

“A QUANTITATIVE STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE & PRACTICE LEVEL REGARDING HAND & RESPIRATORY HYGIENE PRACTICE AMONG SCHOOL CHILDREN IN SELECTED SCHOOLS, AGARTALA, WEST TRIPURA”

Author's Name: Ms. Rupa Mallik¹

Affiliation:

1. Assistant Professor, Department of Child Health Nursing, Jagannath Gupta Institute of Nursing Sciences, Budge Budge, Kolkata, West Bengal, India.

Corresponding Author Name & E-Mail: Ms. Rupa Mallik, mallikrupa43@gmail.com

ABSTRACT

The researcher conducted “A study to assess the effectiveness of video assisted teaching programme on knowledge & practice level regarding hand & respiratory hygiene practice among school children in selected schools, Agartala, West Tripura. The objectives of the study were to assess the knowledge & practice regarding hand & respiratory hygiene practice among school children, to develop video assisted teaching programme regarding hand & respiratory hygiene practice among school children, to evaluate the effectiveness of video assisted teaching programme regarding hand & respiratory hygiene practice among school children, & to find out the relationship between pre-test knowledge & practice score regarding hand & respiratory hygiene among school children with their selected demographic variables. The present study is based on conceptual framework of “health promotion model” by Nola J. Pender’s (2006). Purposive sampling technique was used. Data were collected from 60 Class-IV students of Hapania H. S. School & Bordwali H. S. School, Agartala, West Tripura. Self-structured knowledge questionnaire & observation checklist was administered to assess the knowledge & practice level regarding hand & respiratory hygiene practice among school children in selected schools. Result showed that out of 60 Class-IV students 70% students had adequate knowledge & 58.3% students had excellent practice in post-test &. The knowledge t-value was 12.73 & practice t-value was 16.42, that was more than the tabulated t-value. So, the video assisted teaching programme is effective to improve the knowledge & practice level of students. There was significant relationship between knowledge score with demographic variable such as types of family ($\chi^2 = 10.62$, $df = 1$) at 0.05 level i.e. $p < 0.05$. Therefore, the research hypothesis was accepted & null hypothesis was rejected for demographic variable such as types of family. There

was no significant relationship between knowledge score with other demographic variables. Therefore, the null hypothesis was accepted & respiratory hygiene, hand wash before eating & research hypothesis was rejected. There was no significant relationship between practice score with demographic variables. Therefore, the null hypothesis was accepted for the demographic variables & research hypothesis was rejected. The study can be concluded that students had adequate knowledge & practice regarding hand & respiratory hygiene practice.

Keywords: Effectiveness, Knowledge, Practice, Hand Hygiene, Respiratory Hygiene, Video-assisted teaching programme.

INTRODUCTION

Handwashing, or, hand hygiene is the act of cleaning one's hands with the use of water or another liquid, or with the use of soap for the purpose of removing soil, dirt, &/or micro-organisms. Handwashing with soap reduce diarrhoeal diseases by 48% & respiratory infections by 23%, thereby meaningfully contributing to reductions in infant & child mortality & improve child survival rates.

Respiratory hygiene/cough etiquette is a combination of infection prevention measures desired to limit the transmission of respiratory pathogens spread by droplet, or, air-borne routes. If anyone have signs & symptoms of respiratory infection like cough, congestion, runny nose, or, increased production of respiratory secretions, then cover your mouth & nose with a tissue when coughing or sneezing, use the nearest waste receptacle to dispose the tissue after use, & perform hand hygiene after having contact with respiratory secretions & contaminated objects, or, materials.

RESEARCH PROBLEM

A study to assess the effectiveness of video assisted teaching programme on knowledge & practice level regarding hand & respiratory hygiene practice among school children in selected schools, Agartala, West Tripura.

OBJECTIVES:

- To assess the knowledge & practice regarding hand & respiratory hygiene practice among school children.
- To develop video assisted teaching programme regarding hand & respiratory hygiene practice among school children.
- To evaluate the effectiveness of video assisted teaching programme regarding hand & respiratory hygiene practice among school children.
- To find out the relationship between pre-test knowledge & practice score regarding hand & respiratory hygiene among school children with their selected demographic variables.

MATERIAL AND METHODS

Research approach for the study was Quantitative research approach. The design adopted for this study was one group pre-test post-test design. The final study was conducted in Hapania H. S. School, Bordwali H. S. School, Agartala, West Tripura. Target population was school children who are reading in Class: - IV. In this study sample was school children who are reading

in class: - IV of Hapania H. S. School, Bordwali H. S. School, Agartala, West Tripura. Sample consists of 60 (Sixty) Class-IV students. Purposive sampling technique was used to select the sample. Tools were developed and used for data collection were socio-demographic data, structured questionnaire, observation checklist.

RESULTS

The data are organized & presented in the following sections.

