Department Khartoum Ministry of Health was broadcast for the pupils by using loudspeakers of the schools, the frequencies of broadcasting were done every week accompanied with the lectures. Every school received weekly sessions of song listening. The purpose of these songs was to increase knowledge and improve practicing of pupils in polite, attractive and untraditional way.

Morning Assembling Message

One of the most essential interventional methods to promote practice regarding personal hygiene elements among the pupils was the morning assembly message. It was designed and distributed every week. It was written carefully and revised by Health Promotion Department, Khartoum Locality. It was read by the pupils in the morning assembling for all school classes.

Phase III: Post intervention phase

This is an evaluation phase in which data regarding the indicators of the study was collected using the same methods of data collection used in phase one about the pupils' KAPs regarding personal hygiene the same pupils in pre-evaluation phase.

Mechanisms to assure the quality of the study

To avoid bias and ensure this study should be in good quality some procedures took place as follow:

- The sample size of this study selected scientifically by using references.
- All data collectors and interventionists were public health officers working in health promotion department in the Umbada locality.
- Data collectors and interventionists were trained.
- A pilot study conducted before starting data collection.
- Using official data and information
- Computer was used in data analysis.
- Both hard copies and soft copies used for data saving.
- Credible references and published research abstracts were used.
- This study edited by professionals in English language.
- Auditing all figures that will be mentioned in this study.
- Sound computer was used.

Limitations of the study

There were many limitations found can be mentioned such as:

- Irregularity of the periods of school class.
- Self-reporting of pupils was very difficult
- Sense of fear among the pupils in all phases of the study.

Ethical considerations

- Agreement letter was issued from the educational affairs, Umbada locality.

- Managers of the schools were oriented by the objectives of this research and its benefits.
- Letters of performance were issued from the schools of the study.

Data Analysis

Data was analyzed using Statistical Package for Social Sciences SPSS Computer Program Version (19.0). Frequency distribution was used; Chi-square(X^2 -test) was used to verify possible associations between different variables. Values were considered to be statistically significant when the p-value obtained was less than 0.05.

Ethical Clearances

The ethical approval for the study was obtained from the Education Department, the primary stage, Umbada locality, then the schools administration in the study areas, al emir Unit, see annexes. The study was explained to school principals and professors prior to the interviews and they were informed that their participation was voluntary.

RESULTS

Overall attitude	Pre-intervention (n=800)		Post –intervention (n=800)	
	No.	(%)	No.	(%)
Neat and clean pupil	671	83.9	800	100.0
Affected by the environment around you	570	71.3	707	88.4
Staying in clean place	737	92.1	800	100.0
Unclean neighbor	512	64.0	750	93.8
Maintaining the cleanliness of your environment	570	71.3	790	98.7
live in a family that maintains cleanliness	758	94.8	800	100.0
Seeking to show your interest in cleanliness	800	100.0	800	100.0
Using tooth paste is Important in cleaning tooth	758	94.8	800	100.0
The towel is a personal hygiene instrument	540	67.5	640	80.0
Being more obese meaning stronger	541	67.6	718	79.7
Washing hand with soap is important after dealing with animals	563	70.4	800	100.0
Body cleanliness is important	768	96.0	800	100.0
Perfect mind in healthy body	648	81.0	789	98.6
Overall attitude	8436	45.8	9994	54.2

Table (1): Distribution of the pupils according to the overall attitude about personal hygiene

Table 1 indicates that the overall attitude was promoted after intervention from 45.8% to 54.2% during pre and post intervention. The attitude regarding neat and clean pupils was increase from 83.9% to 100.0% after intervention by 16.1% after intervention. Also, the attitude concerning affection by the environment around them was increased from 71.3% to 88.4% by 17.1%. In addition, the attitude towards staying in clean place was slightly increased from 92.1% to 100.0% by 7.9%. The attitude of participants regarding unclean neighbor was witnessed sharply increased from 64% to 93.8%. However, maintaining the cleanliness of their environment was increase from pre-intervention to pos-intervention by 27.4%. Moreover, the attitude regarding live in a family that maintains cleanliness showed to some extent slightly increase from 94.8% to 100.0%. The attitude in terms of seeking to show their interest in cleanliness 67% showed constant improved during pre- and post-intervention 100%. While the attitude regarding using tooth paste is Important in cleaning tooth was witness increased from 94.8% to 100.0%. On the other hand, the attitude regarding whether they agreed that the towel is a personal hygiene instrument showed an improvement from 67.5% to 80%. Also, attitude concerning being more obese meaning stronger was increased from 67.7% to 79.7%. Furthermore, the attitude in terms of washing hand with soap is important after dealing with animals was increased from 70.4% to 100%. Hence, the attitude of participants towards whether body cleanliness is important was showed slightly improved from 96% to 100%. While he attitudes concerning perfect mind in healthy body was increased from 81% to 98.6%.

DISCUSSION

The current study aimed to assess of personal hygiene attitude among Primary School Pupils in the Umbada Locality, Khartoum state, Sudan (2018-2020). Our study showed that the overall attitude was promoted after intervention from 45.8% to 54.2% during pre and post intervention.

Research review from developing countries similarly showed that health education had a significant input to sanitation behavior of school adolescents and their families. It has positive health consequences related to increased health education (Joshi and Amadi, 2013). Other studies also showed that infectious diseases like diarrheal morbidity and behavioral change in personal hygiene are very personal subject, and encouraging changes in hygiene requires skills that can be improved through individual and community-based education (Belachew et al., 2013).

This agrees with the findings of Dakhili et al (2014) 19. Also, Smith et al (2007) reported that Subjects with strong knowledge showed better attitude and practice towards hygiene. However, nor practice variables differed significantly between the strong and weak knowledge groups (Smith et al., 2007). Another study revealed that three-quarters of children with a positive attitude and the majority of those with good practice had significantly moderate and good knowledge (Elsabagh et al., 2016).

Furthermore, the attitude of pupils regarding seeking to show their interest in cleanliness was found good during pre and post intervention 100% among agreed pupils. However, the attitude among agreed pupils was improved from 94.8% to 100% after intervention in terms of lived in a family that maintains cleanliness, hence the attitude regarding the towel is a personal hygiene instrument among agreed pupils was improved after intervention from 67.5% to 80%.

Furthermore, the attitude of pupils regarding being more obese meaning stronger among agreed pupils was improved from 67.6% to 79.75%. Also, the attitude of pupils in terms of washing hand with soap is important after dealing with animals among agreed pupils was improved from 70.4% to 100%. Moreover, the attitude of pupils in terms of body cleanliness is important among agreed pupils was improved from 96% to 100%. In addition, the attitude concerning perfect mind in healthy body among agreed pupils was improved after intervention from 81% to 98.6%. Despite the fact that it has been deliberated whether attitude influences awareness or awareness influences attitude. Yet, it is essential to note that in the process of building up attitude and the awareness regarding perceiving diverse things about the theme comes into the picture. Environmental attitude is universally understood as a cognitive judgment toward the value of environmental protection.

However, Divergent results have been found between environmental attitude and behavior. While a few researchers have guaranteed a positive connection between environmental attitude and environmental behavior (Kotchen and Reiling, 2000), another has reasoned that the relationship is either moderate or week (Olawepo, and Jekayinfa, 1999). The contradicting results in investigations of the relationship between environmental attitude and behavior endorse those further studies are expected to affirm the relationship between environmental attitude and environmental sanitation factors.

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