Clinical Perspective

MBGR Protocol of orofacial myofunctional evaluation with scores

Irene Queiroz Marchesan (CEFAC, Sao Paulo)

Giedre Berretin-Félix (University of Sao Paulo)

Katia Flores Genaro (University of Sao Paulo)

Suggested Citation

Marchesan, I. Q., et al. (2012). MBGR Protocol of orofacial myofunctional evaluation with scores. *International Journal of Orofacial Myology*, 38(1), 38-77.

DOI: <https://doi.org/10.52010/ijom.2012.38.1.5>

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MBGR PROTOCOL OF OROFACIAL MYOFUNCTIONAL EVALUATION WITH SCORES

**IRENE QUEIROZ MARCHESAN PHD,
GIÉDRE BERRETIN-FÉLIX PHD, KÁTIA FLORES GENARO PHD**

ABSTRACT

The MBGR Protocol with scores was first published in 2009. This protocol was widely administered by speech-language pathologists experienced in orofacial myology in different states from Brazil for four months. From the comments and suggestions of these professionals, the protocol was reviewed and modified. A consistent visual training materials program was prepared, and speech-language pathologists, experienced in orofacial myology from different states of Brazil, Venezuela, Peru, and Colombia were trained with the provided materials. These speech-language pathologists administered the protocol for two years. From the data collected by the speech-language pathologists, modifications were made, and a final version was designed. This final version was administered for two-months by the same speech-language pathologists from Brazil, Venezuela, Peru, and Colombia in order to re-test the final version of MBGR protocol. The aim of this study was to demonstrate the efficiency and effectiveness of the protocol to assess orofacial myofunctional alterations. The final version of the MBGR protocol with scores has proven to be efficient and effective in the identification of individuals experiencing orofacial myofunctional disorders.

KEYWORDS: Protocol, validity, validation study, test reproducibility, orofacial myology

INTRODUCTION

Protocols are important in the providing parameters for assessment, especially in a specialty area such as orofacial myology (OM). In Brazil, until the 1980s, there was an absence of structured protocols for the identification of orofacial myofunctional disorders (OMD). Since the 1980s short protocols to assess the OM alterations were designed by different speech-language pathologists (Marchesan, 1997; Marchesan, 2003a; Marchesan, 2003b; Marchesan, 2005a; Marchesan, 2005b; Marchesan 2005c; Cattoni, 2006; Paskay, 2006; Felicio, Ferreira, 2008; Rodrigues, Monção, Moreira, 2008; Cattoni, Fernandes, 2009; Tessitore, Paschoal, Pfeilsticker 2009; Whitaker, Trindade, Genaro, 2009).

During 2007 and 2008, four speech-language pathologists, experienced in OM, decided that it was important to design a structured protocol. From the protocols in existence at that time, a new model protocol was designed and published (Genaro, Berretin-Felix, Redher, Marchesan, 2009).

From the administration of the original 2009 protocol, modifications were made, and a final version was designed. This version consisted of two parts: history and clinical examination. The history section focuses on collecting information about: general health problems; breathing; sleep; previous treatments; feeding; chewing; swallowing; oral and postural habits; communication; education; speech; hearing; and voice. The clinical examination section is composed of eight parts and focuses on assessing: body posture; the face, mandibular and occlusion measurements; extra-oral and intra-oral examinations; mobility of lips, tongue, velum and jaw; pain; tone of lips, mentum, tongue and cheeks; orofacial functions including breathing, chewing, swallowing, speech, and voice.

A scoring system was developed for the results obtained from administering the protocol. Because of the different characteristics of each item assessed, the scores range, from the maximum score considered as being reflective of the most

deficient results and 0 score considered the best or normal performance. At the end of the MBGR protocol, a summary with scores of all items assessed is provided. Photos and video recording are the types of documentation suggested. This is primarily to compare the first evaluation to the re-evaluations.

The aim of this article is to demonstrate the efficiency and effectiveness of the protocol in identifying orofacial myofunctional alterations.

METHODS

The protocol published in 2009 was widely administered by speech-language pathologists experienced in orofacial myology in different states from Brazil for four months. Following the directions of the authors of the protocol, the speech-language pathologists administering the protocol also photographed and recorded the patients during evaluation. The data was collected and the considerations of the speech-language pathologists were sent to the authors, who analyzed all the cases, including the photographs and recordings. From the comments and suggestions of these professionals, the protocol was reviewed and modified.

Understanding the importance of administering the reviewed protocol, the authors searched for speech-language pathologists from Brazil, as well as Latin America, to test the new version of MBGR protocol. A consistent visual training materials package was prepared, and speech-language pathologists experienced in orofacial myology from different states of Brazil, Venezuela, Peru, and Colombia were trained in the use of the materials, and administered the protocol during the following two years.

From the information collected by the speech-language pathologists, modifications were made, and a final version was designed. This final version was administered for two-months by the same speech-language pathologists from Brazil, Venezuela, Peru, and Colombia who administered the previous version in order to re-test the final version of MBGR protocol.

RESULTS

The final version of MBGR protocol is presented in Appendix A. In an attempt to provide examples of some of the items included in the MBGR protocol, Appendix B provides photographic samples of some of the items included on the MBGR to help the new clinician understand the characteristics important to conducting the clinical assessment.

DISCUSSION

The new protocol permits the identification of individuals experiencing orofacial myofunctional disorders, and also presents information on categories of problems. Insight into the potential causes of an orofacial myofunctional disorder, and potential future difficulties that the individual may experience, is also possible for the properly trained evaluator. When a specific protocol is administered by trained individuals, a systematic and homogeneous analysis of the collected information is possible which may justify the knowledge and beliefs currently held about orofacial myofunctional disorders.

As Hogikyan & Sethuraman (1999) and Gasparini & Behlau (2009) indicate in their studies on voice, subjective judgements may be accurate or inaccurate. Informational data from a specific country on the disease incidence, etiology, prognosis, the most frequent symptoms, for example, can only be obtained from the use of a standard protocol.

When protocols are administered during all the treatment phases including evaluation before and after treatment, the comparison of data reveals whether the therapeutic techniques are effective or not. If professionals from different places administer the same protocol, they can compare data from different patients concerning diagnosis and treatment, and potentially identify specific treatment procedures for the various types of orofacial myofunctional disorders, which could then be provided in an efficient and effective manner.

CONCLUSIONS

The MBGR is a two-part protocol composed of history and clinical examination with scores, which allows the speech-language pathologist to assess, diagnose and establish prognostic information for orofacial myofunctional disorders. In order to be confident in the data collected, it is important to use a protocol

which has been developed and reviewed by knowledgeable specialists. The authors feel that this final version of the MBGR protocol is an instrument that will not only help in the identification of individuals with orofacial myofunctional disorders, but also permit individuals interested in conducting future research a protocol which will allow the accurate collection of data.

CONTACT AUTHOR

Irene Queiroz Marchesan PhD.

Speech-Language Pathologist from CEFAC
Post-Graduation in Health and Education
CEFAC' Professor and Board of Directors,
Specialist in Orofacial Myology

Phone number: 55-11-3868.0818

irene@cefac.br

www.cefac.br

Kátia Flores Genaro PhD.