Section: -1: Findings related to demographic data among Class-IV students.

41.7% of Class-IV children were male, **58.3%** of Class-IV children were female & **85%** of study sample were from Hindu religion, **15%** were from Muslim religion. **48.3%** students were having one sibling, **51.7%** students were having two siblings. **16.7%** father had govt. job, **13.3%** father had private job, & **70%** fathers were daily worker & **15%** mother had govt. job, **13.3%** mother had private job, & **71.7%** mothers were housewife. **76.7%** Class-IV children belong to nuclear family, **23.3%** Class-IV children belong to joint family. Information regarding hand & respiratory hygiene yes answer had given by **45%** Class-IV students, in this **45%** information received from parent **18.3%**, siblings **10%**, mobile **11.7%**, television **5%**, & no answer had given by **55%** students & 100 % students were washed their hands before eating. Hand wash material used by Class-IV children at home, soap used by **58.3%** students, only water without soap used by **33.4%** students, & sanitizer used by **8.3%** students. Hand wash material used by Class-IV children at school, soap used by **8.3%** students, only water without soap used by **26.7%** students, & sanitizer used by **65%** students.

Section: -2: Findings related to assess the knowledge & practice regarding hand & respiratory hygiene practice among school children.

Table-1: Frequency & percentage distribution of pre-test & post-test knowledge level regarding hand & respiratory hygiene. N = 60

| Level of knowledge scoring | | Pre-test | | Post-test | |
|----------------------------|-----------|-----------------|-------------|-----------------|-------------|
| Level of Knowledge | Scoring | No. of Students | Percentage | No. of Students | Percentage |
| Adequate Knowledge | (13-18) | 2 | 3.3% | 42 | 70% |
| Moderate Knowledge | (7-12) | 31 | 51.7% | 18 | 30% |
| Inadequate Knowledge | (1-6) | 27 | 45% | 0 | 0% |
| Total | 18 | 60 | 100% | 60 | 100% |

Table-2: Frequency & percentage distribution of pre-test & post-test practice level regarding hand & respiratory hygiene among school children. N = 60

| Level of practice scoring | | Pre-test | | Post-test | |
|---------------------------|-----------|-----------------|-------------|-----------------|-------------|
| Level of practice | Scoring | No. of Students | Percentage | No. of Students | Percentage |
| Excellent | (13-16) | 2 | 3.3% | 35 | 58.3% |
| Good | (9-12) | 8 | 13.4% | 25 | 41.7% |
| Average | (5-8) | 47 | 78.3% | 0 | 0% |
| Poor | (1-4) | 3 | 5% | 0 | 0% |
| Total | 16 | 60 | 100% | 60 | 100% |

Maximum score: 16, Minimum score: 1

Table: -3: Mean, Median, SD, mean difference of pre-test & post-test Knowledge scores on video assisted teaching programme regarding Hand & Respiratory hygiene practice. N = 60

| Group | Mean | Median | SD | Mean Difference |
|-----------|------|--------|-----|-----------------|
| Pre-test | 7 | 7.5 | 3.3 | 6.7 |
| Post-test | 13.7 | 14.42 | 2.7 | |

Table: -4: Mean, Median, SD, mean-difference of pre-test & post-test Observation scores on video assisted teaching programme regarding Hand & Respiratory hygiene practice.

N = 60

| Group | Mean | Median | SD | Mean Difference |
|-----------|------|--------|------|-----------------|
| Pre-test | 6.96 | 7.21 | 2.16 | 5.84 |
| Post-test | 12.8 | 13.42 | 1.92 | |

Section: -3: Findings related to evaluate the effectiveness of video assisted teaching programme regarding hand & respiratory hygiene practice.

Table: -5: Mean, Median, SD, t-value of knowledge level regarding hand & respiratory hygiene.

N = 60

| Group | Mean | Median | SD | Paired t-value |
|-----------|------|--------|-----|----------------|
| Pre-test | 7 | 7.5 | 3.3 | 12.73* |
| Post-test | 13.7 | 14.42 | 2.7 | |

t-value: 2, df=59, p<0.05

Table: -6: Mean, Median, SD, t-value of practice level regarding hand & respiratory hygiene.

N = 60

| Group | Mean | Median | SD | Paired t-value |
|-----------|------|--------|------|----------------|
| Pre-test | 6.96 | 7.21 | 2.16 | 16.42* |
| Post-test | 12.8 | 13.42 | 1.92 | |

t-value: 2, df=59, p<0.05

Section: -4: Findings related to relationship between pre-test knowledge & practice score of Class-IV students with demographic variables.

