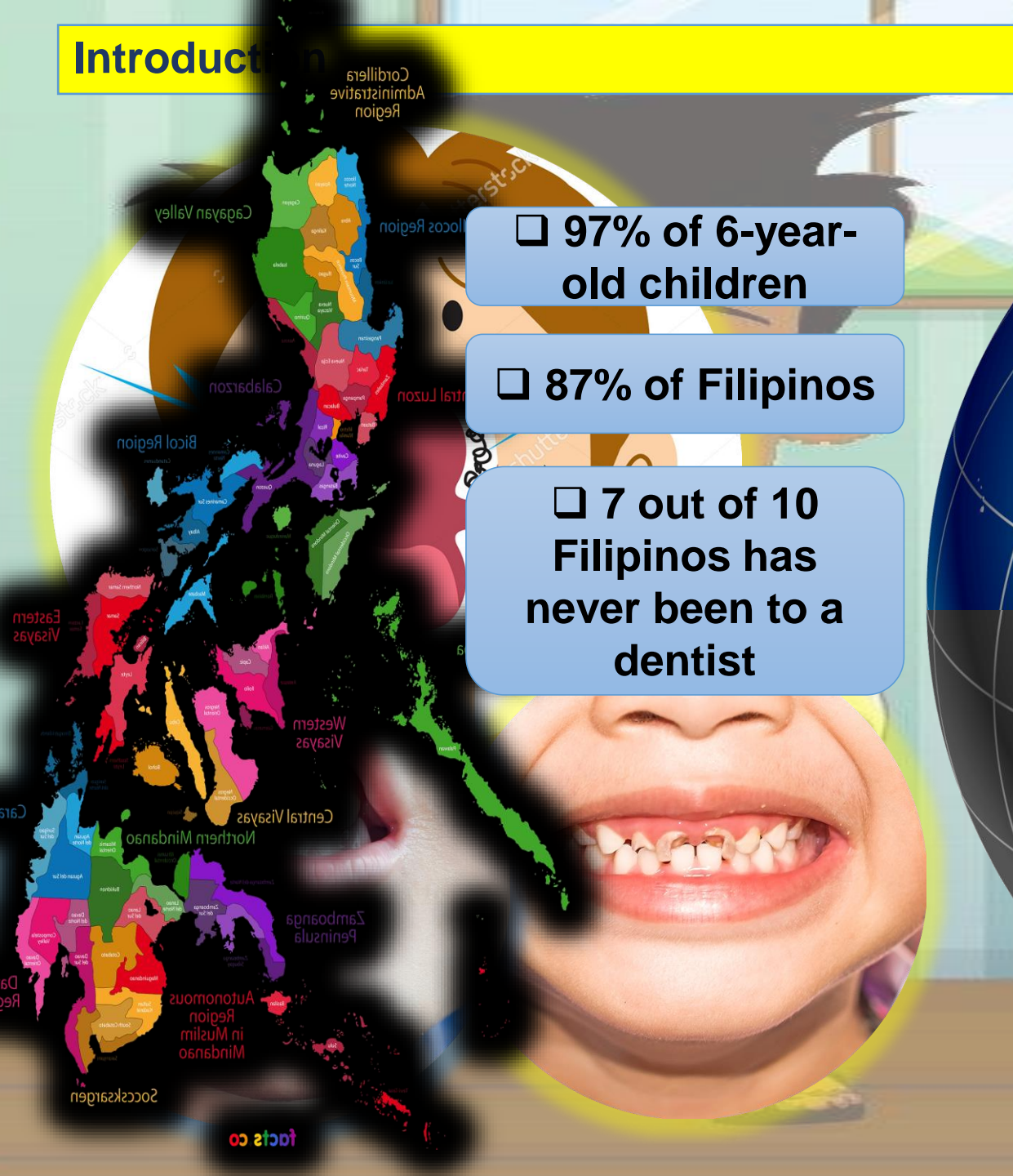




Effectiveness of Tooth Buddy Mobile Application in Promoting Oral Health Education Among Children