Speech-Language Pathologist
Associate Lecturer
Department of Speech Therapy
Faculty of Odontology
University of Sao Paulo
Bauru, Brazil
Specialist in Orofacial Myology

Giédre Berretin-Félix PhD.

Speech-Language Pathologist,
Associate Lecturer
Department of Speech Therapy
Faculty of Odontology
University of Sao Paulo
Bauru, Brazil,
Specialist in Orofacial Myology.

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APPENDIX A

MBGR PROTOCOL HISTORY <i>Marchesan IQ, Berretin-Felix G, Genaro KF, Rehder MI</i>

Name: _____		Gender F
() M ()		
Examination date: ____ / ____ / ____	Age: ____ years and ____ months	Birth: ____ / ____ / ____
Responsible: _____ Relative: _____ Marital status _____		

Student: ☐ yes ☐ no	Grade: _____
Working: ☐ yes ☐ no	Profession: _____
Worked before ☐ no	☐ yes Professional Area: _____
Practicing sports: ☐ no	☐ yes What: _____

Address: _____		
City: _____	State: _____	ZIP: _____
Phone: Home: (____) _____	Office: (____) _____	Cell: (____) _____
e-mail: _____		
Father's name: _____		Mother's name: _____
Siblings: ☐ no ☐ yes How many: _____		

Who referred patient for evaluation (<i>Name, specialist, phone</i>): _____

Main complaint:

Other complaints affecting: (0) no (1) sometimes (2) yes

() lips	() tongue	() sucking	() chewing	() deglutition
() breathing	() speech	() tongue frenulum	() voice	() hearing
() learning	() facial aesthetic	() posture	() occlusion	() headache
() TMJ clicking	() TMJ pain	() neck pain	() shoulder pain	() other
() mandible range of motion	() mouth opening difficulty			

Family history

☐ no ☐ yes	What kind: _____
--	-------------------------

Intercurrences

During pregnancy: ☐ no ☐ yes	What kind: _____
At birth: ☐ no ☐ yes	What kind: _____

Motor development

Sitting:	☐ adequate	☐ altered	When: _____
Walking:	☐ adequate	☐ altered	When: _____

Motor difficulties: (0) no (1) sometimes (2) yes

☐ running	☐ dressing	☐ tying shoes	☐ buttoning	☐ riding a bike	☐ Other: _____
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Health problems

	What	Treatment	Medication
Neurological:	☐ no ☐ yes _____	_____	_____
Orthopedic:	☐ no ☐ yes _____	_____	_____
Metabolic:	☐ no ☐ yes _____	_____	_____
Digestive:	☐ no ☐ yes _____	_____	_____
Hormonal:	☐ no ☐ yes _____	_____	_____

Other problems: _____

Breathing problems

	Annual frequency	Treatment	Medication
Frequent colds*:	☐ no ☐ yes		
Throat problems:	☐ no ☐ yes		
Tonsils:	☐ no ☐ yes		
Halitosis:	☐ no ☐ yes		
Asthma:	☐ no ☐ yes		
Bronchitis:	☐ no ☐ yes		
Pneumonia:	☐ no ☐ yes		
Rhinitis:	☐ no ☐ yes		
Sinusitis:	☐ no ☐ yes		
Nasal obstruction:	☐ no ☐ yes		
Nasal itching:	☐ no ☐ yes		
Runny nose:	☐ no ☐ yes		
Sneezing in a row:	☐ no ☐ yes		

* Frequent colds: children up to 5 years old - over 12colds a year; between 6 and 12 years old – over 6 colds a year

Other problems: _____

Sleep

Restless sleep:	☐ no	☐ sometimes	☐ yes
Snoring:	☐ no	☐ sometimes	☐ yes
Drooling:	☐ no	☐ sometimes	☐ yes
Apnea:	☐ no	☐ sometimes	☐ yes
Water intake at night:	☐ no	☐ sometimes	☐ yes
Sleeping with mouth open:	☐ no	☐ sometimes	☐ yes
Waking up with a dry mouth:	☐ no	☐ sometimes	☐ yes
Pain in the face when wake up:	☐ no	☐ sometimes	☐ yes
Posture:	☐ side	☐ back	☐ stomach
Hand resting on the face:	☐ no	☐ sometimes [] R [] L	☐ yes [] R [] L

Other problems: _____

Treatments

				reason	Professional
SLPs:	☐ no	☐ done	☐ current		
Physician:	☐ no	☐ done	☐ current		
Psychological :	☐ no	☐ done	☐ current		
Physiotherapy:	☐ no	☐ done	☐ current		
Dental:	☐ no	☐ done	☐ current		
Procedure:	☐ exodontia	☐ prosthesis	☐ implant	☐ fixed device	☐ removable device
Surgery:	☐ no	☐ yes. What? _____			When: _____

Other problems: _____

Feeding

Breastfeeding:	☐ yes. Until: _____	☐ no
Bottle:	☐ yes. Until: _____	☐ no

Feeding – difficulty

Glass:	☐ no	☐ yes (describe): _____
Flavors:	☐ no	☐ yes (describe): _____
Consistencies:	☐ no	☐ yes (describe): _____

Current feeding

What			
Fruits:	☐ no	☐ sometimes	☐ yes
Greens:	☐ no	☐ sometimes	☐ yes
Vegetables:	☐ no	☐ sometimes	☐ yes
Cereals (rice, oat, wheat):	☐ no	☐ sometimes	☐ yes
Grains (beans, lentils, peas):	☐ no	☐ sometimes	☐ yes
Meat:	☐ no	☐ sometimes	☐ yes
Milk and dairy products:	☐ no	☐ sometimes	☐ yes
Sugar:	☐ no	☐ sometimes	☐ yes

Diet predominantly

☐ liquid	☐ pasty	☐ solid
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Activities during meals

Eating only:	☐ at the table	☐ on the couch	☐ on the floor	☐ in bed
Reading:	☐ at the table	☐ on the couch	☐ on the floor	☐ in bed
Watching TV:	☐ at the table	☐ on the couch	☐ on the floor	☐ in bed
Doing homework:	☐ at the table	☐ on the couch	☐ on the floor	☐ in bed
Using computer:	☐ at the table	☐ on the couch	☐ on the floor	☐ in bed

Chewing

Side:	☐ bilateral	☐ unilateral: [] R [] L
Lips:	☐ closed	☐ half-open ☐ open
Noise:	☐ no	☐ sometimes ☐ yes
Drinking during meals:	☐ no	☐ sometimes: [] always [] help to form a bolus ☐ yes: [] always [] help to form a bolus
Pain or discomfort:	☐ no	☐ sometimes: [] R [] L ☐ yes: [] R [] L
TMJ noise:	☐ no	☐ sometimes: [] R [] L ☐ yes: [] R [] L
Chewing difficulties:	☐ no	☐ yes What: _____
Food escape:	☐ no	☐ yes

Other problems: _____

Chewing

☐ adequate	☐ short time	☐ long time
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Chewing speed

	similar	faster	slower
Comparing to the family:	☐	☐	☐
Comparing to friends:	☐	☐	☐

Chewing capacity (how the patient sees his/her chewing)

