Oral Status Survey Tool (v1).

SURVEY PROTOCOL

Introduction

This protocol should be followed when completing the Oral Status Survey Tool – Health Examination Survey (OSST-HES) and Oral Status Survey Tool – Health Informtation Survey (OSST-HIS).

Overview of the Oral Status Survey Tool

The OSST is a data collection tool that produces important data regarding oral health, covering content that indicates oral status and function. The OSST comes in two forms, a form that is based on oral health assessment, the Health Evaluation Survey (HES) and a self-report version called a Health Information Survey (HIS).

Aim of OSST

The aim of the OSST is to generate sample level data based on the following items: Tooth count, denture wear, occluding pairs of teeth, functional dentition, oral cleanliness, gum condition, carious cavitation and oral pain. The OSST has been developed so as content coverage is balanced with feasibility by ensuring that the tool produces a range of useful data while being small enough to be considered a bolt-on to larger data collection and not too onerous on participants or data collectors.

Training

All data collectors using OSST-HES should have undertaken training in its completion prior to use. Calibration should be completed prior to data collection and at regular intervals, where indicated. See Training Tools for further information.

Completing the OSST – HIS

The OSST-HIS is a questionnaire that can be self-administered or completed with the participant +/- proxy respondent as needed. If completed face to face please follow these instructions:

1. Complete each item as indicated with the participant.
2. Clarify any misunderstandings or other issues as you progress.
3. Answer one option for each question only, by ticking the box that applies clearly.
4. Add any comments in the relevant boxes.
5. Return the completed sheet for data entry.

Completing the OSST - HES

The comfort and safety of participants and data collectors are paramount. When carrying out the OSST-HES consider the risk-benefit to all involved when collecting data. If it is felt that oral data collection may be unsuitable or unsafe, return to the risk-benefit assessment and decide whether to continue data collection.

1. Follow principles of universal precaution (Infection control)
2. Set up the assessment area as shown in the training manual.
3. Prepare appropriate zones and placement of protective barriers on the pen and the light source if applicable.
4. Ensure hand hygiene, surface disinfection and wear of personal protective equipment including glasses, mask and gloves.
5. Welcome participant
6. Review process consent.
7. Ensure that the participant is seated with adequate light / light source as indicated.
8. Use a disposable plain mouth mirror.
9. Use sterile gauze to clean surfaces that are covered in debris if necessary.
10. If placing fingers into the mouth, ensure that you avoid placing digits between the biting surfaces of the dentition to avoid accidental injury.
11. Complete OSST-HES according to coding criteria **(Appendix).**

12. Discard all protective barriers, gloves, mouth mirror, and wipes in the waste bag. Clean and disinfect surfaces, pen and light source if applicable.

13. Prepare assessment zone for next participant.

After data collection

14. After data collection, each participant should be given a copy of the *Participant Dental Form **(Appendix)***. This should be completed immediately after dental data collection and discussed with the participant if necessary.

15. It is important that participants are aware that the findings of this data collection process **do not** amount to a dental examination.

16. Anyone who is found to answer YES regarding *Pain*, *Dental decay* or *Gum inflammation* should be advised to seek further advice. Participants are encouraged to attend a person who can support them or a dental professional where these findings indicate a need for assessment.

17. Return OSST-HES and OSST-HIS forms for data entry.

End of section.

Appendix 1 Coding criteria for Health Evaluation Survey Items

Item	Description	Diagnostic codes & criteria:
E1Tooth Count	**I. Item** Tooth count (upper) **Definition:** The number of teeth on the upper jaw **II. Item** Tooth count (lower) **Definition:** The number of teeth on the lower jaw **How to carry out examination:** Use pen light and dental mirror. Ask participant to open their mouth, & remove denture. Look at the upper jaw, count the number of teeth from one end to another (systematic approach). Record on the form. **Other remarks:** The tooth should be considered present when any part of it is visible. Assessor will not need to identify primary or permanent teeth. Tooth count includes false teeth that are fixed (and participant cannot remove from the mouth) such as crown, bridges, and implant fixed prosthesis.	Code each arch separately (e.g. UPPER = X; LOWER = X) **Enter the number of teeth (0,1,2....)**

| E2 **Denture Wear** | Is the participant wearing dentures now?

a. Item: Wearing denture (upper)
Definition: Upper denture is present inside the mouth immediately before data collection.

b. Item: Wearing denture (lower)
Definition: Lower denture is present inside the mouth immediately before data collection.

