

## A study to evaluate the effectiveness of role play on knowledge regarding oral hygiene among higher primary school children in selected school at Tumkur

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**Abstract:** Oral health is a vital component of overall health and a marker for oral health status that have lead to safe and effective means of maintaining oral health and preventing dental caries, periodontal diseases, gingivitis. **Objectives:** To evaluate the effectiveness of role play on knowledge regarding oral hygiene & to find an association between the pre-test levels of knowledge with selected socio-demographic variables of school children. **Materials and methods:** The investigator used quasi experimental research design. Simple random sampling technique was used to assess the knowledge of school children in selected higher primary school at Tumkur. Data was collected by administering knowledge questionnaire elicited by interview. The conceptual framework used for this study was based on modified Wiedenbach's helping of clinical nursing theory. The data was analysed by using descriptive and inferential statistics. paired 't' test was used to find the effectiveness of role play & chi square test was used to find association. **Results:** It was evident that the obtained 't' value 30.067 is greater than the table value at 0.05 level of significance. Therefore "T" value is found to be significant. It indicates that there is a significant difference between pre-test and post-test knowledge of school children regarding oral health. **Conclusion:** Hence role play is considered as one of the effective teaching strategy in imparting knowledge regarding oral health among school children.

**Keywords:** school children, Role play and oral health

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### I. Introduction

Oral health is a vital component of overall health, which contributes to each individual's well being and quality of life by positively affecting physical and mental well-being, appearance, and interpersonal relations. Research and other advances in oral health have lead to safe and effective means of maintaining oral health and preventing dental caries, periodontal disease, gingivitis.

In 1960 the government of India constituted a school health committee to assess the standard of health and nutrition of school children and suggests ways to improve hygienic status of school children. The purpose of WHO theme behind oral health was to make the people aware about various diseases of oral cavity and to educate them in relation to prevention of these diseases. Role play is an important teaching strategy or technique to allow pupils to identify with others and discovers new ways of understanding. Materials such as photographs, stories, news papers, cuttings, cartoons, poems could all be used as stimulus role to play.

### II. Need for the Study

Health and hygiene as a subject can't be taught but it can be learnt as a way of life. The primary schools impart a broad set of values that transient specific knowledge acquired during the time at school will determine what kind of person the child will become. It has been proven that school can provide an ideal platform for the promotion of oral health. Children spend considerable period of their lifetime in the school right from their childhood to adolescence. This period has a special importance in their growing age as they are particularly receptive during this phase. They can be nurtured well for their general and oral health and the saying "catch them young" can very well be implemented.

Oral problems are most prevalent childhood disorders affecting more than 70% of school children. Dental decay is the most common chronic disease affecting more than 90% of world's population. In some countries dental pain is the most frequent reason for absenteeism from school. India faces many challenges in rendering oral health needs. The majority of children can not avail oral facilities due to inaccessibility, financial constraints and stagnation of public dental health care services. This entails the health professional to adopt a more practical approach to achieve primary prevention of oral disease. The most vial solution seems to be oral health education.

Role play is an effective teaching and learning technique that arouses the interest of learners. Role playing activities help introduce students to "real-world" situations. General advantages of role play are

positive and safe in dealing with attitudes and feelings, they provides a safe venue for expressing personal and sometimes unpopular attitudes and opinions, and role playing is highly motivating the majority of students enjoy these type of activities and become more inspired learners.

### III. Statement of the study

“A study to evaluate the effectiveness of role play on knowledge regarding oral hygiene among higher primary school children in selected school at Tumkur”

#### Objectives of the study

1. To assess the pretest level of knowledge regarding oral hygiene among higher primary school children.
2. To evaluate the effectiveness of role play on knowledge regarding oral hygiene among higher primary school children.
3. To determine an association between the level of knowledge with selected socio demographic variables.