☐ excellent	☐ good	☐ regular	☐ bad	☐ very bad
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Swallowing

Difficulties:	☐ no	☐ sometimes	☐ yes: _____
Noise:	☐ no	☐ sometimes	☐ yes: _____
Choking:	☐ no	☐ sometimes	☐ yes: _____
Odynophagia:	☐ no	☐ sometimes	☐ yes: _____
Nasal reflux:	☐ no	☐ sometimes	☐ yes: _____
Anterior escape:	☐ no	☐ sometimes	☐ yes: _____
Hawking:	☐ no	☐ sometimes	☐ yes: () during () after _____
Cough:	☐ no	☐ sometimes	☐ yes: () during () after _____
Residue after swallowing:	☐ no	☐ sometimes	☐ yes: _____

Other problems: _____

Oral habits

Pacifier:	☐ no	☐ yes	Until: _____ [] regular [] orthodontic
Thumb sucking:	☐ no	☐ yes	Until: _____
Tongue sucking:	☐ no	☐ yes	Until: _____
Lip liking:	☐ no	☐ yes	When: _____
Cigarette:	☐ no	☐ yes	How many a day: _____
Pipe:	☐ no	☐ yes	[] right [] left
Bruxism:	☐ no	☐ yes	[] day [] night
Grinding:	☐ no	☐ yes	When: _____
Nail biting:	☐ no	☐ yes	When: _____
Cheek biting:	☐ no	☐ yes	When: _____
Other biting habits: ☐ no ☐ yes What: _____ When: _____			

Other: _____

Posture habits

Lower lip sucking:	☐ no	☐ yes
Mandible protruding:	☐ no	☐ yes
Hand resting on chin:	☐ no	☐ yes: [] R [] L
Head resting on hand:	☐ no	☐ yes: [] R [] L
Excessive computer use:	☐ no	☐ yes: posture: _____
Excessive phone use:	☐ no	☐ yes: posture: _____

Other: _____

Communication

Express well:	☐ yes	☐ no
Lack of babbling:	☐ no	☐ yes
Late-talking:	☐ no	☐ yes
Late sentence structuring:	☐ no	☐ yes
Understanding difficulty:	☐ no	☐ yes

Other problems: _____

Speech

Omission:	☐ no	☐ sometimes	☐ yes
Substitution:	☐ no	☐ sometimes	☐ yes
Difficult to understand:	☐ no	☐ sometimes	☐ yes
Difficult to understand on the phone:	☐ no	☐ sometimes	☐ yes
Excessive saliva:	☐ no	☐ sometimes	☐ yes
Restrict mandible movements:	☐ no	☐ sometimes	☐ yes
Tongue protrusion:	☐ no	☐ yes: [] anterior [] lateral	What phones: _____

Other problems: _____

Hearing

Hearing loss:	☐ no	☐ sometimes: [] R [] L	☐ yes: [] R [] L
Otitis:	☐ no	☐ sometimes: [] R [] L	☐ yes: [] R [] L
Buzzing:	☐ no	☐ sometimes: [] R [] L	☐ yes: [] R [] L
Otalgia:	☐ no	☐ sometimes: [] R [] L	☐ yes: [] R [] L
Dizziness /Vertigo:	☐ no	☐ sometimes	☐ yes
Previous audiological assessment:	☐ no	☐ yes. When: _____	

Other problems: _____

Voice

Hoarseness:	☐ no	☐ sometimes	☐ yes
Weakness:	☐ no	☐ sometimes	☐ yes
Hypernasality:	☐ no	☐ sometimes	☐ yes
Hyponasality:	☐ no	☐ sometimes	☐ yes
Aphonia:	☐ no	☐ sometimes	☐ yes
Screaming:	☐ no	☐ sometimes	☐ yes
Pain:	☐ no	☐ sometimes	☐ yes
Throat burning:	☐ no	☐ sometimes	☐ yes

Other problems: _____

Education

Learning difficulties:	☐ no	☐ yes	What: _____
Lack of concentration:	☐ no	☐ sometimes	☐ yes
Memory difficulties:	☐ no	☐ yes	
Fail:	☐ no	☐ yes	How many times: _____
Relationship difficulties:	☐ no	☐ yes	
Handedness:	☐ right-handed ☐ left-handed ☐ both hands		

Other problems:

SLPs responsible: _____

Id number: _____

APPENDIX A (Continued)

MBGR PROTOCOL Orofacial Myofunctional Clinical Examination Marchesan IQ, Berretin Felix G., Genaro KF, Rehder, MI
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Name: _____

Examination date: ____ / ____ / ____ Age: ____ years and ____ months Date of birth: ____ / ____ / ____

1. BODY POSTURE *Observe the patient standing barefoot*

Head [*flexion and extension = yes*] [*rotation = no*] [*inclination = maybe*]

Frontal:	☐ normal	☐ R rotation	☐ L rotation	☐ R inclination	☐ L inclination
Lateral:	☐ normal	☐ anterior	☐ flexion	☐ extension	

Shoulders

Frontal:	☐ normal	☐ high R	☐ high L
Lateral:	☐ normal	☐ anterior rotation	

Comments: _____

2. FACE, MANDIBULAR MOVEMENT AND OCCLUSION MEASUREMENTS

Face (*keep lips closed, take measurements with a caliper rule for three times and calculate average measurements*)

	1st measure (mm)	2nd measure (mm)	3rd measure (mm)	Average (mm)
midface (<i>glabella to subnasal</i>)				
lower face (<i>subnasal to gnathion</i>)				
face height - H (<i>from glabella to gnathion</i>)				
face width - W (<i>prominence of zygomatic arches - this measure will be more accurate with the "spreading caliper" or with the caliper rule adapted with a extension of 10cm</i>)				
right outer eye corner to the right lip corner				
left outer eye corner to the left lip corner				
upper lip (<i>from subnasal point to the lowest point of upper lip</i>)				
lower lip (<i>from the upper point of lower lip to gnathion</i>)				

Comments: _____

Mandibular movements and Occlusion (use copy-pencil and caliper rule. Take measurements for three times and calculate average measurements)

	1st measure (mm)	2nd measure (mm)	3rd measure (mm)	Average (mm)
right mandible laterality (mark the dental midline of the superior arch on the inferior arch, move the jaw to the right and measure the distance between the mark and the superior midline)				
left mandible laterality (mark the dental midline of the superior arch on the inferior arch, move the jaw to the left and measure the distance between the mark and the superior midline)				
overbite (with teeth fully occluded, mark on the vestibular surface of the lower incisors the edge of the upper incisors. Measure the distance of that mark to the edge of the lower incisors. When there is open bite the result between the edges of upper and lower incisors will be negative)				
overjet (measure the distance between the surfaces of the upper and lower incisors in the horizontal plane)				
maximum active interincisal distance – MAID (from the central or lateral upper incisor to the central or lateral lower incisor with maximum open mouth)				
mouth opening (maximum active interincisal distance + overbite)				
MAID with the tip of the tongue touching the incisive papilla (MAIDTP)				
Calculate: $\frac{MAIDTP}{MAID} \times 100$				

