

Clinical Trial Protocol

Iranian Registry of Clinical Trials

07 Jul 2026

Comparison of the effectiveness of oral health education using Audio Tactile Performance (ATP) technique alone; ATP combined with oral health education for parents; ATP and art package, on oral health status of students with visual impairment

Protocol summary

Study aim

Comparison of the effectiveness of oral health education using Audio Tactile Performance (ATP) technique alone; ATP combined with oral health education for parents; ATP and art package, on oral health status of students with visual impairment

Design

Three arm parallel group randomized trial with blind examiner after intervention and blind analyst, 200 visually impaired students, between December 2018 and April 2019

Settings and conduct

This study will be done in three schools for blinds, in Tehran. After completing the questionnaire and oral examinations in the baseline study, the classes in each school, will be divided into three groups. One month and two months after beginning of the intervention, re-examination will be done for assessing treatment index, bleeding on probing index and oral hygiene simplified index by a second calibrated examiner who is not present during the interventions and groups' allocation. By coding for the clusters and groups, the analyst will be blind.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Students in preschool to 10th grade in schools for blinds; student and parent's consent for participation in the study. Exclusion criteria: Mentally disabled students; physically disabled students

Intervention groups

1. The control group: The students will receive education by Audio-Tactile-Performance (ATP) technique
2. The ATP and Parents group: The students will receive education by ATP and the parents will receive telephone education.
3. The ATP and art package group: In addition to ATP, education by moving fingers on educational dental cast, game-based education and music-based education will

be performed. The intervention will be done 3 times with a one week interval, in each group. Students will be re-examined one and two months after the beginning of the intervention.

Main outcome variables

Treatment status; oral hygiene; gingival bleeding

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20140624018214N2**

Registration date: **2018-11-29, 1397/09/08**

Registration timing: **prospective**

Last update: **2019-06-18, 1398/03/28**

Update count: **1**

Registration date

2018-11-29, 1397/09/08

Registrant information

Name

Katayoun Sargeran

Name of organization / entity

Tehran University of Medical Sciences, School of Dentistry

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-12-01, 1397/09/10

Expected recruitment end date

2019-04-20, 1398/01/31

Actual recruitment start date

2018-12-01, 1397/09/10

Actual recruitment end date

2019-04-17, 1398/01/28

Trial completion date

2019-04-17, 1398/01/28

Scientific title

Comparison of the effectiveness of oral health education using Audio Tactile Performance (ATP) technique alone; ATP combined with oral health education for parents; ATP and art package, on oral health status of students with visual impairment

Public title

Comparison of the effectiveness of different methods of oral health education for the visually impaired students

Purpose

Prevention

Inclusion/Exclusion criteria**Inclusion criteria:**

Students in preschool to 10th grade in schools for blinds in Tehran The student and parent's consent for participation in the study

Exclusion criteria:

Mentally disabled students Physically disabled students

Age

From **6 years** old to **17 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size

Target sample size: **200**

Actual sample size reached: **200**

Randomization (investigator's opinion)

Randomized

Randomization description

Simple randomization is done by Excel software. Each class is considered to be a cluster in each school. Stratification is then done in each school for clusters, and it creates 2 layers: fifth grade and lower; sixth grade and higher. Within the layers, for each cluster, as well as for each of the three study groups, a code is considered and recorded. For example, the first cluster will be coded as "QWZ" and control group as "GFD" . For each school, all codes will be entered into Excel software in two columns; a column for clusters; another column for study groups. A colleague who is not informed about the coding process, will be asked to run the randomization command in Excel for these two columns. Thus, each cluster will be randomly entered into one of the three study groups (control; the first intervention ; the second intervention).

Blinding (investigator's opinion)

Single blinded

Blinding description

The post-intervention examination will be done by the second calibrated examiner, who is not present in the oral health education (intervention) and the allocation of groups. 2. The data will be entered to the SPSS with special codes so that the analyst will be blind about the clusters and groups. Latin letters will be chosen by chance, for the first cluster, for example, "asd" , and for control group, "cbn". After finishing the data analysis, these codes will be renamed to the original names of the groups and clusters.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of School of Dentistry, Tehran University of Medical Sciences

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School of Dentistry, Tehran University of Medical Sciences, North Kargar Ave, Tehran

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Approval date

2018-10-14, 1397/07/22

Ethics committee reference number

IR.TUMS.DENTISTRY.REC.1397.104

Health conditions studied**1****Description of health condition studied**

Gingivitis and periodontal diseases

ICD-10 code

K05

ICD-10 code description

Gingivitis and periodontal diseases

2**Description of health condition studied**

Dental caries

ICD-10 code

K02

ICD-10 code description

Dental caries

Primary outcomes

1

Description

Treatment status

Timepoint

Baseline study, one month after the beginning of the intervention and two months after the beginning of the intervention

Method of measurement

Treatment index: First, the number of decayed, missing and filled teeth in primary (dmft) and permanent (DMFT) dentition, will be assessed. Treatment index will be calculated by these formulas: $((M+F)/DMF)*100$ and $((m+f)/dmf)*100$. Also, D, M, F, d, m, f indices will be reported separately.

