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Using theatre performance to raise the awareness of middle-school students toward hand-hygiene

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ABSTRACT

Present study has been conducted to investigate the effects of raising the awareness of middle-school students toward hand hygiene via using theater performances. The population of this intervention study consists of 5th and 6th graders studying at the Middle-school. Prior to using the theater performance, 15.7% of students practiced proper hand-washing technique while after the theater, the ratios escalated to 33.8%. After the intervention, there was a statistically significant increase in the ratio of respondents having emphasized the need to wash hands as shown by the demonstrated technique ($p < 0.05$). It was demonstrated that upon performing drama, entertainment and didactic scenarios integrated theater activities among middle-school students, there was a heightened level of hand-hygiene awareness toward a manifold of issues in the short term. In addition, it was detected that by teaching the proper technique students achieved to double increase their knowledge on hand hygiene.

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1. Introduction

In developing countries problems relevant of hygiene, sanitation and water scarcity have triggered a bulky load of diseases. Schools are the places in which some of the vital hygiene skills are instilled to the pupils. To the end of improving school hygiene it is imperative to concomitantly execute hygiene education and services for a hygienic environment. Schools also are challenged with such matters that bolster the frequency of diseases. In any hygienic school environment, once the kids are supplied with sufficient care and protection to ensure a long-lasting health, then can it mitigate the disease load thereby inoculating lifelong lasting positive hygiene practices (Adams, Bartram, Chartier, & Simms, 2009).

Hand hygiene is one of the major practices that is advantageous in protecting children against contagious diseases. Provided

that hand hygiene is practiced sufficiently and in line with the standards, it can then further increase the protective shield against infections (AAP, & APHA, 2011).

Insufficient hygiene is among the most ubiquitous health problems witnessed among school-age children. A number of infections inducted by lack of hand hygiene could potentially affect students' listening and comprehension skills (The World Bank, 2011). However these infections are not solely driven from insufficient hygiene conditions. Adverse hygiene conditions such as inadequate sanitation and scarcity of water resources also increase the risk for contagious diseases and deteriorate physical and cognitive development of the kids (Adams, Bartram, Chartier, & Simms, 2009).

A vast majority of such diseases that can adversely affect education are both preventable and curable. By improving hygiene conditions, triggering a behavioral change, through vaccination and medication the kids may gain advantages in

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the face of wasted school education (Jukes, Drake, & Bundy, 2007).

By virtue of entertaining the community and addressing to communal feelings theater bears some impressive potential in promoting health education and better health. Theater can reveal positive hygiene behaviors in addition to empowering positive social values. Theater can prove to be effective in grabbing the listeners' attention and motivating toward health improvement. To give an example, by using puppets in a theater performance the awareness and knowledge of HIV-infected patients could be enhanced and protection measures could be inoculated (Mbizvo, 2006). Theater could also be utilized in the education of students in health profession. In elderly care theater could strengthen students' holistic approach by providing affection and multidisciplinary coordination (MacRae, & Pardue, 2007).

In the light of the information listed hereinabove, present study has been conducted to investigate the effects of raising the awareness of middle-school students toward hand hygiene via using theater performances.

2. Materials and Methods

2.1. The Scope and the Nature of the Research

The population of this intervention study consists of 5th and 6th grade students (320 total) studying at 100. Yıl One Hundredth Year) Atatürk Middle-school (In Turkey). Of the total of 320 students, 210 students having met the participation criteria were included in the research. Upon receiving the approval of Provincial Directorate of National Education students were face to face surveyed between 22.02.2016-18.03.2016 to collect research data.

2.2. Intervention

For the performance, school's stage hall was selected thanks to its proper sound and curtain setting. In order to make the play even more realistic, the decor costumes and makeup were selected in line with the performance. Play's scenario that met the research objective was concocted and rehearsed for a period of 1 month. Scenario was entertaining, dramatic and its content matched with the explored topic. In the research hand-hygiene performance was presented by 6 players and 2 people were in charge of technical services (sound, decor and curtain). Before commencing the performance, students were informed about the topic and in the presence of researchers the volunteers completed 29-question survey that questioned socio economic variables and hygiene. In one of the questions students were required to explain proper hand-washing technique. Once the survey ended collected responses were grouped as proper practice or improper practice. After coding the survey a 25-minute theater performance was conducted. After the performance students were navigated to classrooms and the survey with the identical code was completed under the supervision of researchers.