3. EXTRAORAL EXAMINATION [] Sum scores from face, lips and masseter (best result = 0 and worst result = 28)

Face [] Sum scores from frontal and lateral norm (best result = 0 / and worst result = 15)
Observe the patient standing barefoot

Frontal Norm (numerical facial analysis) [] Sum scores (best result = 0 / worst result = 3)

Facial type			
Compare height (H) with width (W):	(0) medium (H similar to W)	(1) long (H > W)	(1) short (W > H)
Facial proportions			
Compare middle third with lower third:	(0) similar	(1) larger lower third	(1) smaller lower third
Compare the distance between R outer eye corners to R lip corner and L outer eye corners to L lip corner:	(0) similar	(1) asymmetrical	

Frontal Norm (perceptual facial analysis) [] Sum scores (best result = 0 / worst result = 10)

	Symmetric	Asymmetrical	Description
Infraorbital plane	(0)	(1)	
Zygomatic region	(0)	(1)	
Nasal alar	(0)	(1)	
Cheeks	(0)	(1)	
Nasolabial folds	(0)	(1)	
Upper lip	(0)	(1)	
Lip corners	(0)	(1)	
Lower lip	(0)	(1)	
Mentum	(0)	(1)	
Mandible	(0)	(1)	

Lateral Norm (perceptual facial analysis) [] Sum scores (best result = 0 / worst result = 2)

Facial Pattern:	(0) Pattern I (<i>straight</i>)	(1) Pattern II (<i>convex</i>)	(1) Pattern III (<i>concave</i>)
Nasolabial angle:	(0) around 90° - 110	(1) acute (<90°)	(1) obtuse (>110°)
Comments: _____			

Lips [] Sum scores (best result = 0 / worst result = 11)

Habitual posture:	(0) closed (2) half-open	(1) closed with tension (2) closed with teeth contact	(2) sometimes open, sometimes closed (3) open
Form - Upper - Lower	(0) normal (<i>1st cupid's bow</i>) (0) normal	(1) gull wing (<i>1st and 2nd cupid's bow</i>) (1) discrete eversion	(2) stressed eversion
Upper length:	(0) covers ⅓ of incisors (0) normal	(1) covers more than ⅓ (1) with saliva	(1) covers less than ⅓ (1) dry (2) injured
<i>External mucosa:</i>			

Comments: _____

Masseter [] (Best result = 0 / worst result = 2) *Evaluate through observation and touch:*

Rest	(0) relaxed	(1) contraction (teeth pressure)
Recruitment in isometric contraction:	(0) simultaneous	(1) R side first (1) L side first

Comments: _____

4. INTRAORAL EXAMINATION [] Sum scores from lips, tongue, cheeks, palate, tonsils, teeth and occlusion (Best result = 0 / worst result = 58)

Lips [] Sum scores (best result = 0 / worst result = 5)

Internal mucosa:	(0) normal	(1) with teeth marks	(2) injured
Superior frenulum:	Attachment on alveolar ridge:	(0) adequate	(1) low
	Thickness:	(0) adequate	(1) altered (<i>describe</i>): _____

Comments: _____

Tongue [] Sum scores (best result = 0 / worst result = 17)

Habitual posture:	☐ not visible	(1) on mouth floor	(1) low tip and high back	(1) protrudes between the teeth:
Symmetry:	(0) yes	(1) no (<i>describe</i>):		
Width:	(0) adequate	(1) reduced	(2) increased	
High:	(0) adequate	(1) increased		
Mucosa:	(0) adequate	(1) geographic	(1) fissured	(2) injured (<i>place</i>):-
	(1) with teeth marks (<i>place</i>):		(1) with braces marks (<i>place</i>):	
Frenulum:	Extension: (0) adequate	(1) long	(1) short	
	Tongue fixation: (0) in the middle	(1) between the middle and the apex	(2) at the apex	
	Fixation on the floor of the mouth:	(0) between the sublingual caruncles	(1) on alveolar crest	
	Other characteristics:	(0) none	(1) posterior	(1) thick (1) fibrotic

Comments: _____

Cheeks [] Sum scores (best result = 0 / worst result = 8)

Mucosa: (0) normal	(1) R dental marks/braces (1) L dental marks/braces	(1) R alba (white) line (1) L alba (white) line	(2) R injured (2) L injured
---------------------------	--	--	--------------------------------

Comments: _____

Palate [] Sum scores (best result = 0 / worst result = 8)

Hard:	Depth: (0) adequate	(1) reduced (shallow)	(2) increased (deep)
	Width: (0) adequate	(1) increased (wide)	(2) reduced (narrow)
Velum:	Symmetry: (0) present	(1) absent	
	Extension: (0) adequate	(1) long	(2) short
Uvula:	(0) adequate	(1) altered (<i>describe</i>): _____	

Comments: _____

Tonsils [] Sum scores (best result = 0 / worst result = 4)

Presence:	☐ present	☐ removed	☐ not visible
Size:	(0) adequate	(1) R hypertrophy	(1) L hypertrophy
Color:	(0) adequate	(1) R hyperemia	(1) L hyperemia

Comments: _____

Mallampati Test (Samssoon e Young 1987)

Classification:	() Class I (<i>full visibility of tonsils, uvula and soft palate</i>)	() Class II (<i>visibility of hard and soft palate upper portion of tonsils and uvula</i>)
	() Class III (<i>soft and hard palate and base of the uvula are visible</i>)	() Class IV (<i>only hard palate visible</i>)

Teeth [] Sum scores (best result = 0 / worst result = 5)

Dentition:	☐ deciduous	☐ mixed	☐ permanent
Number of teeth:	R upper ____	L upper ____	R lower ____ L lower ____
Missing teeth:	(0) absent	(1) present (<i>missing elements</i>): _____	
Oral health:	Teeth: (0) good	(1) regular	(2) bad
	Gum: (0) good	(1) regular	(2) bad
Dental prosthesis:	☐ no	☐ removable	☐ fixed ☐ partial denture ☐ denture

Comments: _____

Occlusion [] Sum scores (best result = 0 / worst result = 11)

Midline:	(0) adequate	(1) deviated to R	(1) deviated to L		
Angle's classification:	R side	(0) Class I	(1) Class II 1 st div.	(1) Class II 2nd div.	(1) Class III
	L side	(0) Class I	(1) Class II 1 st div.	(1) Class II 2nd div.	(1) Class III
Disocclusion Guide:	(0) present	(1) absent R	(1) absent L		
Horizontal relationship:	(0) adequate (Overjet between 1 and 3mm)	(1) bite on top (Overjet = 0mm)	(1) excessive overjet (Overjet >3mm)	(1) anterior crossbite (Overjet <0mm)	
Vertical relationship:	(0) adequate (overbite between 1 e 3mm)	(1) overbite >3mm		(1) posterior R open bite	
	(1) bite on top = (overbite=0mm)	(1) anterior open bite ((overbite<0mm)		(1) posterior L open bite	
Transversal relationship:	(0) adequate	(1) posterior R crossbite	(1) posterior L crossbite		
Use of appliance:	☐ no	☐ removable	☐ braces		

Comments: _____

5. MOBILITY [] Sum scores from lips, tongue, velum and jaw (best result = 0 / worst result = 65)

Lips [] Sum scores (best result = 0 / worst result = 24) *Perform with occlusion of the teeth

