Use of Oral Health Index (OHX) in a community screening campaign

Dr. Kishor Tom, Neoh Siew Peng, Shanmugam a/l Lakshmanan,
Dr. Kalyan C Gundavarapu , Dr. Daniel D Devaprakash, Datuk Prof. Dr. Rohani Ramli

aimst
AIMST UNIVERSITY
(496741-P)

Introduction

A free public dental screening was conducted in a three day oral health campaign in November 2011.

For the collection of data on oral health status of the public attending free screening campaign with limited facilities and time, we require a composite index to measure the treatment need and to briefly advice the patients on their oral health status.

The aim of the study is to assess the oral health status of the individual attending the screening campaign using Oral Health Index.

Materials and Methods

Screening of patients was done by dental surgeons using disposable mouth mirror and probes with the patient seated in a portable dental chair.

Each screening session lasted for an average of five to ten minutes.

A comprehensive Oral Health Index (OHX) for measuring all diseases in oral cavity was used to summarize oral health status of a person.

Components of OHX include felt or expressed need and a measure of normative need of common oral diseases.

A self reported felt need of pain, function and aesthetics constitute the first part of the index.

A question on smoking was also included along with OHX index and a brief intervention of smoking cessation was given to those patients who smoke and willing to quit.
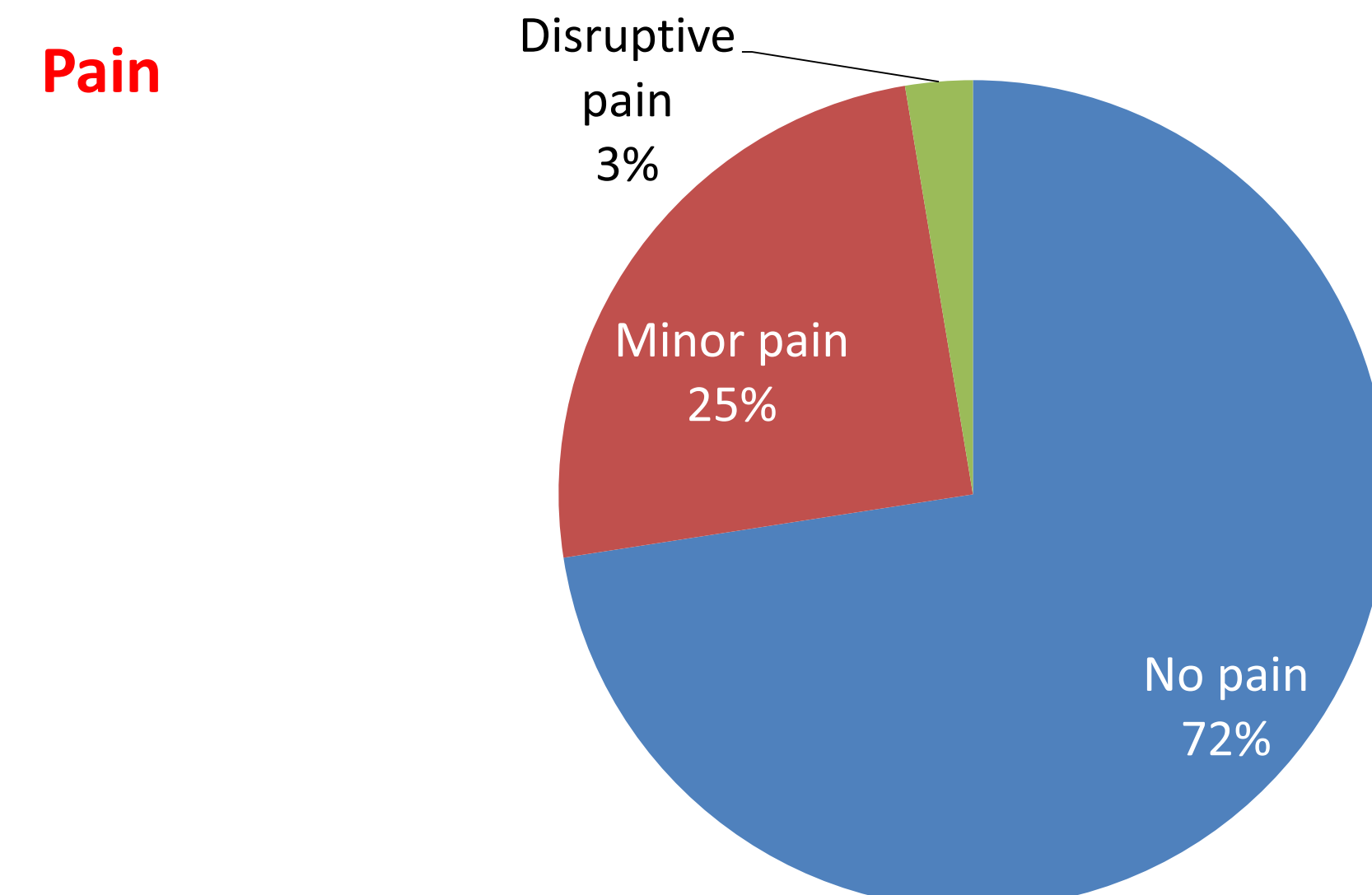
Caries, periodontal, prosthetic, occlusion, soft tissue and wasting diseases were recorded by intra oral clinical examination.
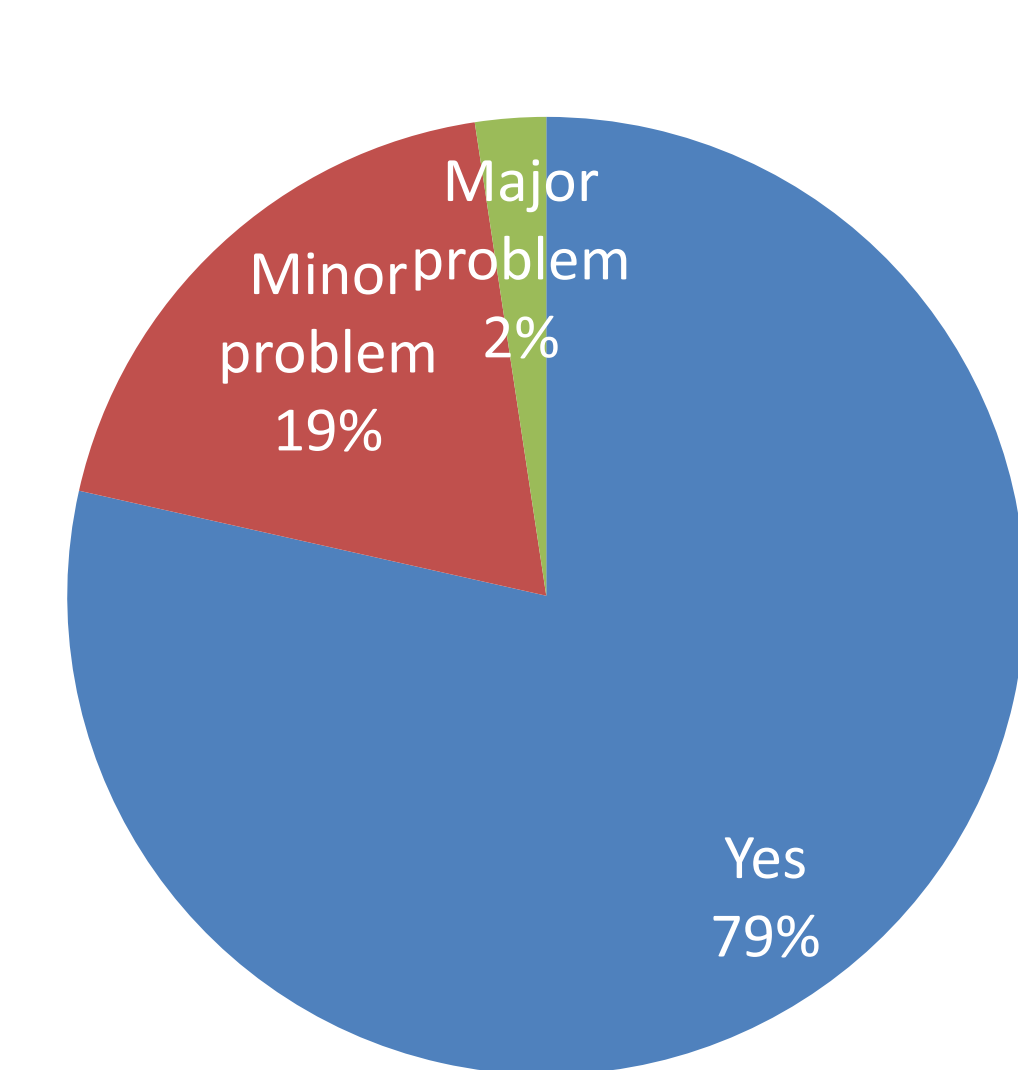
Results