2.3. Inclusion Criteria for the Research

Volunteering students from the relevant middle-school were included to the research.

2.4. Data Evaluation

Collected data were presented as mean and percentage values. In the evaluation of categorical data McNemar and Chi-square Tests were utilized.

2.5. Human Subject Approval Statement

Upon receiving the approval of Provincial Directorate of National Education data were collected. Ethics Committee Approval was granted by Bitlis Eren University Ethics Committee.

3. Results

A total of 210 students were included in the research. Students were largely around 11-12 ages and median age equated to 11 years of age. 60% of research participants were male and 40% were female. 46.7% of mothers were elementary school and below graduates; 30% of mothers were high school and above graduates whilst 61.9% of fathers were high school and above graduates. 89.5% of mothers were housewives and 5.2% were employed in public sector whilst 42.9% of fathers were employed in public sector, 31.0% were self-employed and employees and 18.1% were employed in private sector.

Table 1. Socio-demographic features of the participants

Variable	n	%
Age		
10	18	8.6
11	102	48.6
12-13	90	42.8
Gender		
Female	84	40.0
Male	126	60.0
Mother's education level		
Illiterate	49	23.3
Elementary education and below	98	46.7
High school and above	63	30.0
Father's education level		
Illiterate	17	8.1
Elementary education and below	63	30.0
High school and above	130	61.9
Mother's profession		
Housewife	188	89.5
Public official	11	5.2
Private sector	8	3.8
Self employed	3	1.4
Father's profession		
Unemployed	17	8.1
Public official	90	42.9
Private sector	38	18.1
Self employed	65	31.0
Total	210	100

Table 2. Change in proper hand hygiene practices of the participants after the intervention

Variables	Before the Theater				After the Theater				P*
	Always / Usually		Occasionally/ Never		Always / Usually		Occasionally/ Never		
	n	%	n	%	n	%	n	%	
After getting up	188	89.5	22	10.5	194	92.4	16	7.6	0.146
Before any meal	177	84.3	33	15.7	193	91.9	17	8.1	0.001
After any meal	184	87.6	26	12.4	199	94.8	11	5.2	<0.001
After using the toilet	206	98.1	4	1.9	206	98.1	4	1.9	1.000
After coming home	192	91.4	18	8.6	199	94.8	11	5.2	0.092
After playing games	171	81.4	39	18.6	194	92.4	16	7.6	<0.001
After dirtying the hand	209	99.5	1	0.5	209	99.5	1	0.5	1.000
Sneezing-Coughing	146	69.5	64	30.5	172	81.9	38	18.1	<0.001
After touching the animals	192	91.4	18	8.6	198	94.3	12	5.7	0.146
After shaking hands with a sick person	157	74.8	53	25.2	177	84.3	33	15.7	<0.001

*Mc Nemar test

As manifested in Table 2, after the intervention, a statistically significant awareness on hand hygiene was taught before and after any meal, after playing games, after sneezing / coughing and after shaking hands with a sick person ($p < 0.05$). Furthermore, there was a considerable increase in hand-washing awareness after getting up, coming home and touching the animals.

Table 3. Knowing proper hand-washing technique

Before the Theater				After the Theater			
Proper practice		Insufficient/ Uninformed		Proper practice		Insufficient/ Uninformed	
n	%	n	%	n	%	n	%
33	15.7	177	84.3	71	33.8	139	66.2

*Mc Nemar test
P<0.001

Before the theater performance, solely 15.7% of students practiced proper hand-washing technique whereas after the theater performance the ratio climbed to 33.8%. After the intervention, a statistically significant rise was detected in the ratio of the participants being informed about proper hand-washing technique ($p < 0.05$). Before and after the theater performance, proper hand-washing technique was statistically higher among girls compared to boys ($p < 0.05$). Although there was no significant differentiation ($p > 0.05$) among different age groups in terms of knowing proper hand-washing technique before the theater, a statistically significant difference was measured after the performance.