How to carry out examination:
Use pen light and dental mirror.
Ask participant to open their mouth.
Look at the upper jaw.
Check if the participant is wearing dentures. Record on the form.

Other remarks:
Exclude those who have denture but did not wear it during the examination, or not accessible.
Exclude false teeth that are fixed and cannot be removed from the mouth such as fixed partial denture (bridge). | Code each arch separately

<table><tr><th>Code</th><th>Category</th><th>Diagnostic criteria</th></tr><tr><td>0</td><td>Absent</td><td>No denture in the arch</td></tr><tr><td>1</td><td>Present</td><td>Presence of denture in the arch</td></tr></table>
May include:
Partial denture/ Complete denture
Acrylic or cobalt chrome |
| | | |

| E3 **Occluding Pairs** | No. of biting pairs of teeth.

a. Item: Occluding pairs
Definition: Pattern of occlusal contacts (teeth in contact)

How to carry out examination:
Use pen light and dental mirror. | <table><tr><th>Code</th><th>Category</th><th>Diagnostic criteria</th></tr><tr><td>0</td><td>No occlusal contacts at all</td><td>No teeth are biting on each other.</td></tr></table> |

| | Ask participant to bite down with their back teeth together. Retract cheek using hand mirror, identify canine (eye tooth). Look at the teeth after canine (eye tooth); count the number of upper teeth occluding/meeting the lower teeth. Then, check on the other side. Add the number of teeth contacts from right and left sides. If there is no posterior teeth in contacts, count the number of front teeth (including canines) in contact. Record on the form **Other remarks:** | 1 | 1 or more posterior contacts | Total number of posterior teeth contacts is equal or more than 1. This is in presence of anterior teeth contacts. |
| | | 2 | Anterior contacts only | No posterior teeth in contact. Only front teeth are in contact. |

| **E4&E5** Functional Dentition **(Nguyen et al., 2011)** | **a. Item:** **Definition:** Presence of 3 or 4 occluding pairs of premolars AND all 12 anterior teeth. **Pairs of Premolars (POPs):** Does the participant have three or more occluding pairs of premolars (POPs)? **How to carry out examination:** Use light source and dental mirror. Retract cheek using hand mirror, identify canine (eye-tooth). | E4 | Code | Category | Diagnostic criteria | | :--- | :--- | :--- | | 0 | Sufficient | 3 or 4 Occluding pairs of premolars | | 1 | Insufficient | 2 Occluding pairs of premolars or less | E5 | Code | Category | Diagnostic criteria | | :--- | :--- | :--- |

		Code	Category	Diagnostic criteria
	Count the number of premolar pairs that meet on one side. Then, count the same on the other side. Add the number of premolar contacting pairs from the right and left sides. Front 12 Teeth: Are the participant's **front 12 teeth present** **How to carry out examination:** Use light source and dental mirror. Ask participant to smile. Identify the centre line and count backwards three teeth each side, in each arch. The objective is to visualise if all 12 front teeth (canine to canine, top and bottom) are present. **Other remarks:**	0	Complete anterior 12 teeth	All 12 anterior teeth present
		1	Incomplete anterior 12 teeth	< 12 anterior teeth
		If E4=0 AND E5=0, Functional Dentition= YES		
E5 Oral Cleanliness	**Item:** Oral cleanliness	Code	Category	Diagnostic criteria
	Definition: Presence/Absense of food particles, tartar and plaque in the mouth or on dentures. **How to carry out examination:** Use pen light and dental mirror. Ask the person to take out dentures/false teeth.	0	**Clean** mouth	**Clean:** No obvious food particles, plaque or tartar in mouth or on dentures

		Code	Category	Diagnostic criteria
	Ask the participant to open their mouth, use dental mirror to retract the buccal cheek. Check for presence of food particles, tartar and plaque on the teeth surface. Check on the dentures too. **Other remarks:** If in doubt, score 0.	1	Mouth not clean	**Not Clean:** Obvious food particles, plaque or tartar in mouth or on dentures