Table: -7: Chi-square (χ^2) on knowledge score of Class-IV students regarding hand & respiratory hygiene practice with their selected demographic variables. N= 60

| Sl. No. | Sample character | Category | Below Median | Equal, or above Median | df | Tabulated χ^2 -value | Calculated χ^2 -value |
|---------|--|-----------------|--------------|------------------------|----|---------------------------|----------------------------|
| 1. | <u>Gender:</u> | Male: | 17 | 8 | 1 | 3.84 | 0.15 NS |
| | | Female: | 22 | 13 | | | |
| 2. | <u>Religion:</u> | Hindu: | 34 | 17 | 1 | 3.84 | 0.4 NS |
| | | Muslim: | 5 | 4 | | | |
| 3. | <u>Number of sibling</u> | 1 | 20 | 9 | 1 | 3.84 | 0.38 NS |
| | | 2 | 19 | 12 | | | |
| 4. | <u>Types of family</u> | Nuclear: | 35 | 11 | 1 | 3.84 | 10.62* |
| | | Joint: | 5 | 9 | | | |
| 5. | <u>Information regarding hand & respiratory hygiene</u> | Yes: | 18 | 9 | 1 | 3.84 | 0.049 NS |
| | | No: | 21 | 12 | | | |
| 6. | <u>Hand wash before eating</u> | Yes: | 39 | 21 | 1 | 3.84 | 0 NS |
| | | No: | 0 | 0 | | | |

NB: NS – Not Significant, *Significant at 0.05 level (i.e. $p < 0.05$).

Table: -8: Chi-square (χ^2) on practice score of Class-IV students regarding hand & respiratory hygiene practice with their selected demographic variables. N=60

| Sl. No. | Sample character | Category | Below Median | Equal, or above Median | df | Tabulated χ^2 -value | Calculated χ^2 -value |
|---------|--|-----------------|--------------|------------------------|----|---------------------------|----------------------------|
| 1. | <u>Gender:</u> | Male: | 20 | 5 | 1 | 3.84 | 2.02 NS |
| | | Female: | 22 | 13 | | | |
| 2. | <u>Religion:</u> | Hindu: | 35 | 16 | 1 | 3.84 | 0.29 NS |
| | | Muslim: | 7 | 2 | | | |
| 3. | <u>Number of sibling</u> | 1 | 20 | 9 | 1 | 3.84 | 0.38 NS |
| | | 2 | 19 | 12 | | | |
| 4. | <u>Types of family</u> | Nuclear: | 32 | 14 | 1 | 3.84 | 0.016 NS |
| | | Joint: | 10 | 4 | | | |
| 5. | <u>Information regarding hand & respiratory hygiene</u> | Yes: | 21 | 6 | 1 | 3.84 | 1.4 NS |
| | | No: | 12 | 21 | | | |
| 6. | <u>Hand wash before eating</u> | Yes: | 42 | 18 | 1 | 3.84 | 0 NS |
| | | No: | 0 | 0 | | | |

NB: NS – Not Significant.

CONCLUSION

This study dealt with the analysis & interpretation based on the objectives of the study. The data were analysed using descriptive & inferential statistics & presented under four sections with tables & diagrams. The study findings indicate that research hypothesis-1 (H_1) was accepted & research hypothesis-2 (H_2) was rejected. All the respondents & school teachers were very cooperative & also administrative co-operation met the final study smooth & successful.

REFERENCES

1. Proverbs regarding children. Wikipedia[Internet]. <http://proverbicals.com/children>.
2. Hand washing, Wikipedia[Internet]. Available from: http://en.wikipedia.org/wiki/Hand_washing.
3. Olajuyin OA, Olajide TG, et. al. (2019) Knowledge and Practice of Sneeze and Cough Etiquettes among Participants in a Randomized Study in Ekiti-State, South-Western Nigeria. J. Research Gate [Internet]. Trop Dis. 7:335. doi: 10.35248/2329-891X.19.7.335
4. World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF), 2017[Internet]. Available from: <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>.
5. The State of Handwashing, 2017[Internet]: Global Hand hygiene partnership, Annual Research Summary. Available from: https://globalhandwashing.org/wp-content/uploads/2018/05/The-State-of-Handwashing-in-2017_Final_tc.pdf
6. G. Z. Christophe, Licart T. Lack of access to handwashing facilities among poor makes fight even harder. [Place unknown]. The conversation[Internet]. April 1, 2020. Available from: <http://theconversation.com/india-and-coronavirus-lack-of-access-to-handwashing-facilities-among-poor-makes-fight-even-harder-135087>.
7. Abhishek Sharma & Vijay Avinandan. Global Handwashing Day: Only 2 Out of 10 Poor Households in India Use Soap, Survey. WHO[Internet]. October 14, 2020. Available from: <http://swachhindia.ndtv.com/global-handwashing-day-2019-only-2-out-of-10-poor-households-in-india-use-soap-survey-39281>.
8. T. Barry, S. Manning, et al. Respiratory hygiene practices by the public during the 2009 influenza pandemic: an observational study. New Zealand (Wellington). Influenza and Other Respiratory Viruses 5(5). 2011.
9. VN Anitha, Willaims Sheela, et. al. Karnataka, India. Conducted a study to assess the effectiveness of Structured Teaching Programme on Respiratory Hygiene Practices among school children. Karnataka, India: Clinical and Experimental Pathology Research: 3(3). 2020.
10. P. S. Shrivastava, S. R. B. Shrivastava. A cross sectional study to assess the awareness and practice about cough etiquettes among respiratory symptomatic patients. Tamil Nadu. International journal of community medicine & public health[Internet]. March, 2019. Available from: DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20194165>