	Adequate	Mild alteration	Severe alteration	Does not perform
Protrude closed *	(0)	(1)	(2)	(3)
Retract closed *	(0)	(1)	(2)	(3)
Protrude open *	(0)	(1)	(2)	(3)
Retract open *	(0)	(1)	(2)	(3)
Protrude closed to the R*	(0)	(1)	(2)	(3)
Protrude closed to the L*	(0)	(1)	(2)	(3)
Pop protracted	(0)	(1)	(2)	(3)
Pop retracted	(0)	(1)	(2)	(3)

Comments: _____

Tongue [] Sum scores (best result = 0 / worst result = 24)

	Adequate	Mild alteration	Severe alteration	Does not perform
Protrude and retract	(0)	(1)	(2)	(3)
Touch R/L commissures and upper/lower lips sequentially	(0)	(1)	(2)	(3)
Touch incisive papilla	(0)	(1)	(2)	(3)
Touch R cheek	(0)	(1)	(2)	(3)
Touch L cheek	(0)	(1)	(2)	(3)
Click tip	(0)	(1)	(2)	(3)
Suck tongue on palate	(0)	(1)	(2)	(3)
Vibrate	(0)	(1)	(2)	(3)

Comments: _____

Velum [] Sum scores (best result = 0 / worst result = 4)

	Adequate	Reduced movement	Absent movement
Say "a" repeatedly	(0) R (0) L	(1) R (1) L	(2) R (2) L

Comments: _____

Mandible [] Sum scores (best result = 0 / worst result = 13)

	Adequate	Reduced	Increased	Does not perform	With deviation		With noise	With pain
Mouth opening	(0)	(1)	(1)	(2)	(1) R	(1) L	(1)	(1)
<i>Expected scores: child = 35 to 50mm / adult = 40 to 55mm</i>								
Mouth closure	(0)	-	-	-	(1) R	(1) L	(1)	(1)
R Laterality	(0)	(1)	(1)	(2)	-	-	(1)	(1)
L Laterality	(0)	(1)	(1)	(2)	-	-	(1)	(1)
<i>Expected scores: child = 6 a 10mm / adult = 8 a 12mm</i>								

Comments: _____

6. PAIN WITH PALPATION [] Sum scores (best result = 0 / worst result = 10)

	Absent		Present	
Anterior temporal	(0) R	(0) L	(1) R	(1) L
Superficial masseter	(0) R	(0) L	(1) R	(1) L
Trapezius	(0) R	(0) L	(1) R	(1) L
Sternocleidomastoid	(0) R	(0) L	(1) R	(1) L
TMJ	(0) R	(0) L	(1) R	(1) L

Comments: _____

7. TONE [] Sum scores (best result = 0 / worst result = 6) *Observe and touch to evaluate:*

	Normal	Reduced	Increased
Upper lip	(0)	(1)	(1)
Lower lip	(0)	(1)	(1)
Mentum	(0)	(1)	(1)
Tongue	(0)	(1)	(1)
Right cheek	(0)	(1)	(1)
Left cheek	(0)	(1)	(1)

Comments: _____

8. OROFACIAL FUNCTIONS [] Sum scores from breathing, chewing, swallowing and speech
(best result = 0 / worst result = 98)

Breathing [] Sum scores (best result = 0 / worst result = 5)

When altered, the origin is [] functional [] structural [] other

Type: (0) medium-lower	(1) medium-high	(1) other (<i>describe</i>): _____
Mode: (0) nasal	(1) oronasal	(2) oral
Possibility of breathing to the nose: (0) 2 minutes or more (1) between 1 and 2 minutes (2) less than 1 minute		

Comments: _____

Nasal flux (<i>use mirror</i>)	Before blowing:	() similar between nostrils	() mildly asymmetric	() severely asymmetric
	After blowing in order to clean:	() similar between nostrils	() mildly asymmetric	() severely asymmetric

Comments: _____

:

Chewing [] Sum scores (best result = 0 / worst result = 10)

When altered, the origin is [] functional [] structural [] TMD [] other

Habitual chewing (always use the same food)

Incision:	(0) anterior	(1) lateral	(1) other
Trituration/Pulverization:	(0) posterior teeth (0) efficient	(1) anterior teeth (1) inefficient	(1) with help of tongue
Number of cycles: (use video)	right: 1 st portion: _____ left: 1 st portion: _____ right/left: 1 st portion: _____ total: 1 st portion: _____	2 nd portion: _____ 2 nd portion: _____ 2 nd portion: _____ 2 nd portion: _____	3 rd portion: _____ 3 rd portion: _____ 3 rd portion: _____ 3 rd portion: _____
Chewing pattern:	(0) bilateral alternate (0) unilateral preferential: _____	(1) bilateral simultaneous (2) chronic unilateral: _____	
Lip closure:	(0) systematic	(1) unsystematic	(2) absent
Speed:	(0) adequate	(1) increased	(1) reduced
Noisy chewing:	(0) no	(1) yes	
Unexpected muscle contractions:	(0) absent	(1) present (describe): _____	
Duration of chewing (use portions of standard size and the same food)			
1 st portion: _____ seconds	2 nd portion: _____ seconds	3 rd portion: _____ seconds	Average: _____ seconds

Comments: _____

Ask the patient:

Preferred side of chewing:	☐ right and left	☐ right	☐ left	☐ does not know
Pain when chewing:	☐ no	☐ right	☐ left	
TMJ noise:	☐ no	☐ right	☐ left	

Comments: _____

Swallowing [] Sum scores (best result = 0 / worst result = 39)

When altered, the origin is [] functional [] structural [] other _____

Habitual swallowing (solid) [] Sum scores (best result = 0 / worst result = 15)

Lip posture:	(0) closed	(1) partially closed	(1) inferior lip touching upper teeth	(2) open
Tongue posture:	☐ not seen	(0) behind teeth	(1) against teeth	(2) interdental
Food escapes:	(0) no	(1) partial	(2) yes	
Orbicular contraction:	(0) adequate	(1) mild	(2) severe	
Mentum contraction:	(0) absent	(1) mild	(2) severe	
Head movement:	(0) absent	(1) present		
Noise:	(0) absent	(1) present		
Coordination:	(0) adequate	(1) chokes	(1) coughs	
Residue after swallowing:	(0) absent	(1) present		

Comments: _____

Habitual deglutition (liquid - water) [] Sum scores (best result = 0 / worst result = 11)

Tongue posture: ☐ not seen	(0) behind teeth	(1) against teeth	(2) interdental
Liquid containment: (0) adequate	(1) inadequate		
Liquid volume: (0) satisfactory	(1) increased	(1) reduced	
Mentum contraction: (0) absent	(1) mild	(2) severe	
Head movement: (0) absent	(1) present		
Noise: (0) absent	(1) present		
Rhythm: (0) sequential	(1) sip by sip		
Coordination: (0) adequate	(1) chokes	(1) coughs	

Comments: _____

Directed deglutition (liquid - water) [] Sum scores (best result = 0 / worst result = 13)