2

Description

Gingival bleeding

Timepoint

Baseline study, one month after the beginning of the intervention and two months after the beginning of the intervention

Method of measurement

Bleeding on probing index (BOP): The presence or absence of gingival bleeding in all teeth will be evaluated using the WHO Periodontal Probe. The surrounding gingiva of each tooth is assessed for the presence or absence of bleeding.

3

Description

Oral hygiene

Timepoint

Baseline study, one month after the beginning of the intervention and two months after the beginning of the intervention

Method of measurement

Oral Hygiene Index-simplified (OHI-S): The Calculus Index (CI) and Debris Index (DI) for six teeth (16,11,26,36,31,46) will be evaluated and will be scored from 0 to 3 for each tooth and will be recorded in the examination form. The sum of calculus scores, divided by the number of examined teeth will represent the CI and the sum of debris scores, divided by the number of examined teeth will represent the DI. Finally, the sum of CI and DI will be reported as OHI-S.

Secondary outcomes

empty

Intervention groups

1

Description

The first intervention group (ATP and parents): The parents' questionnaire will be completed by telephone. Then, training is provided to parents to raise their awareness of oral health. These educations include the importance of oral hygiene to prevent caries and gum disease, the role of fluoride in controlling caries, the necessity to control the consumption of sugar and the importance of regular dental visits. The parents will then be asked to brush twice daily for two minutes and encourage their child to do this, too. Oral health education by ATP (Audio Tactile Performance) technique will be delivered to the students in class. In this technique, a verbal oral health Education will be delivered on the importance of teeth, oral hygiene, proper brushing, dental floss, fluoride, and the importance of controlling the consumption of sugar, in accordance with the age of the students. Then, the proper brushing technique will be taught individually by intra-oral guidance of the student's hand with the students' own toothbrush, until it is ensured that the student can properly handle it. One week and two weeks after the beginning of the intervention, the intervention will be repeated. Post-intervention examination will be done one month and two months after the beginning of the intervention.

Category

Prevention

2

Description

The second intervention group (ATP and art package): In this group, in addition to ATP technique, educational dental cast, game-based education and music-based education will be used. Normal and common pathological conditions of the teeth and gingiva will be simulated on dental cast. The students will be asked to move their fingers over casts to distinguish the cavitated dental caries, calculus and gingival swelling. Using play dough to make hand craft about oral health, will be considered as a game-based education. Music-based education also will be used. A music is prepared which focuses on the direction of tooth brushing for each jaw, side and surface with equal time to give equal importance to all surfaces. The music will be played in the class and students will perform the tooth brushing; listening to the music until they get able to brush properly. This music will be given to them to use at home every day. One week and two weeks after the beginning of the intervention, the intervention will be repeated. The post intervention examination will be done one month and two months after the beginning of the intervention. To prevent the contamination between the second group (ATP and art package) with other groups, interventions for the second group (ATP and art package) will be performed after the intervention of the other two groups.

Category

Prevention

3

Description

The control group (ATP) :Oral health education by ATP (Audio Tactile Performance) technique will be delivered to the students. A verbal oral health education will be delivered on the importance of teeth, oral hygiene, proper brushing, dental floss, fluoride, and the importance of controlling the consumption of sugar, in accordance with the age of the students. Then, the proper brushing technique will be taught individually by intra-oral guidance of the student's hand with the students' own toothbrush, until it is ensured that the student can properly handle it. one week and two weeks after the beginning of the intervention, the intervention will be repeated. Post-intervention examination will be done one month and two months after the beginning of the intervention.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Mohebbi Educational Complex for Blinds

Full name of responsible person

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Name of recruitment center

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Sponsors / Funding sources

1

Sponsor

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Tehran University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

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Person responsible for general inquiries

Contact

Name of organization / entity

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Full name of responsible person

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Position

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Latest degree

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available