#### Operational Definitions:

1. **Effectiveness:** It refers to the improvement in knowledge scores of primary school children regarding oral hygiene, which is elicited by comparing pretest and posttest knowledge score.
2. **Knowledge:** In this study knowledge refers to correct response of primary school children regarding oral hygiene through structured interview schedule.
3. **Higher primary school children:** In this study, higher primary school children refers to children studying in 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> standards between the age group 10-13years, in a selected higher primary school at Tumkur.
4. **Role play:** It is acting out of a situation without any artificiality regarding oral hygiene by a trained group.
5. **Oral hygiene:** It helps to maintaining a healthy state of mouth, teeth, gums and lips.

#### Hypothesis:

**H<sub>1</sub>**-There will be significant difference between the pre-test and the post-test knowledge scores regarding oral hygiene among the higher primary school children.

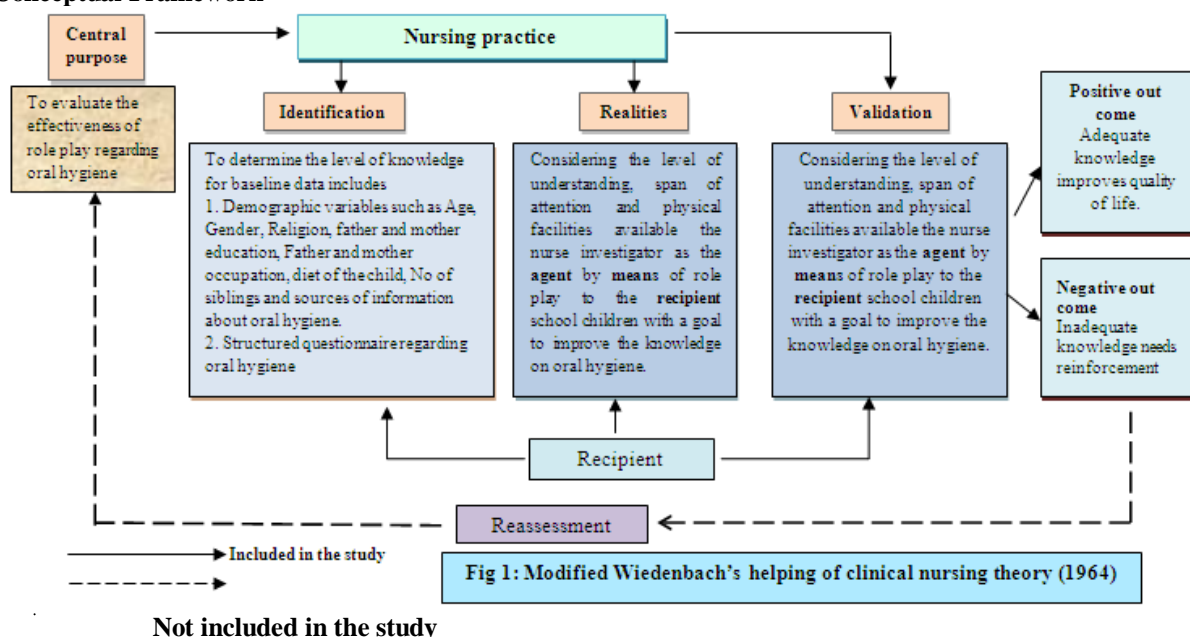
**H<sub>2</sub>** - There will be significant association between the levels of knowledge with selected socio demographic variables.

#### Assumptions

#### The study assumes that

1. Higher Primary school children may have limited knowledge about oral hygiene.
2. Role play is best teaching strategies among higher primary school children in imparting knowledge on oral hygiene.

#### Conceptual Framework



#### IV. Research Methodology

Research methodology is a way to solve the research problem systematically. It deals with defining the problem, formulation of hypothesis, methods adopted for data collection and statistical techniques used for analysing the data with logical reason behind it.

