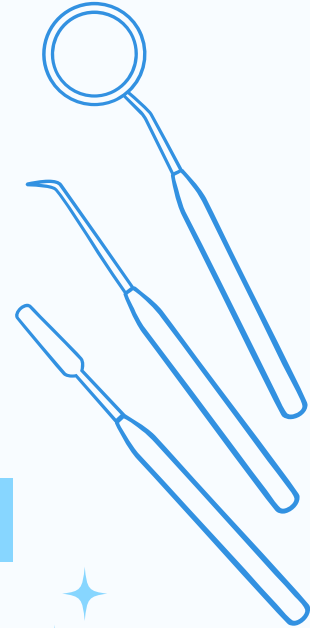




Orofacial Pain Classification Diagnostic Tool


Angela Chen DDS 2023





Objectives and Goals


Orofacial Pain Diagnostic Tool



Quick and
accurate
diagnosis

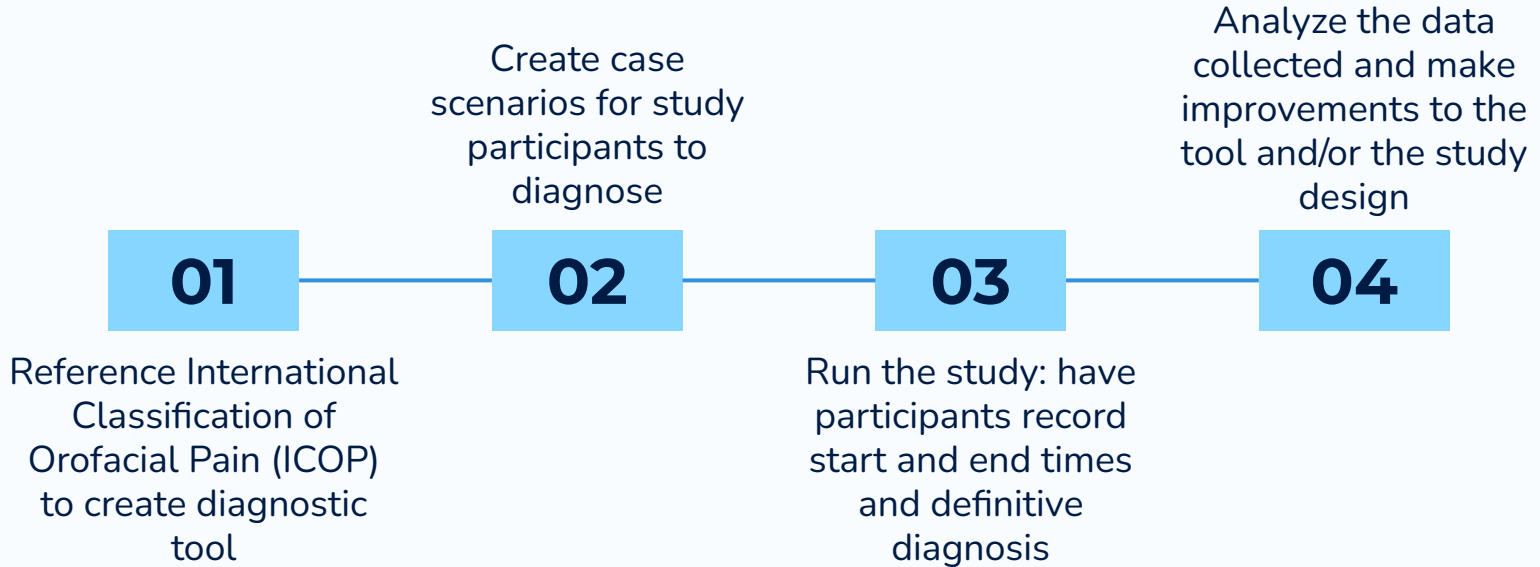
Differentiation of
trigeminal neuralgias,
neuropathic pain, and
idiopathic pain

For dental
practitioners of all
experience levels





Methods





Methods

Start time: _____

History

Your patient has a severe, sharp pain in the oval area, which lasts for 30 seconds. It is triggered by light touch to the oval area. If there is no trigger, he has no pain.