4. Discussion and Conclusions

Preparation phase for theater activities spans to a long period of time and necessitates intensive efforts. Regardless of these challenges however, once the preparation phase is concluded it becomes feasible to demonstrate the very same educational scenario in different schools. Once this activity is disseminated to a larger portion of society it could then offer mass solutions

for a wider range of public-health issues. The advantage of provided hygiene education is not merely limited with hand hygiene. Hygiene education could potentially be beneficial in solving the basic hygiene-service problems within schools.

Concomitant practice of hygiene, education and art activities could provide a complementary impact on promoting communal health. Present study revealed that this educative, entertaining and dynamic approach rendered critical contributions to students' knowledge, attitude and awareness on hand hygiene. Following the theater intervention to emphasize hand hygiene, a considerable increase was monitored in proper hand-washing practices before and after meals, after playing games, sneezing/ coughing, after contacting with any patient ($p < 0.05$). Further to that a considerable rise was witnessed in the number of participants recognizing the necessity to wash hands after getting up in the morning, after coming home or touching animals.

Forming an attitude and awareness among students to adopt proper hand-hygiene practices might fail to be effective on its own. It also should be supported by factors such as a health-promoting and supportive environment. In the fight against potential infections that are attributed to insufficient awareness on hand hygiene, it is thus suggested to use tools (soap, sufficient water etc.) to assist school students. But in this intervention study no other hand-hygiene supportive activity was conducted.

Unveiling the link between variables such as gender & age and hand hygiene might render help to planning hygiene education. In this study focusing on hand hygiene after the theater performance a significant differentiation was measured between gender & age and awareness on proper hand-washing technique. In a separate study relevant of the link between theater and attitudes toward organ transplantation, it was revealed that women were, to a larger extent, more intentional toward organ transplantation. On the other hand no significant differentiation could be identified between age groups and intent toward organ transplantation (Buitrago, Gómez, Guerra,

Lucumí, Romero, & Sánchez, 2013).

In similar studies like

wise it was verified that theater activities instilled to the students and the larger society positive knowledge, attitude and raised awareness. Within the scope of anti- HIV activities among adolescents it was detected that theater intervention remarkably raised the level of knowledge, attitude and awareness (Taggart, Taboada, Stein, Milburn, Gere, & Lightfoot, 2016). By the same token it was concluded in a parallel study that theater intervention could potentially increase the level of knowledge, attitude and behavioral change to be safe from HIV infection. Hence this activity could be effective in alleviating the infection risks (Lauby, LaPollo, Herbst, Painter, Batson, Pierre, & Milnamow, 2010). Forum Theater is a crucial social tool to educate society in delicate matters such as hygiene. Forum Theater also rendered a certain level of awareness in preventing Hepatitis C infection (Elliott, & Gahan, 2000). In addition folk theater was utilized among rural societies as a tool to manage infection diseases. To implement bio-environmental management of malaria disease, theater performances significantly bolstered in knowledge and positive attitude levels (Ghosh, Patil, Tiwari, & Dash, 2006).

Further to its utilization to manage infections theater intervention was also used in preventing violence. This performance was also effectively practiced among middle-school students to grow resistance against violence, to focus on solution and to adopt nonviolent strategies. The activity raises the social awareness on preventing problem of violence (Belknap, Haglund, Felzer, Pruszynski, & Schneider, 2013). Interactive theater activities are components of an innovative and dynamic approach in solving social problems. Theater plays a critical role in the management of violence and elevated social awareness against the ills of violence (Yoshihama, & Tolman, 2015).

In a distinctive educational study that utilized theater performances the positive aspect of theater was validated. In the education intervention that utilized theater performance it proved to be a beneficial option in the short term for the organ transplantation intent. Theater contributed to a significant difference in the increased intent for organ transplantation (Buitrago, Gómez, Guerra, Lucumí, Romero, & Sánchez, 2013). Besides, in a different study, it was suggested that theater was useful in the development of clinical empathy toward patients (Dow, Leong, Anderson, & Wenzel, 2007)

In the final analysis, it was demonstrated that upon performing drama, entertainment and didactic scenarios integrated theater activities among middle-school students, there was a heightened level of hand-hygiene awareness toward a manifold of issues in the short term. In addition it was detected that by teaching the proper technique students achieved to double increase their knowledge on hand hygiene.

Limitations

This intervention study was neither randomized nor blinded.

Conflict of Interest

The Authors declare that there is no conflict of interest.

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None.

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