**Research approach:** Evaluative approach

**Research design:** Pre-experimental one group pre-test and post-test design

**Variables under study**

**Independent variable:** Role play on oral hygiene.

**Dependent variable:** Knowledge scores of primary school children.

**Setting of the study:** Sree Siddaganga higher primary school.

**Population:** Higher primary school children of Tumkur district.

**Sample and sampling technique**

Sample: 100 higher primary school children. Non-probability purposive sampling technique was used to select the higher primary school children.

#### Criteria for sample selection

##### Inclusive criteria

1. Higher primary school children between the age group of 10-13 years.
2. Higher primary school children who are studying in selected school at Tumkur.

##### Exclusive criteria

1. Primary school children who are not willing to participate in the study.
2. Primary school children who are not available at the time of data collection.

#### Data collection method

Self administered knowledge questionnaire was used to determine the knowledge of higher primary school children regarding oral hygiene. **The following steps were adopted in the development of the tool:** Review of literature, Discussion with nursing scholars and experts from the field of paediatric nursing, Development of a blueprint, Construction of a self administered knowledge questionnaire, Content validity, Pre-testing of the tool, Reliability.

##### Development of the tool:

Self administered knowledge questionnaire was developed by the investigator for assessing the knowledge of higher primary school children regarding oral hygiene. The tool was developed after review of literature on relevant topics and in consultation with subject experts.

##### Description of tool:

Self administered knowledge questionnaire was used to assess the knowledge of higher primary school children regarding oral hygiene. It consisted of two parts:

**Part I** It consist of eight items for obtaining information about the selected background factors such as age, gender, religion, father educational status, mother education educational status, father occupation, mother occupation, diet of the child.

**Part II** Multiple choice questions on knowledge of higher primary school children regarding oral hygiene. Total items were 46, with total score of 46.

The scoring scale consists of one correct option for the all multiple choice items. There were a total of 46 items. Score '1' is given for each correct response and '0' for incorrect response. The scores range from a minimum of '0' to a maximum score of 46.

The knowledge level has been arbitrarily divided into three categories.

- Adequate knowledge: >75%
- Moderately adequate knowledge: 50%-75%
- Inadequate knowledge: <50%

#### V. Data Analysis

**Table 01: Frequency and percentage distribution of higher primary school children based on socio-demographic variables.**

**N=100**

Sl No	Variables	Frequency	Percentage (%)
1	Age		
	10 Years	30	30
	11 Years	32	32
	12 Years	34	34
	13 Years	4	4

2	<b>Gender</b>		
	Male	49	49
	Female	51	51
3	<b>Religion</b>		
	Hindu	93	93
	Muslim	6	6
	Others	1	1
4	<b>Education status of father</b>		
	Illiterate	4	4
	Primary school	2	2
	Secondary education	18	18
	PU education	31	31
	Graduation	45	45
5	<b>Education status of mother</b>		
	Illiterate	1	1
	Primary school	6	6
	Secondary education	30	30
	PU education	34	34
	Graduation	29	29
6	<b>Occupation of the father</b>		
	Unemployed	1	1
	Agriculture	2	2
	Industrial worker	12	12
	Business	42	42
	Professional	43	43
7	<b>Occupation of the mother</b>		
	Home maker	61	61
	Agriculture	3	3
	Industrial worker	15	15
	Business	3	3
	Government	12	12
	Professional	6	6
8	<b>Diet</b>		
	Vegetarian	60	60
	Mixed	40	40

Majority of higher secondary school children 34(34%) belongs to the age of 12 years and only 4(4%) belongs to the age of 13 years. Majority (51%) students are female school children & 49% are male school children. 93(93%) of the higher secondary school children belongs to Hindu and only 1(1%) higher secondary school child belongs to Christian religion. 45 (45%) of higher secondary school children fathers are graduates where as only 2% of higher secondary school children fathers have got primary education. 34 (34%) of higher secondary school children mothers have completed PU education where as only 1% of higher secondary school children mother is illiterate. About 43 (43%) of higher secondary school children fathers are having professional occupation where as only 1% of higher secondary school children father is unemployed. 61 (61%) of higher secondary school children mothers are home makers where as only 3% of higher secondary school children mothers are agriculturist. Majority of higher secondary school children 60% are vegetarian whereas 40% are consuming mixed diet.