Put water in the mouth and swallow only upon request of the evaluator

Lip posture: (0) closed	(1) partially closed	(1) lower lip touching upper teeth	(2) open
Tongue posture: (0) behind teeth	(1) against teeth	(2) interdental	
Liquid containment: (0) adequate	(1) partial	(1) inadequate	
Orbicular contraction: (0) adequate	(1) mild	(2) severe	
Mentum contraction: (0) absent	(1) mild	(2) severe	
Head movement: (0) absent	(1) present		
Noise: (0) absent	(1) present		
Coordination: (0) adequate	(1) chokes	(1) coughs	

Comments: _____

Ask the patient

Swallowing difficulty: ☐ no	☐ yes (describe) _____		
Tongue position: ☐ behind upper teeth	☐ behind lower teeth	☐ interdental	☐ patient does not know

Comments: _____

Speech [] Sum scores from the five tests (best result = 0 / worst result = 44)

When altered, the origin is [] phonetic [] phonetic/phonological [] phonological _____
In case of phonetic origin, this is: [] functional [] structural [] TMD [] neuromuscular [] other _____

Spontaneous speech [] Sum scores (best result = 0 / worst result = 6)

Ask the following questions: "tell me your name and age"

"tell me what you do (study, work)"

"tell me about a trip you enjoyed"

Omission: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____
Substitution: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____
Distortion: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____

Automatic speech [] Sum scores (best result = 0 / worst result = 6)

Count from 1 to 20; weekdays and months of the year

Omission: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____
Substitution: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____
Distortion: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____

Picture naming [] Sum scores (best result = 0 / worst result = 6)

Use the pictures from the board

Omission: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____
Substitution: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____
Distortion: (0) absent	(1) unsystematic	(2) systematic	Phone(s): _____

In case of distortion, that is related to the following tongue aspects:

- [] anterior interdental [] lateral interdental [] absence or reduce vibration of tip [] multiple vibration of tip
[] elevation of dorsum [] lowering of dorsum [] other: _____

Motor coordination of speech [] Sum scores (best result = 0 / worst result = 8)

Request fast and repeated emission of syllables and trisyllabic sequence for 10 seconds each.

		Speed		Rhythm	
		Adequate	Inadequate	Adequate	Inadequate
[pa]	(0)	(1)	(0)	(1)	
[ta]	(0)	(1)	(0)	(1)	
[ka]	(0)	(1)	(0)	(1)	
[pataka]	(0)	(1)	(0)	(1)	

Comments:

General aspects [] Sum scores (best result = 0 / worst result = 18)

Saliva: (0) patient swallows	(1) accumulates in the R/L commissures (2) splashes	(1) accumulates in the lower lip (3) slobbers
Mouth opening: (0) normal	(1) reduced	(1) increased
Tongue position: (0) adequate	(1) on the floor	(2) anterior (2) posterior (2) low tip and high sides
Lip movement: (0) adequate	(1) reduced	(1) exaggerated
Mandible movement: (0) adequate trajectory	(1) right deviation	(1) left deviation (1) anterior
Resonance: (0) oronasal balance	(1) reduced use of nose	(1) excessive use of nose (1) laryngopharyngeal
Articulatory precision: (0) adequate	(1) unsystematic imprecision	(2) systematic imprecision
Speed: (0) normal	(1) increased	(1) reduced
Coordination between breathing and speech:	(0) adequate	(1) altered

In case of imprecision, it is related to:

☐ tone ☐ oronasal breathing ☐ malocclusion ☐ use of dental prosthesis ☐ speech rate
☐ hearing ☐ use of medication ☐ amount of saliva ☐ reduced mouth opening
☐ neurological disorder ☐ muscle fatigue ☐ anxiety/depression ☐ other: _____

Comments:

Therapeutic test (*syllable repetition*) Request syllables repetition that contain the phone with alteration, using the vowel “e”.

This test is used to observe if when the pattern is provided, the production of the altered phone is modified

Tested phone	Production does not change	Production improves	Production becomes adequate

Comments:

Voice Request sustained emission of vowel “a”

Pitch: () adequate	() low	() high
Loudness: () adequate	() loud	() soft
Voice quality: () adequate	() disordered	

DOCUMENTATION

Suggested Photos

Body		
- front:	() Yes	() No
- right side:	() Yes	() No
Face		
- front: - rest:	() Yes	() No
- smile:	() Yes	() No
- right side:	() Yes	() No
Lower Third		
- front:	() Yes	() No
- right side:	() Yes	() No
Oral Cavity		
- superior arch:	() Yes	() No
- inferior arch:	() Yes	() No
Occlusion:		
- anterior:	() Yes	() No
- right side:	() Yes	() No
- left side:	() Yes	() No
Tongue:		
	() Yes	() No
Lingual frenulum (with open mouth, elevating apex without touching any place):		
	() Yes	() No

Others: _____

Suggested Video

Mobility:	Chewing:	Swallowing:	Speech:
() Yes () No	() Yes () No	() Yes () No	() Yes () No

Summary of the Orofacial Myofunctional Examination – MBGR
Marchesan IQ, Berretin Felix G., Genaro KF, Rehder, MI

Name: _____ number: _____ Examination date: ____ / ____ / ____

Initial Examination Scores	Re-evaluations (____ / ____ / ____) (____ / ____ / ____)	
[] EXTRAORAL EXAMINATION (best result = 0 / worst = 28)	[]	[]
[] Face (best result = 0 / worst = 15)	[]	[]
[] Lips (best result = 0 / worst = 11)	[]	[]
[] Masseter (best result = 0 / worst = 2)	[]	[]
[] INTRAORAL EXAMINATION (best result = 0 / worst = 58)	[]	[]
[] Lips (best result = 0 / worst = 5)	[]	[]
[] Tongue (best result = 0 / worst = 17)	[]	[]
[] Cheeks (best result = 0 / worst = 8)	[]	[]
[] Palate (best result = 0 / worst = 8)	[]	[]
[] Tonsils (best result = 0 / worst = 4)	[]	[]
[] Teeth (best result = 0 / worst = 5)	[]	[]
[] Occlusion (best result = 0 / worst = 11)	[]	[]
[] MOBILITY (best result = 0 / worst = 65)	[]	[]
[] Lips (best result = 0 / worst = 24)	[]	[]
[] Tongue (best result = 0 / worst = 24)	[]	[]
[] Soft palate (best result = 0 / worst = 4)	[]	[]
[] Mandible (best result = 0 / worst = 13)	[]	[]
[] PAIN WITH PALPATION (best result = 0 / worst = 10)	[]	[]
[] TONE (best result = 0 / worst = 6)	[]	[]
[] Lips (upper + lower) (best result = 0 / worst = 2)	[]	[]
[] Mentum (best result = 0 / worst = 1)	[]	[]
[] Tongue (best result = 0 / worst = 1)	[]	[]
[] Cheeks (R+L) (best result = 0 / worst = 2)	[]	[]
[] OROFACIAL FUNCTIONS (best result = 0 / worst = 98)	[]	[]
[] Breathing (best result = 0 / worst = 5)	[]	[]
[] Chewing (best result = 0 / worst = 10)	[]	[]
[] Swallowing (best result = 0 / worst = 39)	[]	[]
[] Speech (best result = 0 / worst = 44)	[]	[]

