

Achieving Zero Number of Fake Braces Usage Among School Children in SMK Seri Pantai



Quality Assurance Project by:

**PROGRAM KESIHATAN
PERGIGIAN**



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Problem Identification



List of QA Problems

- 1. Increasing the incidence of caries in first permanent molars among form 1 students from SMK Bangsar**
- 2. An increase in the incidence of redo fillings during school treatment**
- 3. Increasing the number of fake braces usage among school children in SMK Seri Pantai**
- 4. Poor detection of first permanent molars needing fissure sealant among primary school children in KP Bangsar**
- 5. Poor detection of passive and potential smokers among secondary school children covered by KP Bangsar**

Problem Prioritization



Problem Prioritization

No	Problems	S	M	A	R	T	Total
1.	Increase the incidence of caries in first permanent molars among form 1 students from SMK Bangsar	18	14	13	12	8	65
2.	An increase in the incidence of redo fillings during school treatment	14	14	10	10	8	56
3.	Increase in the number of fake braces usage among school children in SMK Seri Pantai	21	21	21	21	21	105
4.	Poor detection of first permanent molars needing fissure sealant among primary school children in KP Bangsar	13	14	12	12	8	59
5.	Poor detection of passive and potential smokers among secondary school children covered by KP Bangsar	15	14	11	9	10	59

NGT (Nominal Group Technique) based on SMART criteria

7 Group members

Mark Awarded	1	2	3
Rating	Low	Average	High

Reasons for Choosing

SERIOUSNESS

Fake braces usage can cause damage to patients' teeth, gums, lips and supporting bones. These practices may also cause internal damage and cancer. (Kangwolkij P. 2018)

MEASURABLE

Data on fake braces usage can be obtained easily from patients' treatment record (L.P.8-1 Pin.7/97).

APPROPRIATENESS

Reduction of fake braces usage will avoid future dental complications. Hence, would greatly reduce cost.