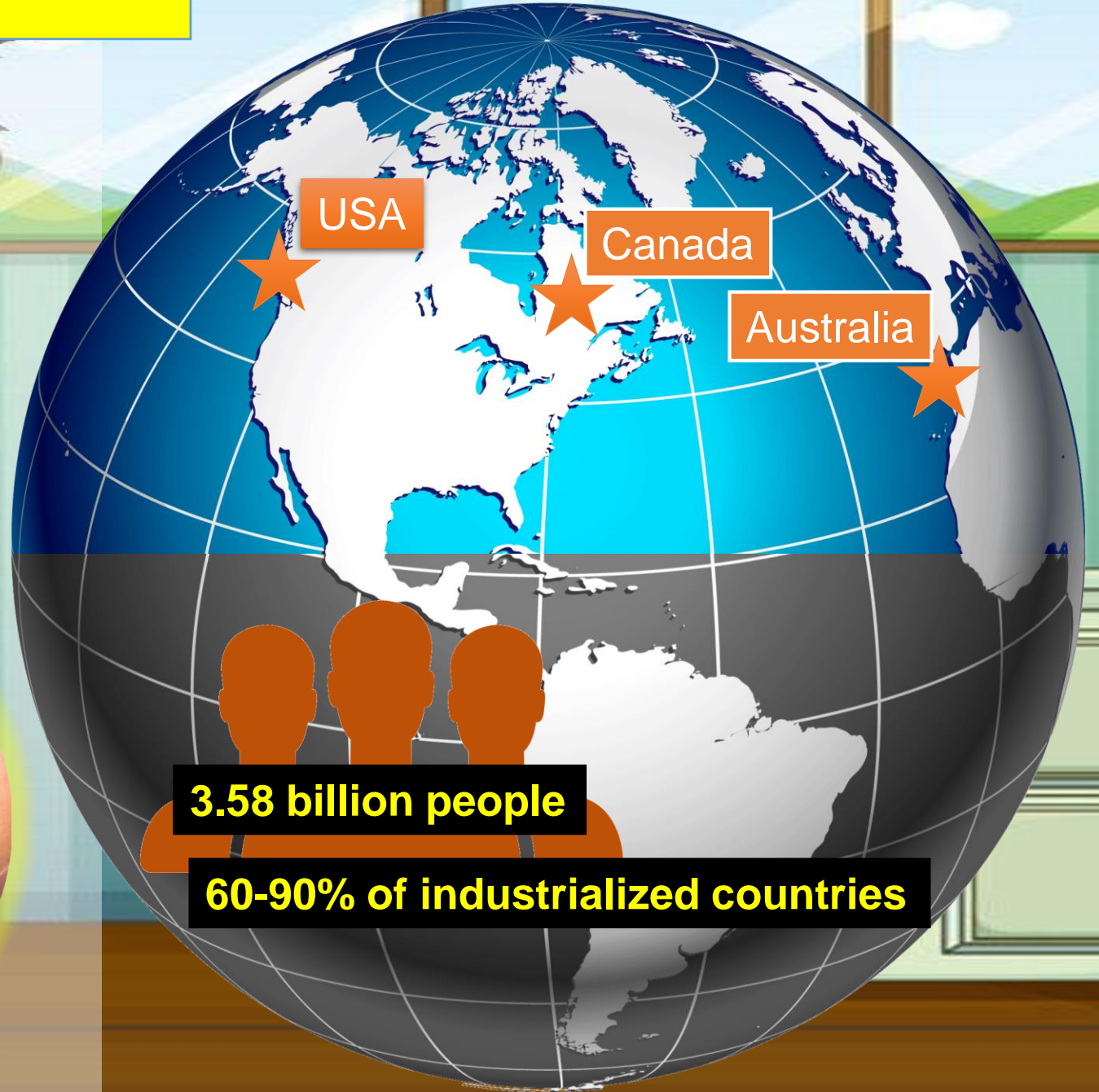
Introduction



☐ 97% of 6-year-old children

☐ 87% of Filipinos

☐ 7 out of 10 Filipinos has never been to a dentist





“Games have the power to teach, train and educate”

❑ This is to address also the sustainable development goals of the **United Nations Development Programme (UNDP)** on achieving and promoting good health and well being of all individuals.