Data from other health professionals:

Requested examinations:

Other alterations:

Possible Diagnosis:

Prognosis:

Therapy plan:

Referrals to other professionals: _____

Counseling:

Responsible speech language-pathologist: _____

Professional's registration number: _____

APPENDIX B :
MBGR: WITH PHOTO EXAMPLES
Orofacial Myofunctional Examination - MBGR
 Marchesan IQ, Berretin-Felix G, Genaro KF, Rehder MI

Name: _____

Examination date: ____ / ____ / ____ Age: ____ years and ____ months Date of birth: ____ / ____ / ____

1. BODY POSTURE *Observe the patient standing barefoot*

Head [flexion and extension = yes] [rotation = no] [inclination = maybe]

Frontal:	☐ normal	☐ R rotation	☐ L rotation	☐ R inclination	☐ L inclination
Lateral:	☐ normal	☐ anterior	☐ flexion	☐ extension

Rotation R. and L. (no)

Inclination R. and L. (maybe)

Anterior

Flexion

Extension

Shoulders

Frontal:	☐ normal	☐ high R	☐ high L
Lateral:	☐ normal	☐ anterior rotation	

Comments:

High R

High L

Anterior rotation

2. FACE, MANDIBULAR MOVEMENT AND OCCLUSION MEASUREMENTS

Face (keep lips closed, take measurements with a caliper rule for three times and calculate average measurements)

	1st measure (mm)	2nd measure (mm)	3rd measure (mm)	Average (mm)
midface (glabella to subnasal)				
lower face (subnasal to gnathion)				
face height - H (from glabella to gnathion)				
face width - W (prominence of zygomatic arches - this measure will be more accurate with the "spreading caliper" or with the caliper rule adapted with a extension of 10cm)				
right outer eye corner to the right lip corner				
left outer eye corner to the left lip corner				
upper lip (from subnasal point to the lowest point of upper lip)				
lower lip (from the upper point of lower lip to gnathion)

Mandibular movements and Occlusion (use copy-pencil and caliper rule. Take measurements for three times and calculate average measurements)

	1st measure (mm)	2nd measure (mm)	3rd measure (mm)	Average (mm)
right mandible laterality (mark the dental midline of the superior arch on the inferior arch, move the jaw to the right and measure the distance between the mark and the superior midline)				
left mandible laterality (mark the dental midline of the superior arch on the inferior arch, move the jaw to the left and measure the distance between the mark and the superior midline)				
overbite (with teeth fully occluded, mark on the vestibular surface of the lower incisors the edge of the upper incisors. Measure the distance of that mark to the edge of the lower incisors. When there is open bite the result between the edges of upper and lower incisors will be negative)				
overjet (measure the distance between the surfaces of the upper and lower incisors in the horizontal plane)				
maximum active interincisal distance – MAID (from the central or lateral upper incisive to the central or lateral lower incisive with maximum open mouth)				
mouth opening (maximum active interincisal distance + overbite)				
MAID with the tip of the tongue touching the incisive papilla (MAIDTP)				
Calculate: $\frac{MAIDTP}{MAID} \times 100$

Right and left mandible laterality

Overbite

Overjet

Maximum active interincisal distance – MAID
MAID with the tip of the tongue touching the incisive papilla (MAIDTP)

3. EXTRAORAL EXAMINATION [] Sum scores from face, lips and masseter (best result = 0 / worst result = 28)

Face [] Sum scores from frontal and lateral norm (best result = 0 / worst result = 15)
Observe the patient standing barefoot

Frontal Norm (numerical facial analysis) [] Sum scores (best result = 0 / worst result = 3)

Facial type Compare height (H) with width (W):	(0) medium (H similar to W)	(1) long (H > W)	(1) short (W > H)
Facial proportions Compare middle third with lower third:	(0) similar	(1) larger lower third	(1) smaller lower third
Compare the distance between R outer eye corners to R lip corner and L outer eye corners to L lip corner:	(0) similar	(1) asymmetrical	

Frontal Norm (perceptual facial analysis) [] Sum scores (best result = 0 / worst result = 10)

	Symmetric	Asymmetrical	Description
Infraorbital plane	(0)	(1)	
Zygomatic region	(0)	(1)	
Nasal alar	(0)	(1)	
Cheeks	(0)	(1)	
Nasolabial folds	(0)	(1)	
Upper lip	(0)	(1)	
Lip corners	(0)	(1)	
Lower lip	(0)	(1)	
Mentum	(0)	(1)	
Mandible (body and ramus)	(0)	(1)

Lateral Norm (perceptual facial analysis) [] Sum scores (best result = 0 / worst result = 2)

Facial Pattern:	(0) Pattern I (<i>straight</i>)	(1) Pattern II (<i>convex</i>)	(1) Pattern III (<i>concave</i>)
Nasolabial angle:	(0) around 90° - 110	(1) acute (<90°)	(1) obtuse (>110°)

Comments:

Pattern I

Pattern II

Pattern III

Nasolabial angle

Obtuse (>110°)

Acute (<90°)

Around (90° - 110°)

Obtuse (>110°)

Obtuse (>110°)

Lips [] Sum scores (best result = 0 / worst results = 11)

Habitual posture:	(0) closed (2) half-open	(1) closed with tension (2) closed with teeth contact	(2) sometimes open, sometimes closed (3) open
Form - Upper - Lower	(0) normal (1st cupid's bow) (0) normal	(1) gull wing (1st and 2nd cupid's bow) (1) mild eversion	(2) severe eversion
Upper length:	(0) covers 2/3 of incisors (0) normal	(1) covers more than 2/3 (1) with saliva	(1) covers less than 2/3 (1) dry (2) injured
External mucosa:			

Comments:

Masseter [] (Best result = 0 / worst = 2) Evaluate through observation and palpation:

Rest	(0) relaxed	(1) contraction (clenching teeth)
Recruitment in isometric contraction:	(0) simultaneous	(1) R side first (1) L side first

Comments:

4. INTRAORAL EXAMINATION [] Sum scores from lips, tongue, cheeks, palate, tonsils, teeth and occlusion
(Best result = 0 / worst result = 58)

Lips [] Sum scores (best result = 0 / worst result = 5)

Internal mucosa:	(0) normal	(1) with teeth marks	(2) injured
Superior frenulum:	Attachment on alveolar ridge:	(0) adequate	(1) low
	Thickness:	(0) adequate	(1) altered (describe): _____

Comments:

Lips - Internal mucosa

Superior frenulum

Adequate

Low

Thickness: altered

Tongue [] Sum scores (best result = 0 / worst result = 17)

Habitual posture:	☐ not visible	(1) on mouth floor	(1) low tip and high back	(1) protrudes between the teeth:
Symmetry:	(0) yes	(1) no (<i>describe</i>):		
Width:	(0) adequate	(1) reduced	(2) increased	
High:	(0) adequate	(1) increased		
Mucosa:	(0) adequate	(1) geographic	(1) fissured	(2) injured (<i>place</i>):
	(1) with teeth marks (<i>place</i>):		(1) with braces marks (<i>place</i>):	
Extension: (0) adequate (1) long (1) short Tongue fixation: (0) in the middle (1) between the middle and the apex (2) at the apex				
Frenulum:	Fixation on the floor of the mouth:		(0) between the sublingual caruncles	(1) on alveolar crest
	Other characteristics		(0) none	(1) posterior (1) thick (1) fibrotic