Imaging

On the MRI, a blood vessel is compressing and deforming the trigeminal nerve.

Please circle his single diagnosis on the right:



End time: _____

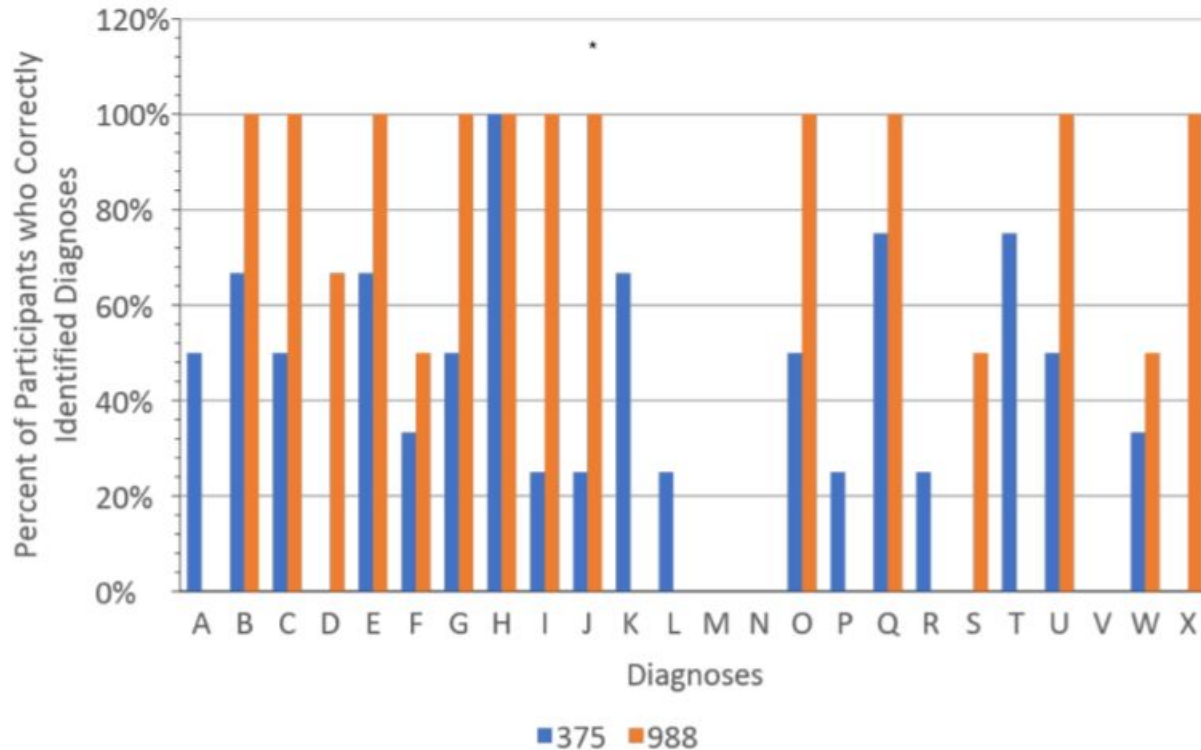
Case: 449

Cohort:

- (a) Classical TN, purely paroxysmal
- (b) Classical TN w/concomitant continuous pain
- (c) TN attributed to MS
- (d) TN attributed to SOL
- (e) TN attributed to other cause
- (f) Idiopathic TN, purely paroxysmal
- (g) Idiopathic TN w/concomitant continuous pain
- (h) Trigem NP attributed to herpes zoster (HZ)
- (i) Trigem postherpetic NP
- (j) Post-traumatic trigem NP
- (k) Prob post-traumatic trigem NP
- (l) Trigem NP attributed to other disorders
- (m) Probable trigem NP attributed to other disorders
- (n) Idiopathic Trigem NP
- (o) Burning mouth syndrome (BMS) w/o somatosensory Δ s
- (p) BMS w/ somatosensory Δ s
- (q) Prob BMS
- (r) Persistent idiopathic facial pain (PIFP) w/o somatosensory Δ s
- (s) PIFP w/ somatosensory Δ s
- (t) Probable PIFP
- (u) Persistent idiopathic dentoalveolar pain (PIDAP) w/ somatosensory Δ s
- (v) PIDAP w/o somatosensory Δ s
- (w) Probable PIDAP
- (x) Continuous Unilateral Facial Pain with Additional Attacks