UNDP’s sustainable development goals on ensuring inclusive and equitable quality education which includes oral health education among children utilizing different modalities such as interactive games and activities, etc.



Objectives

This study aimed to determine the effectiveness of using Tooth Buddy mobile application as means of promoting oral health education among children by evaluating changes on eight aspects:



Frequency of tooth brushing



Frequency of flossing



Frequency of mouth rinsing



Frequency of intake of food high in refined sugar



Amount of dentifrice used



Amount of time spent in brushing



Stroke used in tooth brushing



Stroke used in tooth brushing

Methodology

Game Development

Population Sampling and Informed consent, Pre-test questionnaire and application sample distribution

Utilization of Mobile Application

Post-test Questionnaire and Follow-up

School of Dentistry

POST and PRE-USAGE OF TOOTH BUDDY MOBILE APPLICATION QUESTIONNAIRE

Greeting!

We, the undersigned Doctor of Dental Medicine students of the University of Baguio are conducting a study entitled "Tooth Buddy as means of promoting oral health education to children three to ten years old." In this regard, may we ask your voluntary participation in this study. Rest assured that your answers are completely confidential. Your answers will be used for research purposes only. You may withdraw anytime if you feel uncomfortable in answering the questionnaire.

Sincerely yours,
The Researchers

As parents of the participant, the researchers are asking you to be the one filling up the questions as you ask your child in an interview manner.

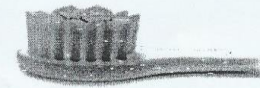
Instructions: **Just place a tick under the column corresponding to the answer regarding child's oral hygiene habits.**

	0-1 time	2 time	3 times	More than 3 times
How often do you brush your teeth in a day?	/			
How often do you floss in a day?	/			
How often do you use mouthwash?	/			
How often do you eat food with high carbohydrate in a day?		/		

➤ Tick the amount of time you spend in tooth brushing:

<1 min / 1-2 min ___ more than 2 min. ___

➤ Place an "x" Mark on the corresponding drawing which reflects the amount of dentifrice you are using during brushing.



Smear



Pea-size



Regular

➤ Place a tick on the type of stroke you are using in tooth brushing (ask for the researchers explanation regarding the type of strokes if you do not fully understand them)

Scrubbing (Scrub motion in anterior-posterior direction keeping brush horizontal)

Circular (On a buccal wide circular movement to include gingiva and tooth surfaces; lingual a back and forth-horizontal motion)

Sulcular (Very short back and forth vibratory; bristle ends remain in the sulcus)

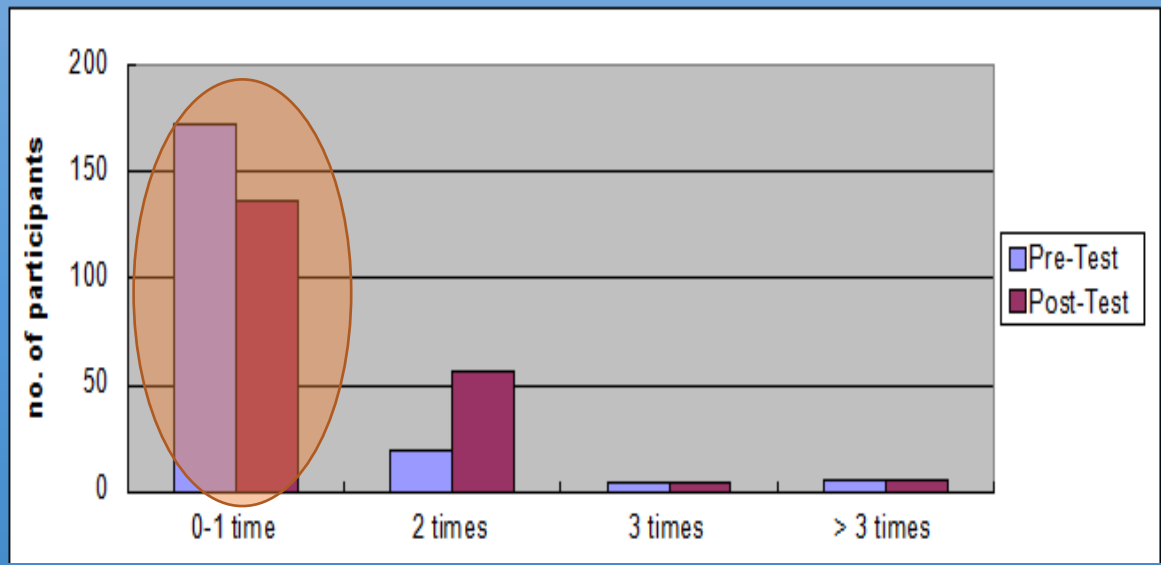
None of the Above (indefinite)