11. B. K. Singh, S. Sharan. et. al. A Study on Prevalence of Hand Flora of School Going Children from Eastern Part. India. journal of medical science & clinical research[Internet]. July, 2018. Available from: DOI: <https://dx.doi.org/10.18535/jmscr/v6i7.33>
12. M. Willmott, A. Nicholson, et al. Effectiveness of hand hygiene interventions in reducing illness absence among children in educational settings: a systematic review and meta-analysis. 39 Whatley Road, Bristol BS8 2PS, UK. BMJ Journals[Internet]. October, 2015. Available from: <http://dx.doi.org/10.1136/archdischild-2015-308875>
13. S. Nasreen, E Azziz-Baumgartner, et. al. Prevalent high-risk respiratory hygiene practices in urban and rural Bangladesh. National Library of Medicine. Jun, 2010. Available from: DOI: 10.1111/j.1365-3156.2010.02531.x
14. Polit DF, Hungler BP. Nursing research: Principles and Methods. 8th ed. Philadelphia.
15. J. B. Tidwell, A. Gopalakrishnan, et al. Impact of a teacher-led school handwashing program on children’s handwashing with soap at school and home in Bihar, India. research Gate[Internet]. Feb., 2020. Available from:
<https://www.researchgate.net/deref/https%3A%2F%2Fdoi.org%2F10.1371%2Fjournal.pone.0229655>
16. S. A. Pratinidhi, S. V. Haribhakta, et al. A Study of knowledge and practices related to handwashing in school going children of a rural community. Pune, Maharashtra, India. International Journal of Contemporary Pediatrics[Internet]. Nov., 2019. Available from: <https://dx.doi.org/10.18203/2349-3291.ijcp20195569>.
17. Chang Sun, Qingzhi Wang, et al. Correlates of School Children’s Handwashing: A Study in Tibetan Primary Schools, Golog (Qinghai), China. Environmental Research & public health[Internet]. Sep., 2019. Available from: doi: 10.3390/ijerph16173217.
18. D. S. Dajaan, H. O. Addo, et al. Hand washing knowledge and practices among public primary schools in the Kintampo Municipality of Ghana. Research Gate[Internet]. May, 2018. Available from: <http://dx.doi.org/10.18203/2394-6040.ijcmph20182146>
19. M. A. Mane, S. H. Tata. A Study to Assess the Effectiveness of Hand Hygiene Technique among School Children in Maharashtra, India. Research Gate[Internet]. December, 2017. Available from: <https://www.researchgate.net/publication/321879063>.
20. B. Y. Jin, K. Shinmi. University Students’ Cough Etiquette Knowledge and Practice to Protect Droplet Infection, C City, Korea. Journal of Korea Biological Nursing

- Science[Internet]. Nov., 2015. Available from:
<https://doi.org/10.7586/jkbns.2015.17.4.348>.
21. G. Zayas, M. C Chiang, et al. Effectiveness of cough etiquette maneuvers in disrupting the chain of transmission of infectious respiratory diseases, Alberta, Canada. National Library of Medicine. Sep., 2013. Available from: <https://pubmed.ncbi.nlm.nih.gov/24010919>
 22. S. Udaykar, M. Udaykar. Effectiveness of Video Assisted Teaching Programme on Prevention of Swine Flu among Students. International Journal of Science and Research[Internet]. October, 2015. Available from:
https://www.ijsr.net/get_abstract.php?paper_id=SUB158391
 23. K. Shivani. A Study to Assess the Effectiveness of Video Assisted Teaching Program on the Knowledge and Practice of School going Children Related to Oral Hygiene in Selected Government Schools of District Kangra (H.P). International Journal of Science and Research[Internet]. November 2019. Available from:
https://www.ijsr.net/search_index_results_paperid.php?id=ART20202675.
 24. Treece EW, Treece JW. Elements of research in nursing. St. Louis Missouri: Mosby publication; 1986.
 25. Polit DF, Beck TC. Nursing research generating and assessing evidence for nursing practice. 8th ed. Philadelphia: wolters Kluwer publication: 2008.
 26. Sharma SK. Nursing Research & Statistics. 2nd ed. New Delhi: Elsevier publication: 2015.