Preliminary Results



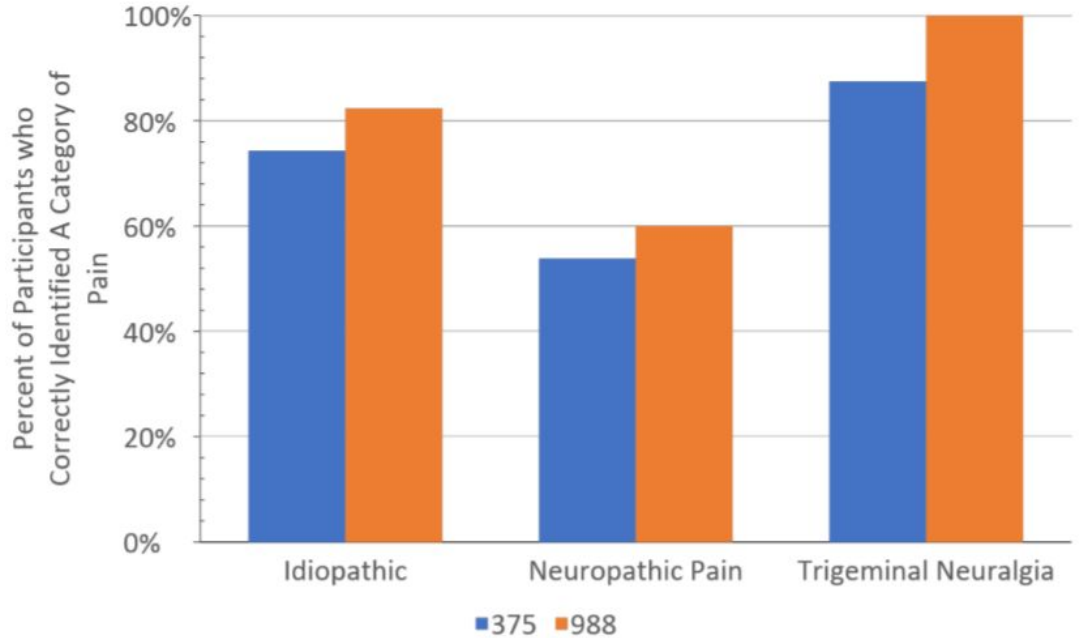
Cohort	375		988	
	Y	N	Y	N
A	50.00%	50.00%		
B	66.67%	33.33%	100.00%	0.00%
C	50.00%	50.00%	100.00%	0.00%
D	0.00%	100.00%	66.67%	33.33%
E	66.67%	33.33%	100.00%	0.00%
F	33.33%	66.67%	50.00%	50.00%
G	50.00%	50.00%	100.00%	0.00%
H	100.00%	0.00%	100.00%	0.00%
I	25.00%	75.00%	100.00%	0.00%
J	25.00%	75.00%	100.00%	0.00%
K	66.67%	33.33%	0.00%	100.00%
L	25.00%	75.00%	0.00%	100.00%
M	0.00%	100.00%	0.00%	100.00%
N	0.00%	100.00%	0.00%	100.00%
O	50.00%	50.00%	100.00%	0.00%
P	25.00%	75.00%	0.00%	100.00%
Q	75.00%	25.00%	100.00%	0.00%
R	25.00%	75.00%	0.00%	100.00%
S	0.00%	100.00%	50.00%	50.00%
T	75.00%	25.00%	0.00%	100.00%
U	50.00%	50.00%	100.00%	0.00%
V	0.00%	100.00%	0.00%	100.00%
W	33.33%	66.67%	50.00%	50.00%
X	0.00%	100.00%	100.00%	0.00%

For many of the specific diagnoses, either all of the participants arrived at the correct answer or the incorrect answer, as indicated by the 100% in the chart above.