Instructions: **Just place a tick under the column corresponding to the answer of the child's willingness.**

	Definitely (4)	Probably (3)	Probably Not (2)	Definitely Not (1)
Do you like visiting a dentist?				
Do you like the dentist to clean your teeth?		/	/	
Do you like the dentist to Check your teeth regularly?			/	

Results and Discussions

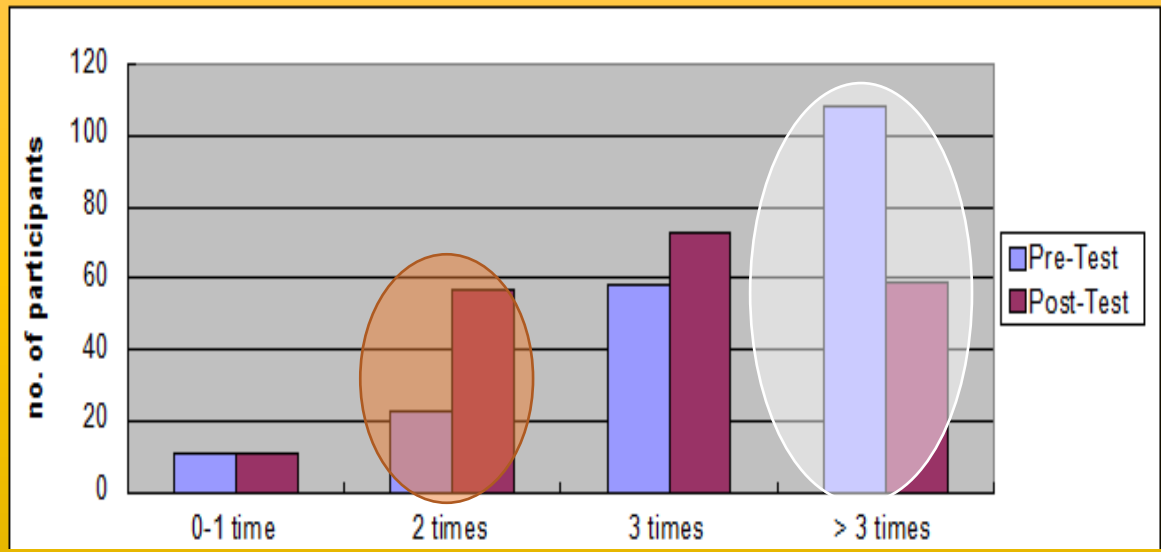
C. Frequency of Mouth rinsing



0-1 time a day:
↓ From 175 to 145

2 times a day:
↑ From 75 to 89

D. Frequency of intake of food high in refined sugar

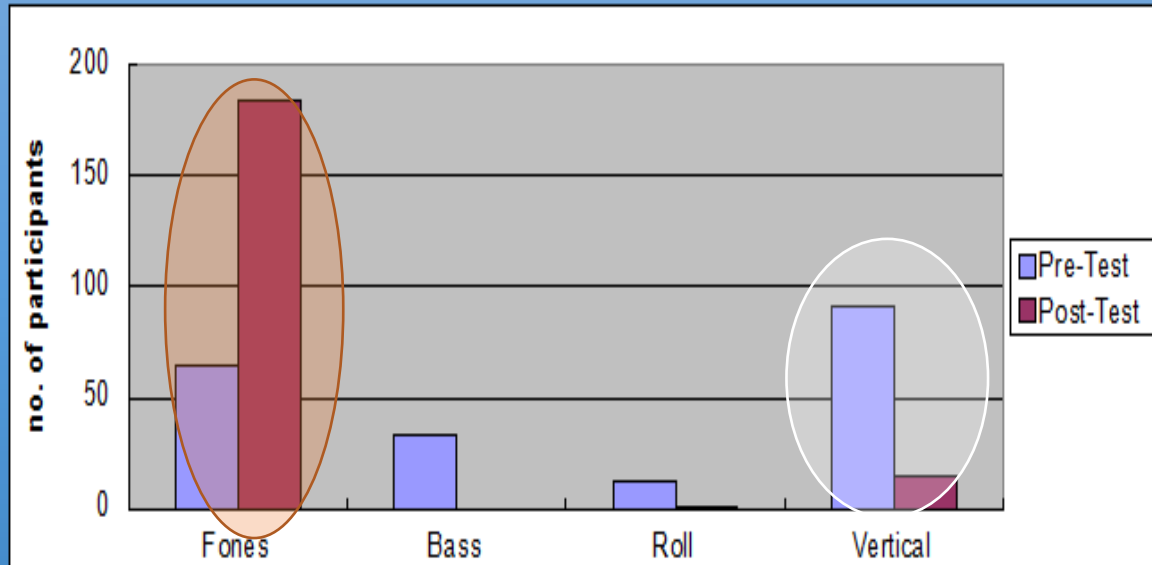


2 times a day:
↑ From 20+ to 50+

>3 times a day:
↓ From 113 to 59

Results and Discussions

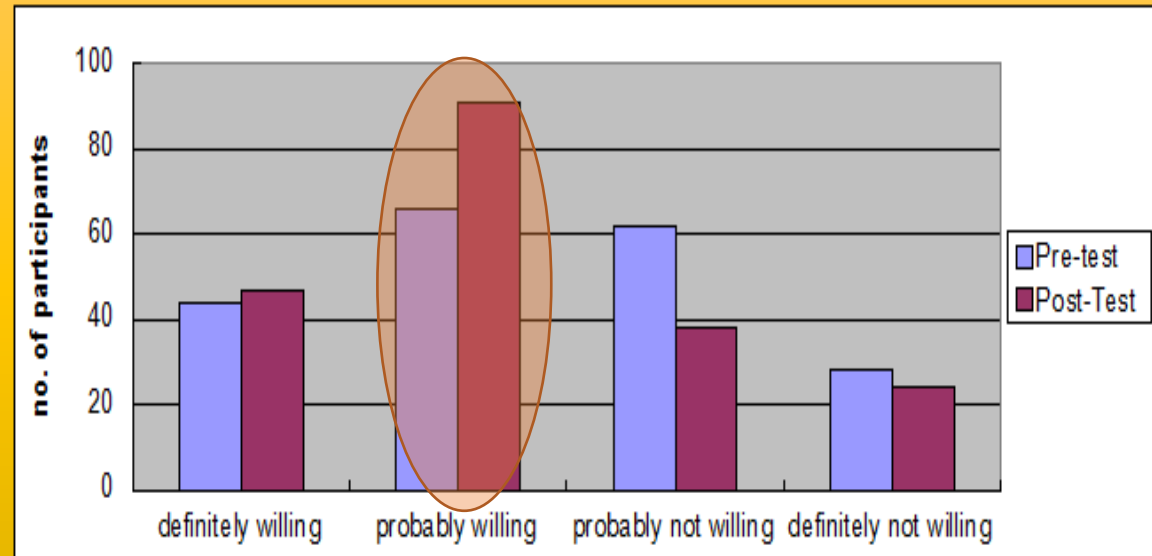