Comments:

Lingual Frenulum

Extension

Tongue Fixation

Between sublingual caruncles

On alveolar crest

Posterior

Thick

Fibrotic

The real ankyloglossia

Cheeks [] Sum scores (best result = 0 / worst result = 8)

Mucosa: (0) normal	(1) R dental/braces marks (1) L dental/braces marks	(1) R alba (white) line (1) L alba (white) line	(2) R injured (2) L injured
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Comments:

Palate [] Sum scores (best result = 0 / worst result = 8)

Hard:	Depth: (0) adequate	(1) reduced (shallow)	(2) increased (deep)
	Width: (0) adequate	(1) increased (wide)	(2) reduced (narrow)
Velum:	Symmetry: (0) present	(1) absent	
	Extension: (0) adequate	(1) long	(2) short
Uvula:	(0) adequate	(1) altered (<i>describe</i>): _____	

Comments:

Palate Hard: examples

Velum and uvula: examples

Tonsils [] Sum scores (best result = 0 / worst result = 4)

Presence:	☐ present	☐ removed	☐ not visible
Size:	(0) adequate	(1) R hypertrophy	(1) L hypertrophy
Color:	(0) adequate	(1) R hyperemia	(1) L hyperemia

Comments:

Tonsils: examples

Mallampati Test (Samssoon e Young 1987)

Classification:	() Class I (full visibility of tonsils, uvula and soft palate)	() Class II (visibility of hard and soft palate upper portion of tonsils and uvula)
	() Class III (soft and hard palate and base of the uvula are visible)	() Class IV (only hard palate visible)

Teeth [] Sum scores (best result = 0 / worst result = 5)

Dentition:	☐ deciduous	☐ mixed	☐ permanent
Number of teeth:	R upper ____	L upper ____	R lower ____ L lower ____
Missing teeth:	(0) absent (1) present (missing elements): _____		
Oral health:	Teeth: (0) good (1) regular (2) bad	Gum: (0) good (1) regular (2) bad	
Dental prosthesis:	☐ no	☐ removable	☐ fixed ☐ partial denture ☐ denture

Comments:

Occlusion [] Sum scores (best result = 0 / worst result = 11)

Midline:	(0) adequate	(1) deviated to R	(1) deviated to L		
Angle's classification:	R side	(0) Class I	(1) Class II 1 st div.	(1) Class II 2 nd div.	(1) Class III
	L side	(0) Class I	(1) Class II 1 st div.	(1) Class II 2 nd div.	(1) Class III
Disocclusion Guide:	(0) present	(1) absent R	(1) absent L		
Horizontal relationship:	(0) adequate (Overjet between 1 and 3mm)	(1) bite on top (Overjet = 0mm)	(1) excessive overjet (overjet >3mm)	(1) anterior crossbite (Overjet <0mm)	
Vertical relationship:	(0) adequate (overbite between 1 - 3mm)	(1) overbite (>3mm)	(1) anterior open bite ((overbite<0mm)	(1) posterior R open bite	(1) posterior L open bite
Transversal relationship:	(0) adequate	(1) posterior R crossbite	(1) posterior L crossbite		
Use of appliance:	☐ no	☐ removable	☐ braces		

Comments:

Midline: adequate

deviated to R

deviated to L

I

II

III

Class II 1st div

Class II 2nd div.

Angle's Classification

Disocclusion Guide

Present in left canine

Absent - right

adequate

bite on top

overjet

anterior crossbite

Horizontal relationship

Vertical relationship

Use of appliance

5. MOBILITY [] Sum scores from lips, tongue, velum and jaw (best result = 0 / worst result = 65)

Lips [] Sum scores (best result = 0 / worst result = 24) **Perform with occlusion of the teeth*

	Adequate	Mild Alteration	Severe Alteration	Does not perform
Protrude closed *	(0)	(1)	(2)	(3)
Retract closed *	(0)	(1)	(2)	(3)
Protrude open *	(0)	(1)	(2)	(3)
Retract open *	(0)	(1)	(2)	(3)
Protrude closed to the R*	(0)	(1)	(2)	(3)
Protrude closed to the L*	(0)	(1)	(2)	(3)
Pop protracted	(0)	(1)	(2)	(3)
Pop retracted	(0)	(1)	(2)	(3)

Comments:

Tongue [] Sum scores (best result = 0 / worst result = 24)

	Adequate	Mild Alteration	Severe Alteration	Does not perform
Protrude and retract	(0)	(1)	(2)	(3)
Touch R/L commissures and upper/lower lips sequentially	(0)	(1)	(2)	(3)
Touch incisive papilla	(0)	(1)	(2)	(3)
Touch R cheek	(0)	(1)	(2)	(3)
Touch L cheek	(0)	(1)	(2)	(3)
Click tip	(0)	(1)	(2)	(3)
Suck tongue on palate	(0)	(1)	(2)	(3)
Vibrate	(0)	(1)	(2)	(3)

Comments:

Velum [] Sum scores (best result = 0 / worst result = 4)

Say "a" repeatedly	Adequate		Reduced movement		Absent movement	
	(0) R	(0) L	(1) R	(1) L	(2) R	(2) L

Comments:

Mandible [] Sum scores (best result = 0 / worst result = 13)

	Adequate	Reduced	Increased	Does not perform	With deviation		With noise	With pain
Mouth opening	(0)	(1)	(1)	(2)	(1) R	(1) L	(1)	(1)
<i>Expected scores: child = 35 to 50mm and adult = 40 to 55mm</i>								
Mouth closure	(0)	-	-	-	(1) R	(1) L	(1)	(1)
R Laterality	(0)	(1)	(1)	(2)	-		(1)	(1)
L Laterality	(0)	(1)	(1)	(2)	-		(1)	(1)
<i>Expected scores: child = 6 a 10mm and adult = 8 a 12mm</i>								

Comments:

6. PAIN WITH PALPATION [] Sum scores (best result = 0 / worst result = 10)

	Absent		Present	
Anterior temporal	(0) R	(0) L	(1) R	(1) L
Superficial masseter	(0) R	(0) L	(1) R	(1) L
Trapezius	(0) R	(0) L	(1) R	(1) L
Sternocleidomastoid	(0) R	(0) L	(1) R	(1) L
TMJ	(0) R	(0) L	(1) R	(1) L

Comments:

Anterior temporal

Superficial masseter

Trapezius

Sternocleidomastoid

7. TONE [] Sum scores (best result = 0 / worst result = 6) *Observe and touch to evaluate:*

	Normal	Reduced	Increased
Upper lip	(0)	(1)	(1)
Lower lip	(0)	(1)	(1)
Mentum	(0)	(1)	(1)
Tongue	(0)	(1)	(1)
Right cheek	(0)	(1)	(1)
Left cheek	(0)	(1)	(1)

Comments:

Upper and lower lip

Mentum

Tongue

Cheek