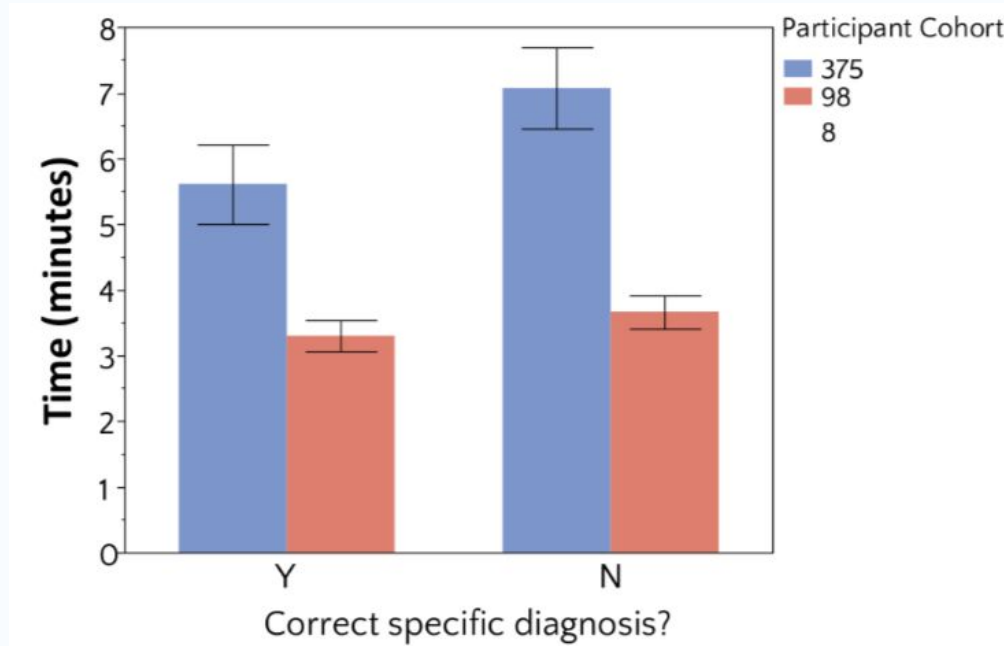
Preliminary Results

The category most correctly identified was trigeminal neuralgias, followed by idiopathic conditions. Neuropathic pain was the category least correctly identified.

Correct Category	375		988	
	Y	N	Y	N
Idiopathic	74.29%	25.71%	82.35%	17.65%
Neuropathic Pain	53.85%	46.15%	60.00%	40.00%
Trigeminal Neural	87.50%	12.50%	100.00%	0.00%