G. Stroke Used in Toothbrushing



Fones:
↑ From 60 +to 180+

Vertical:
↓ From 90+ to > 20

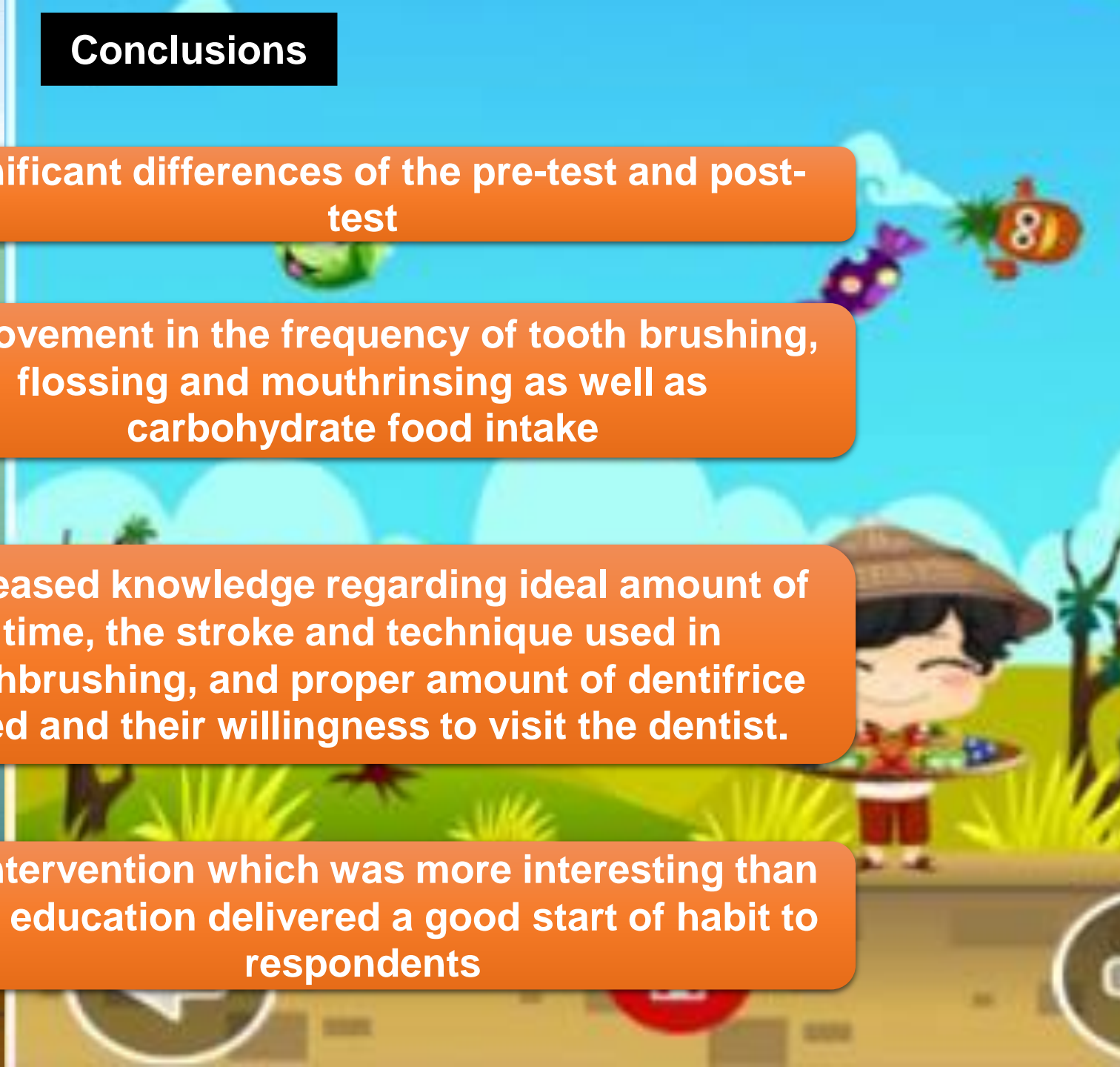
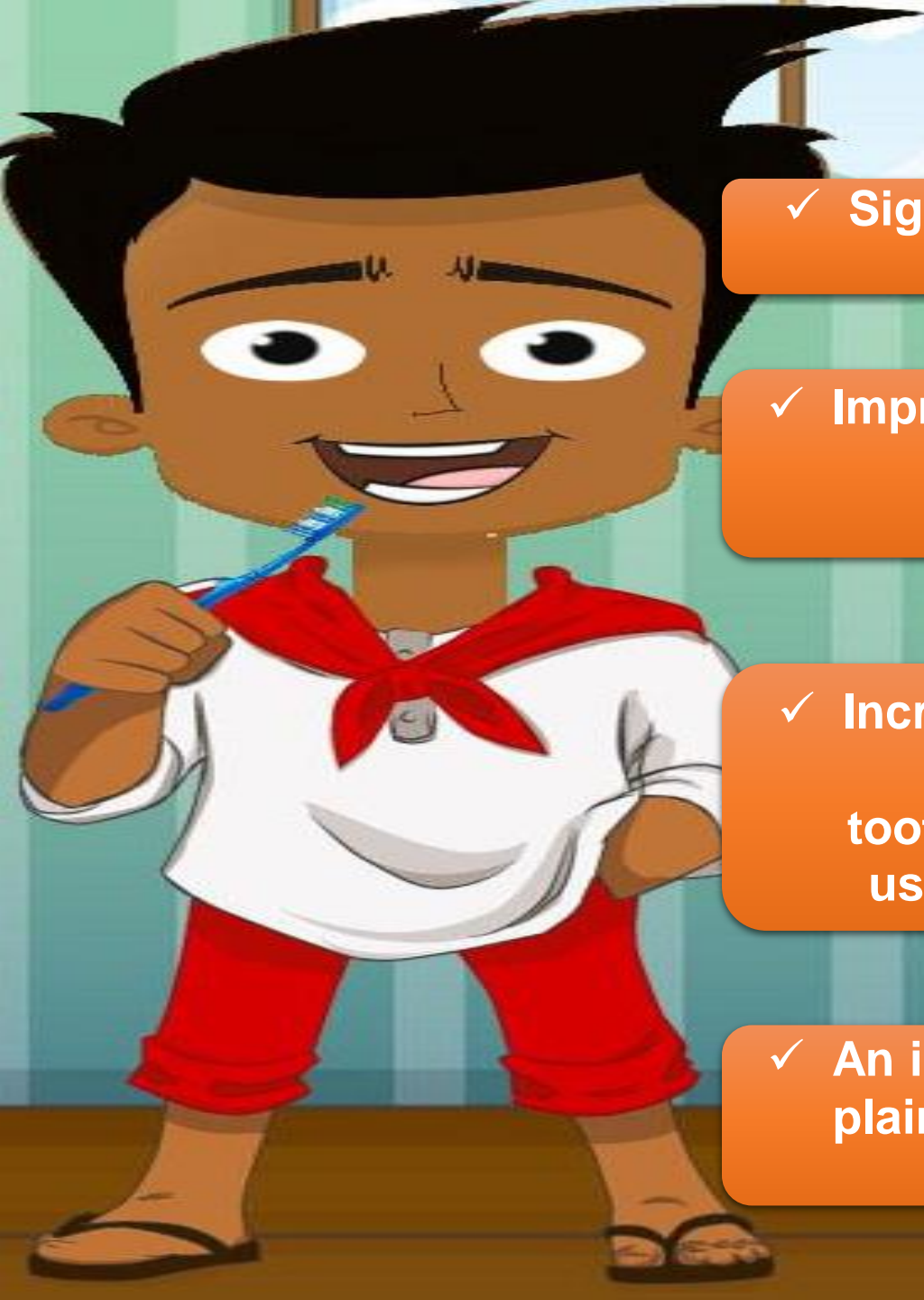
H. Degree of willingness of the children to visit a dentist