E6 Gum Condition	Gum condition **Definition:** The presence of gingival redness, swelling, bleeding and ulcers. **How to carry out examination:** Use pen light and dental mirror. Ask the participant to take out dentures/false teeth. Ask the participant to open their mouth, use dental mirror to retract the buccal cheek. Clean debris with gauze where necessary. Observe the appearance of gum above the teeth, in between the teeth, on the ridge where there is no teeth and on the area under dentures. **Other remarks:**

Diagnostic codes & criteria:

Code	Category	Diagnostic criteria
0	Pink, moist, no bleeding on gums / under dentures	No gingival redness, swelling, bleeding and ulcers. Racial variations of normal & health gums are considered as 0.
1	Redness, swelling, bleeding or ulcers.on gums / under dentures	Redness, swelling, bleeding or ulcers of the attached / free gingiva in any area of the mouth.

E7 CARIOUS TEETH	**Item:** CARIOUS TEETH (HOLES in Teeth) **Definition:** The number of teeth with one or more cavities due to caries (decay), which can be detected by visual examination. **How to carry out examination:** Use pen light and dental mirror. Ask the participant to take out dentures/false teeth. Ask the participant to open their mouth, use dental mirror to retract the cheek. Use gauze to clean and dry teeth surfaces. Check the upper teeth from one side to another (systematic manner). Check all surfaces of teeth. Count the number of teeth with cavitated carious lesions (holes, different in colour, broken down). Do the same for the lower teeth. Record the box that corresponds to the total number of decayed teeth on the form. If in doubt, consider no caries. **Diagnostic codes & criteria:** Cavitated caries means: • At least one hole on tooth. • Different colour from tooth – usually shades of brown. • Hole next to filling (caries)	

Code	Category	Diagnostic criteria
0	0 cavitated teeth	No teeth with cavitated caries.
1	1-2 cavitated teeth	1 or 2 teeth with cavitated caries.
2	3 or more cavitated teeth	3 or more teeth with cavitated caries.

	Other remarks: This category excludes non-cavitated carious lesions. This undercounts cavities interproximally as there is no radiograph examination. This will not determine active or arrested caries as no probing is required.			
E8 ORAL PAIN	**Item:** ORAL PAIN **Definition:** The presence of verbal, physical, or behavioural signs of oral pain within last week. **How to carry out examination:** Ask participant (or supporting person) if there is / has been pain inside the mouth (e.g. toothache or sore areas) reported verbally or vocally in the last week. If they answer yes, this is a verbal sign of dental pain (Score 1 REPORTED ORAL PAIN) go to next question. If they answer no, ask participant (or supporting person) if there has been behavioural signs (such as refused eating or certain food, chewing lips, pulling at face, aggression and self-injurious behaviours related to oral manipulation or function) or physical signs (swelling of cheek or gum,	**Code**	**Category**	**Diagnostic criteria**
		0	NO ORAL PAIN	No (signs of) oral pain in last week (verbal, behavioural or physical)
		1	REPORTED ORAL PAIN	Oral pain reported verbally or vocally by participant in last week
		2	SUGGESTED ORAL PAIN	Oral pain suggested by behavioural signs (such as refused eating or certain food, chewing lips,

	broken teeth, ulcers) suggestive of oral pain in the last week? If they answer yes, this is a behavioural sign of dental pain (Score 2: SUGGESTED ORAL PAIN) If there are no verbal, behavioural or physical signs of pain in last week, score 0.			pulling at face, aggression and self-injurious behaviours related to oral manipulation or function) or physical signs (swelling of cheek or gum, broken teeth, ulcers) in the last week

Appendix 2

Equipment for data collection

Items
Quiet relaxing area with chair and table.
Paperwork as needed.
Light source
Nitrile gloves
Face mask
Protective eye wear
PDI Sani wipes (Tub of 200s)
Purell advanced Handrub 500ml
Protective barriers – Disposable shield No.1 10cm x 15cm
Disposable paper towel
Disposable home use dental mirror
Sterile gauze 10cm x 10cm
Black bin bag
Pen