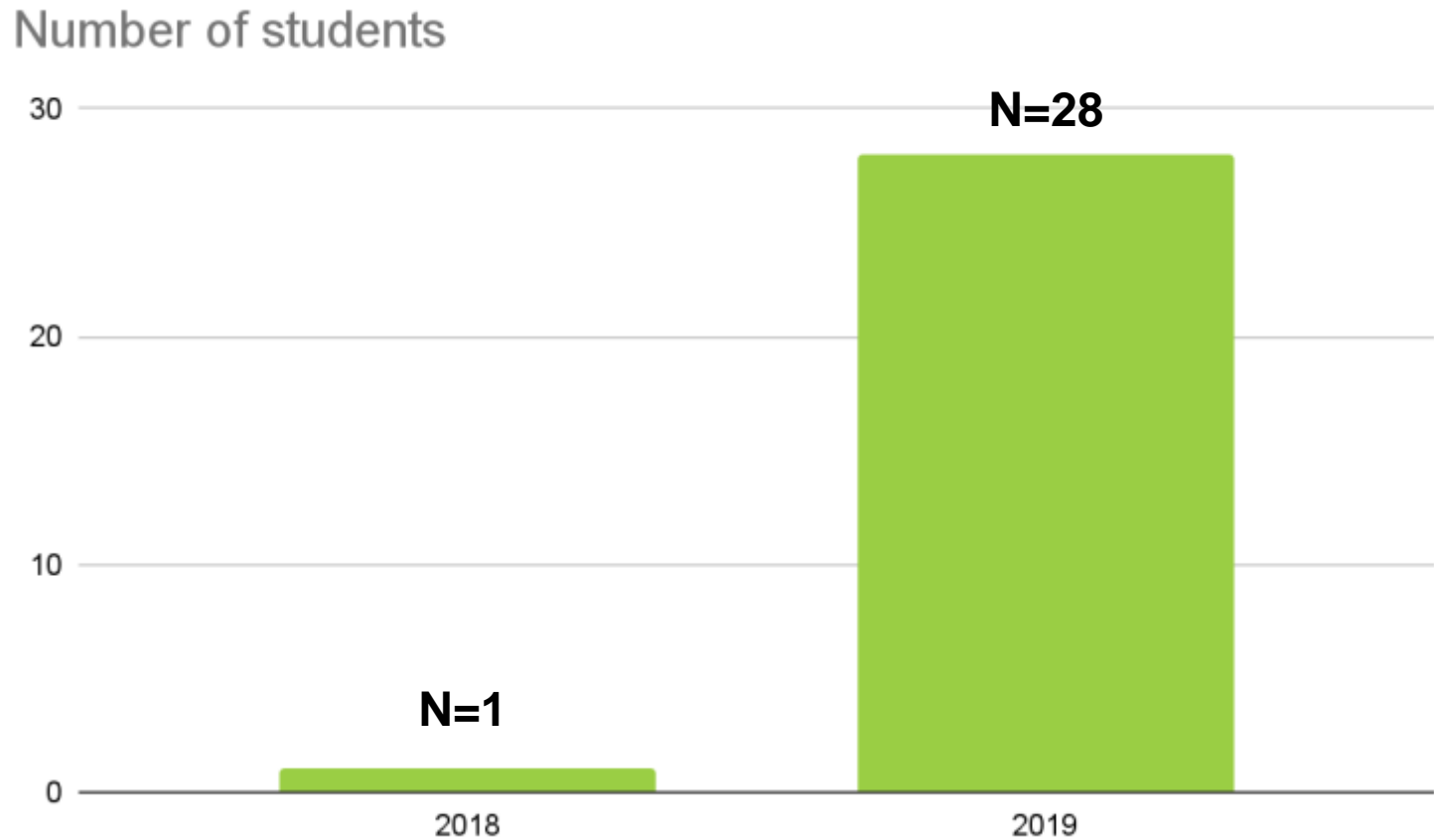
REMEDIABLE

Possible causes can be identified and remedied.

TIMELINESS

This study can be done within a short period of time.

Verification of Problem



Fake Braces Usage in SMK Seri Pantai

Dental Clinical Implications of Fake Braces

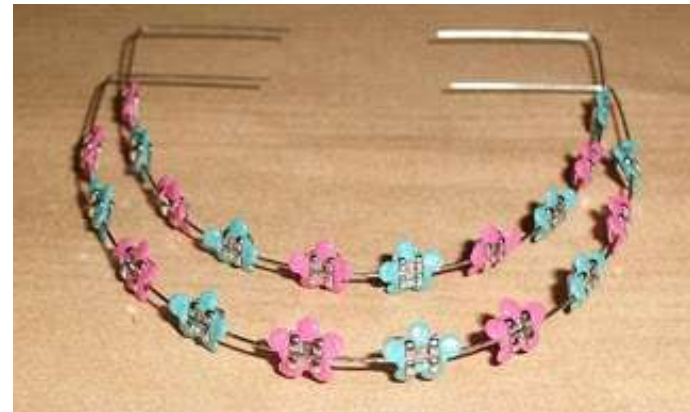
Dental clinical findings	Incidence among the 28 fake braces users
Tooth decay (dental caries)	14
Gum infection (gingivitis)	28
Oral ulcers	7
Foul breath (halitosis)	10
Poor oral hygiene	28
Tooth mobility (periodontitis)	2

Tarikh	Kedatangan (BU)	Tanda Gigi	KAWATAN YANG TELAH DIBUAT			Catatan Klinikal	Bayaran dibuat (RM) / No Resit / No GL / No Kad (Bukti Pengecualian)
			Kod Rawatan				
			Permukaan Gigi	Gigi	Mulut		
4/6/2019	U				<p>clb. Patient came in for dental check up (incremental school programme)</p> <p>hpt: Pt claimed she has occasional bad breath, and noticed 2 cavities on <u>21</u> region.</p> <p>Pt also mentioned she had braces done 5 months ago in a house by her neighbour.</p> <p>PMH : N/A, N/A</p> <p>SLD : N/A</p> <p>HL : Fake braces noted from 15 to 25 & 35 to 45.</p> <ul style="list-style-type: none"> • ++ staining noted on these brackets. • +++ plaque & calculus • ⊕ BOP $\frac{I}{II}$ $\frac{II}{II}$ • OH very poor • Dental caries: 21(M), 66(12), 17(P); Dental caries • 45(B), 33(B), 0MP, mobile • ⊕ swelling on 21 region, ⊕ pus, BPE score 3 <p>Dx: ① Periodontitis, 21, 45, 33</p> <p>② Severe plaque induced gingivitis.</p>		