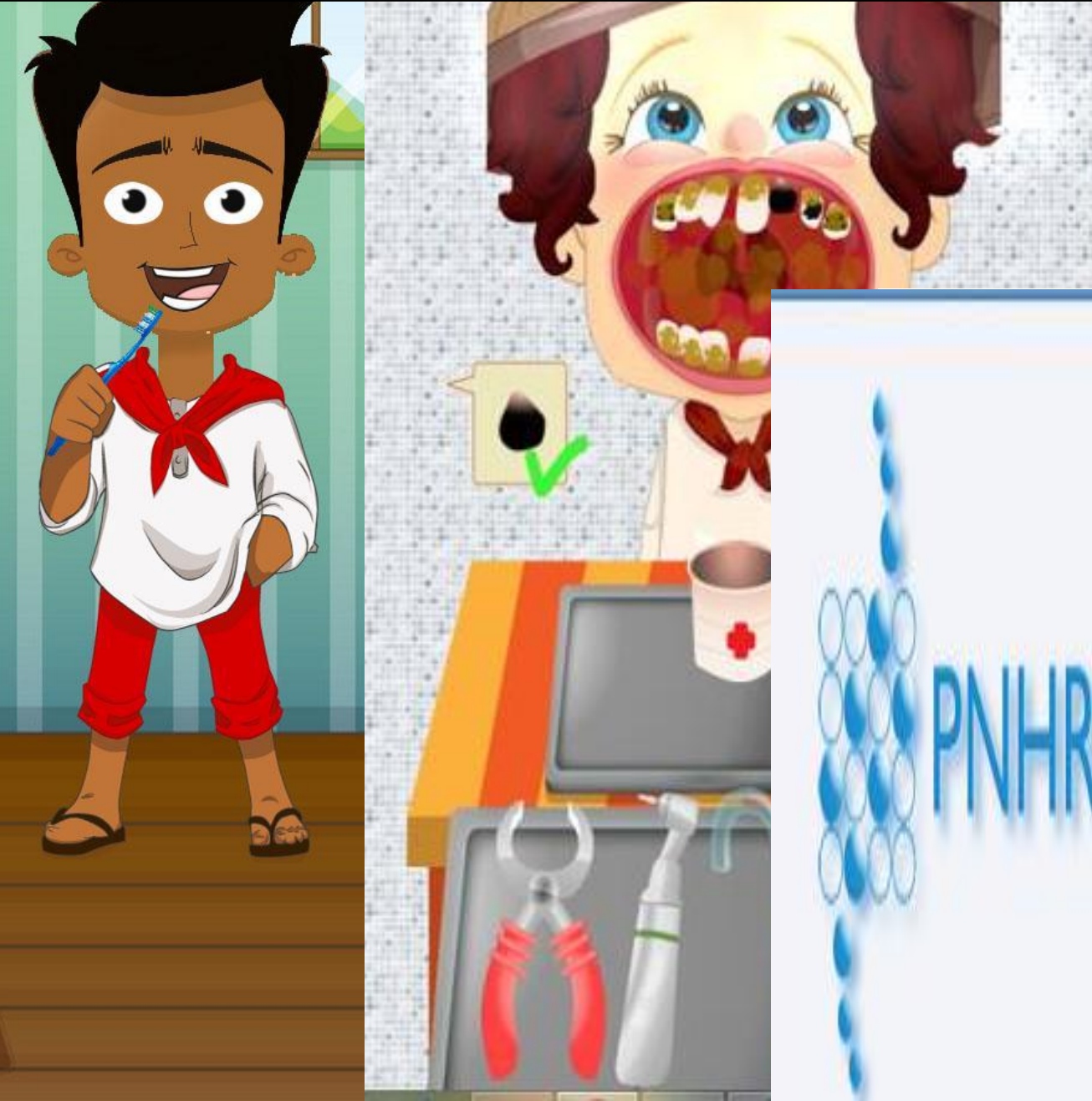
Probably Willing:
↑ From 64 to 91

Conclusions

- ✓ Significant differences of the pre-test and post-test
- ✓ Improvement in the frequency of tooth brushing, flossing and mouthrinsing as well as carbohydrate food intake
- ✓ Increased knowledge regarding ideal amount of time, the stroke and technique used in toothbrushing, and proper amount of dentifrice used and their willingness to visit the dentist.
- ✓ An intervention which was more interesting than plain education delivered a good start of habit to respondents



Recommendations



Longer usage duration along with follow up studies on the previous participants

Study regarding effectiveness of mobile application to children 7 years old and older

Possible expansion of gadgets where the application can be played

Collaboration with different agencies and families