Profile of patients

	Males			Females			Total	
	n	%	μ age	n	%	μ age	n	μ age
<14 years	66	59.5	8.4	45	40.5	8.0	111	8.2
14-25 years	49	42.2	19.3	67	57.8	20.3	116	19.8
26-50 years	81	52.9	36.5	72	47.1	38.2	153	37.2
> 50 years	21	60.0	55.9	14	40.0	59.0	35	57.1
	217	52.3	25.9	198	47.7	26.7	415	26.3

Felt or expressed needs

Pain

Disruptive pain 3%
Minor pain 25%
No pain 72%

Unrestricted diet

Major problem 2%
Minor problem 19%
Yes 79%

Aesthetics

Major concern 34%
No concern 30%
Minor concern 36%
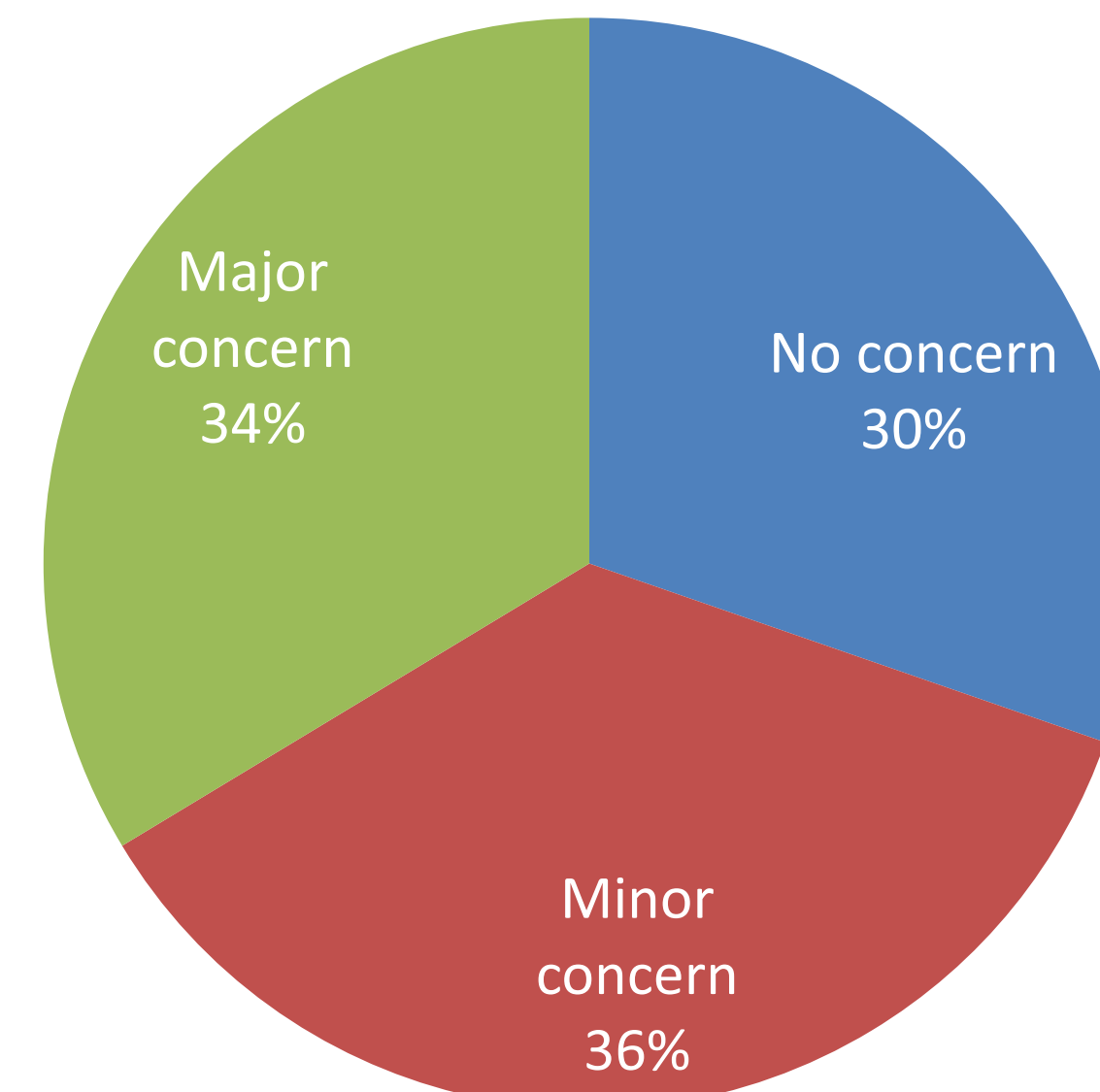
Oral mucosal status