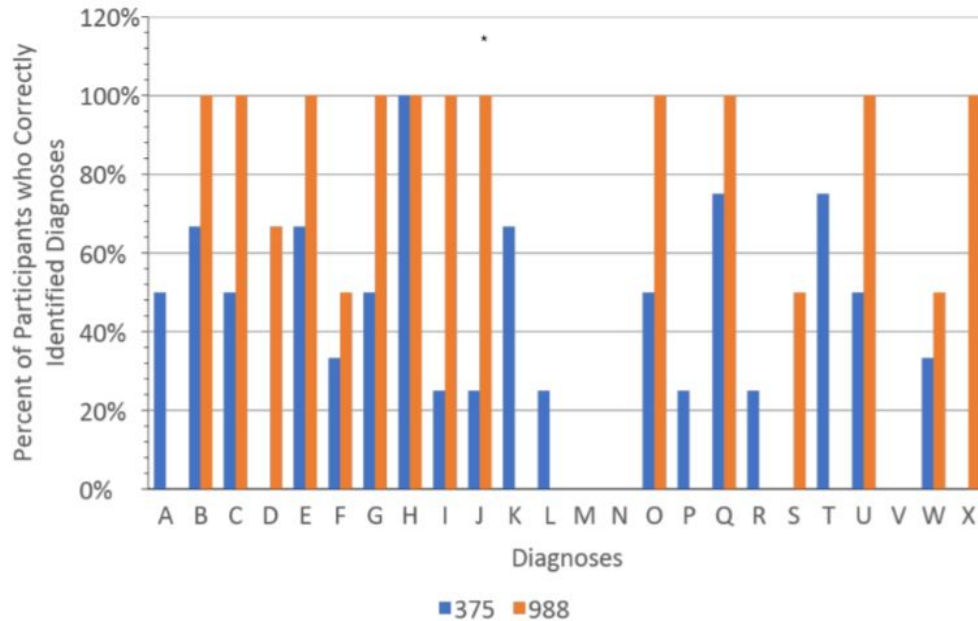


Preliminary Results



The average time for participants who arrived at the correct diagnosis was around 5.5 and 3.3 minutes. The average time for participants who arrived at the incorrect diagnosis was around 7.2 and 3.5 minutes.

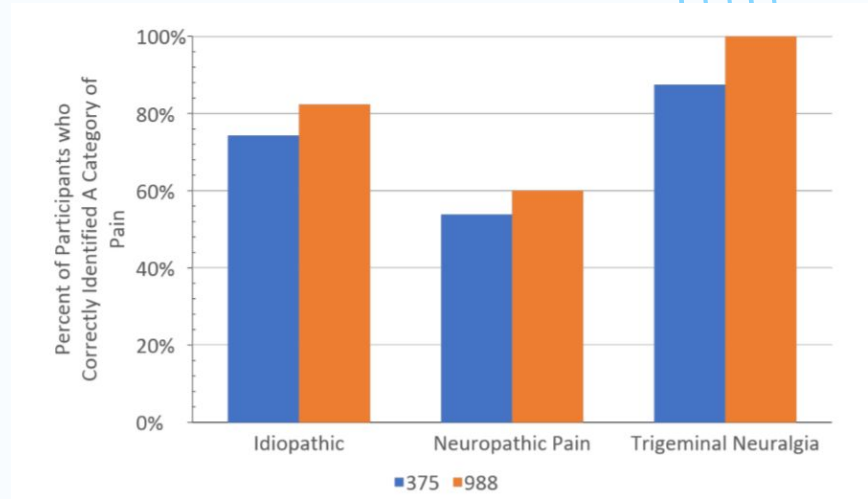
Data Analysis



For many of the specific diagnoses, the results were either 100% correct or 100% incorrect. The 100% correct diagnoses may be too straightforward, which would not be representative of real-life patient scenarios. Distractors that will not change the diagnosis (such as clicking of the TMJ, for example) could be added to these cases to make them more realistic. The 100% incorrect diagnoses brought about the question of whether the answer keys for the cases were correct. All of the cases and their answer keys need to be checked and confirmed with the diagnostic tool and ICOP.

Data Analysis

Neuropathic pain was the category least correctly identified. Upon review of the diagnostic tool, it was noted that the neuropathic pain section has the most abbreviations. This may be a cause for confusion which may affect the diagnosing process for these conditions.





Conclusions




On average, participants were able to more often correctly identify that a condition was a trigeminal neuralgia compared to idiopathic pain or neuropathic pain.



On average, participants who came up with the correct specific diagnosis did so faster than those who arrived at an incorrect specific diagnosis.



It should be noted that there were no significant differences in diagnosing the different specific diagnoses because there were many specific diagnoses (24).



Acknowledgements and Sources

Dr. Andrew Young

Dr. Mythili Kalladka

Dr. Olga Korczeniewska

International Classification
of Orofacial Pain (ICOP)

All of the participants who
volunteered to help with
this study

Thank You!