Example of dental records of one of the fake braces users in SMK Seri Pantai

Introduction

- Fake braces among school children are **becoming popular**.^[4]
- These are fitted personally by the wearer, local beauty salons and by **unauthorized** street vendors.
- Fake braces these days are often worn just for the sake of as an alluring **status symbol** (a sign of wealth and luxury) among teenagers. ^[7]



Risks and Dangers of Fake Braces

**MOUTH
SORES**

**TOOTH
DECAY**

**TOOTH
LOSS**

**FOUL
BREATH**

**NERVE
INFECTION**

**GUM
INFECTION**

CHOKING

DEATH



Doctors warn fashionable dental braces can kill

Experts find deadly cadmium in samples

PUBLISHED: 11 JAN 2016 AT 04:00

NEWSPAPER SECTION: NEWS
WRITER: APINYA WIRATAYOTIN

The Dental Council has warned teenagers wearing fake dental braces in

The Dental Council said fake dental braces are often made by underground clinics that use sub-standard quality materials which contain heavy metal, especially deadly cadmium.

president of the Dental Council, said yesterday.

The Dental Council inspected the sale of fake dental braces which have been popular among Thai teenagers over the past few years.

Yet there are reports of harmful effects.

The latest case involved the death of a 14-year-old girl from Chon Buri who died last November after she wore fake pink-coloured dental braces for two months.

The autopsy did not state that wearing the fake braces was responsible for her death, but the report showed her dental cavity and gums were severely infected.

Since April last year, the Dental Council has received 308 tips related to fake dental braces.

Consumer protection networks and authorities teamed up with police and launched an investigation.

"It is hard to arrest the sellers as their shops are usually listed on social media platforms," Dr Thongchai said.

"Their real address is different from what is posted.

Definitions

Dental braces

Devices used in orthodontics provided by dentists/ orthodontists that align and straighten teeth and help position them with regard to a person's bite, while also aiming to improve dental health

Fake braces

Fake braces are the **non genuine-like** **braces** (fixed orthodontic appliances) which are fixed to the teeth and are fitted by **untrained / unqualified operators**.

(myhealth.gov.my)

Secondary school children

Children that attended school, age from 13 to 17 years old

Author	Details
Hasyimah Hassan et al, 2021	<p>‘Not all outcome of services of these bogus dentists were perceived to be favourable. Some perceived the outcome as no change, whilst most felt the outcome to be worse.’</p>
Riyam Haleem et al, 2021	<p>‘Fake orthodontic braces released more than 100 mg/L of Na, Ca, and K ions during the immersion period.’</p>
Nor Azlida Mohd Nor et al, 2020	<p>‘The placement of brackets in fake braces usually does not follow the correct position of individual teeth. The effect, when used with active archwires or elastomerics, may cause uncontrolled movement of the teeth.’</p>
Kamaruzaman DMS et al, 2019	<p>‘Aesthetics is the major factor that influences teenagers to seek orthodontic treatment (94.8%).’</p>
Nasir SH et al, 2018	<p>‘increase the potential of traumatic ulcers, swallowing and even aspiration of the fractured parts.’</p>