	No Lesion		Need observation		Need treatment	
Oral mucosa						
Age group	n	%	n	%	n	%
<14 years	110	99.10	1	0.90	0	0.00
14-25 years	113	97.41	3	2.59	0	0.00
26-50 years	149	97.39	3	1.96	1	0.65
> 50 years	30	85.71	5	14.29	0	0.00

Caries, periodontal and prosthetic status

Caries

	No decay		Coronal decay		Root decay		Extensive decay	
Age group	n	%	n	%	n	%	n	%
<14 years	47	42.34	50	45.05	5	4.50	9	8.11
14-25 years	55	47.41	55	47.41	1	0.86	5	4.31
26-50 years	36	23.53	97	63.40	16	10.46	13	8.50
> 50 years	8	22.86	23	65.71	1	2.86	3	8.57

Periodontal status

	Healthy		Inflammed		Visible calculus		need further investigations	
Age group	n	%	n	%	n	%	n	%
<14 years	72	64.86	23	20.72	16	14.41	0	0.00
14-25 years	24	20.69	26	22.41	66	56.90	0	0.00
26-50 years	8	5.23	31	20.26	88	57.52	2	1.31
> 50 years	1	2.86	2	5.71	30	85.71	2	5.71

Prosthetic status

	No prosthetic need		Need full denture		Need partial denture		Repair	
Age group	n	%	n	%	n	%	n	%
<14 years	111	100.00	0	0.00	0	0.00	0	0.00
14-25 years	106	91.38	0	0.00	10	8.62	0	0.00
26-50 years	77	50.33	0	0.00	75	49.02	1	0.65
> 50 years	11	31.43	0	0.00	23	65.71	1	2.86

Occlusion and toothwear status

Occlusion

	Slight malocclusion		Severe malocclusion	
Age group	n	%	n	%
<14 years	15	13.51	7	6.31
14-25 years	31	26.72	3	2.59
26-50 years	31	20.26	9	5.88
> 50 years	7	20.00	0	0.00

Toothwear

	Present		Absent	
Age group	n	%	n	%
<14 years	6	5.41	105	94.59
14-25 years	4	3.45	112	96.55
26-50 years	51	33.33	102	66.67
> 50 years	22	62.86	13	37.14

A total of 415 patients of all age groups were screened (Males 52.29%; Females 47.71%).

In all the age groups dental appearance (34.0%) is considered to be major concern with respect to pain and chewing ability.

A very small number of them had oral mucosal lesions (0.24%) and a 25.04% of them had occlusal problems that require treatment.

About 54.46% of them have coronal caries with 7.23% having caries in more than five teeth.

Periodontal treatment need is the highest with 63.61% requiring some form of periodontal treatment. 26.75% need some form of prosthodontic treatment.

Conclusion

Use of OHX in measuring oral health status has provided overall treatment needs of patients with ease of measuring and identifying the treatment need.

References

1. Nikias MK, Sollecito WA, Fink R. An empirical approach to developing multidimensional oral status profiles. J Public Health Dent. 1978 Spring;38(2):148-58.
2. Nikias MK, Sollecito WA, Fink R. An oral health index based on ranking of oral status profiles by panels of dental professionals. J Public Health Dent. 1979 Winter;39(1):16-26.
3. Burke F J T, Wilson N H F. Measuring oral health: an historical view and details of a contemporary oral health index (OHX). Int Dent J 1995; 45: 358-370.
4. Burke F J T, Greene P R, Roberts C. Reproducibility studies on a newly designed Index of Oral Health. J Dent Res 1994; 73: 842.
5. Burke FJT, Busby M, McHugh S, Delargy S, Mullins A, Matthews R. Evaluation of an oral health scoring system by dentists in general dental practice. Br Dent J 2003; 194: 215–218.