**Table 02: Comparison of pre-test and post-test knowledge scores of school children regarding oral hygiene. Df = 99 N=100**

Area of knowledge	Pre test		Post test		Enhancement		t' Value	Inference
	mean	SD	mean	SD	mean	SD		
oral hygiene	1.35	0.57	1.98	0.14	0.63	0.58	10.86	significant
Anatomy of oral cavity	2.82	0.95	3.96	0.19	1.14	0.94	12.08	significant
Physiology of teeth, gums	2.56	0.9	3.94	0.23	1.38	0.91	15.02	significant
measures to improve good oral hygiene	6.24	1.8	9.83	0.4	3.59	1.84	19.48	significant
Common oral problems	16.82	3.58	25.6	0.6	8.76	3.55	24.67	significant
Over all knowledge scores	29.79	5.24	45.3	0.72	15.5	5.15	30.06	significant

From the above table it is evident that the obtained 't' value 30.067 is greater than the table value at 0.05 level of significance. Therefore "t" value is found to be significant. It indicates that there is a significant difference between pre-test and post-test knowledge scores of school children regarding oral hygiene.

**Table 03: Association between pre-test knowledge scores of school children with selected socio demographic variables. N=100**

Sl No	Demographic Variables	Level of knowledge		$\chi^2$ value	Inference
		Moderately adequate	Inadequate		
1	<b>Age</b>			0.563	NS
	10 Years	30	30		
	11 Years	32	32		
	12 Years	34	34		
	13 Years	4	4		
2	<b>Gender</b>			0.427	NS
	Male	49	49		
	Female	51	51		
3	<b>Religion</b>			2.509	S
	Hindu	93	93		
	Muslim	6	6		
	Others	1	1		
4	<b>Education status of father</b>			1.321	S
	Illeterate	4	4		
	Primary school	2	2		
	Secondary education	18	18		
	PU education	31	31		
	Graduation	45	45		
5	<b>Education status of mother</b>			1.07	S
	Illeterate	1	1		
	Primary school	6	6		
	Secondary education	30	30		
	PU education	34	34		
	Graduation	29	29		
6	<b>Occupation of the father</b>			4.524	S
	Unemployed	1	1		
	Agriculture	2	2		
	Industrial worker	12	12		
	Business	42	42		
	Professional	43	43		
7	<b>Occupation of the mother</b>			2.608	S
	Home maker	61	61		
	Agriculture	3	3		
	Industrial worker	15	15		
	Business	3	3		
	Government	12	12		
	Professional	6	6		
8	<b>Diet</b>			0	NS
	Vegetarian	60	60		
	Mixed	40	40		

The data in the above table shows that variables of religion ( $\chi^2= 2.509$ ), education status of father ( $\chi^2= 1.321$ ), Education status of mother ( $\chi^2= 1.07$ ), occupation of father ( $\chi^2= 4.524$ ), occupation of mother ( $\chi^2= 2.608$ ) were found to be significant at 0.05 level, and Age ( $\chi^2= 0.563$ ), Gender ( $\chi^2= 0.427$ ) & diet ( $\chi^2= 0$ ) was not significant at 0.05 level.

## VI. Conclusion

The overall findings of the study shown that school children were having inadequate knowledge on oral hygiene. The gain in mean knowledge score after role play is statistically significant at 0.05 levels. It has proved that Role play is an effective method in improving the knowledge of school children. Government authorities

must provide in-service education and they should encourage the school children and other personnel for the same.

Role play demonstrated by the investigator for the study can also be used as a reference for teaching to other personnel. The present study in short gave the researcher a new experience, a chance to widen the knowledge and a venue to interact with school children. Constant encouragement, guidance of the expert, cooperation of the school authorities and school children contributed to the fruitful completion of the study.

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