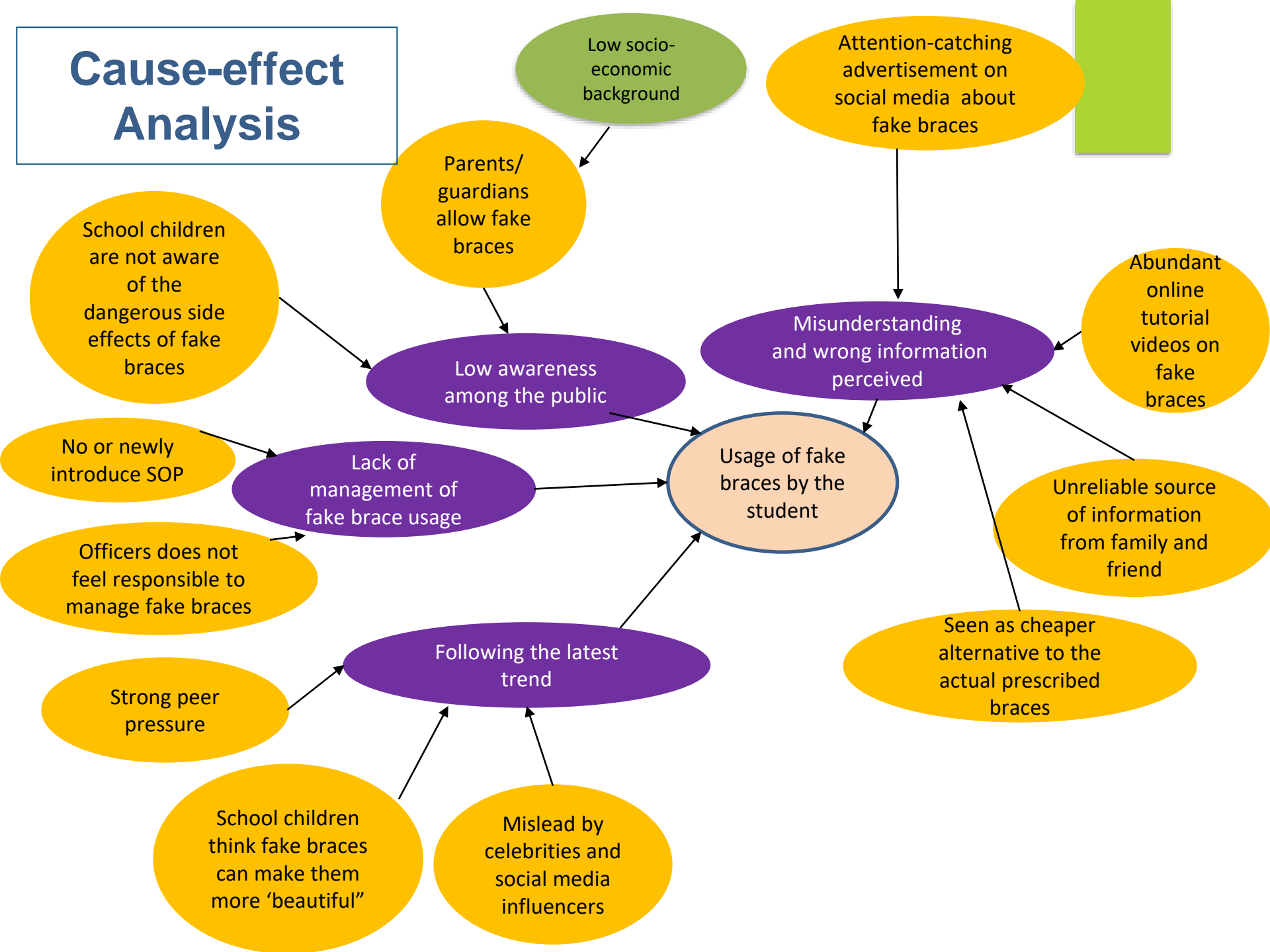
Literature Review

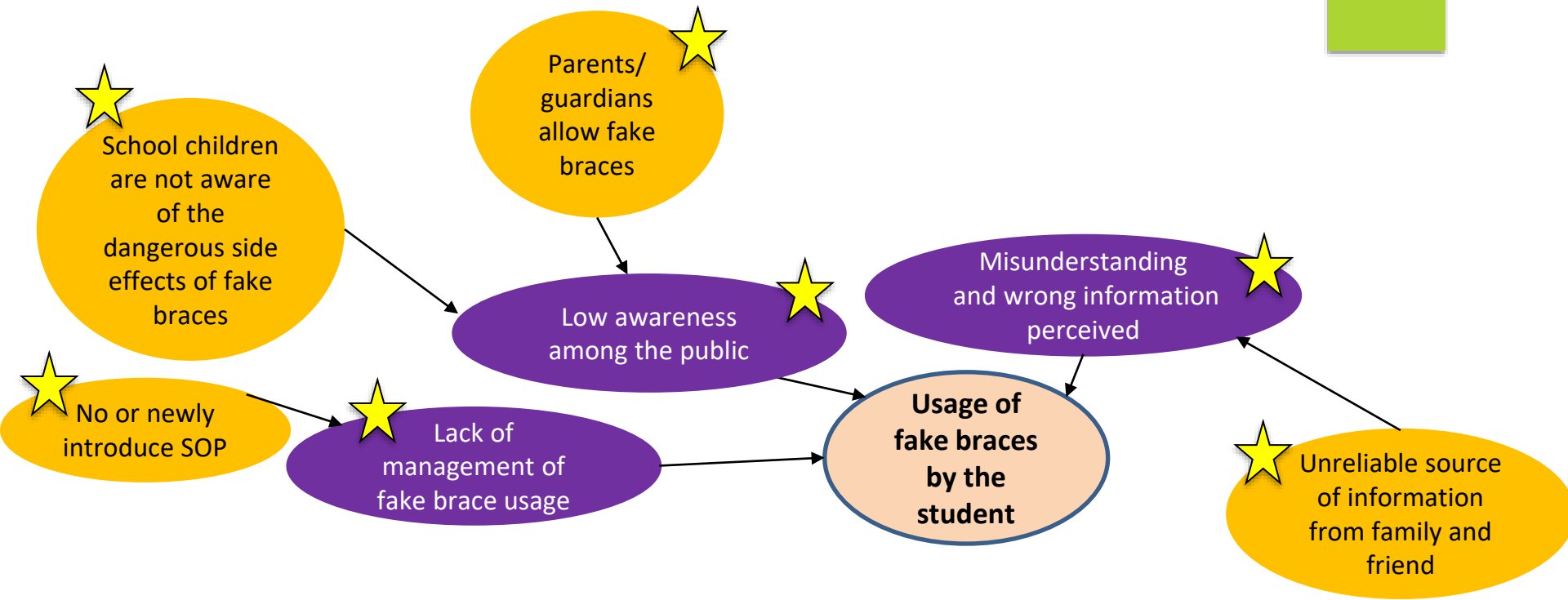


Problem Analysis

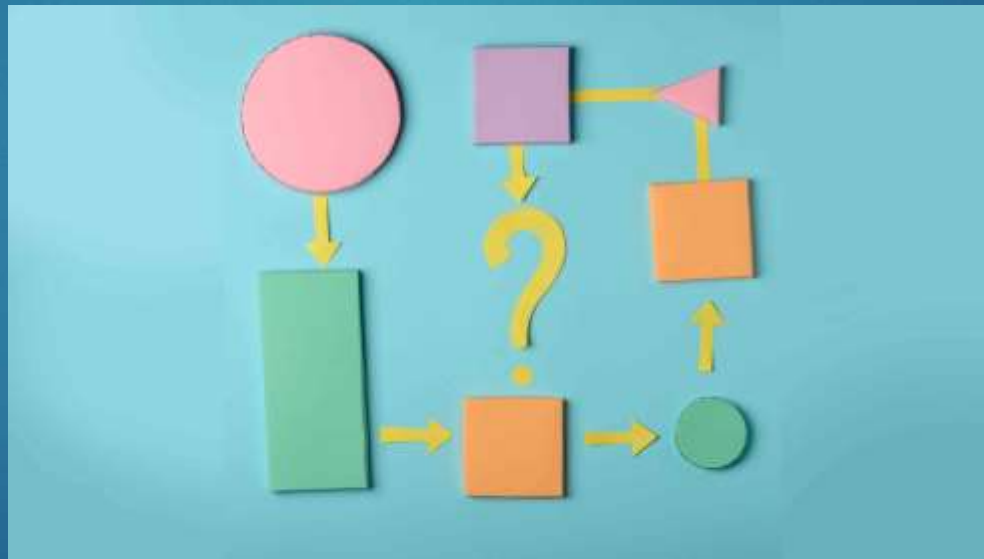


Cause-effect Analysis





Gathering Information and Analysis



Objectives



General Objective

To achieve zero number of fake braces usage among school children in SMK Seri Pantai

Specific Objectives

1. To verify the prevalence of fake braces usage among school children in SMK Seri Pantai.
2. To identify the factors which precipitate students to use fake braces.
3. To formulate and implement remedial actions to achieve zero number of fake braces cases in SMK Seri Pantai.
4. To properly manage students that is using fake braces.
5. To evaluate the effectiveness of remedial measures taken.

Indicators & Standard

Indicator:

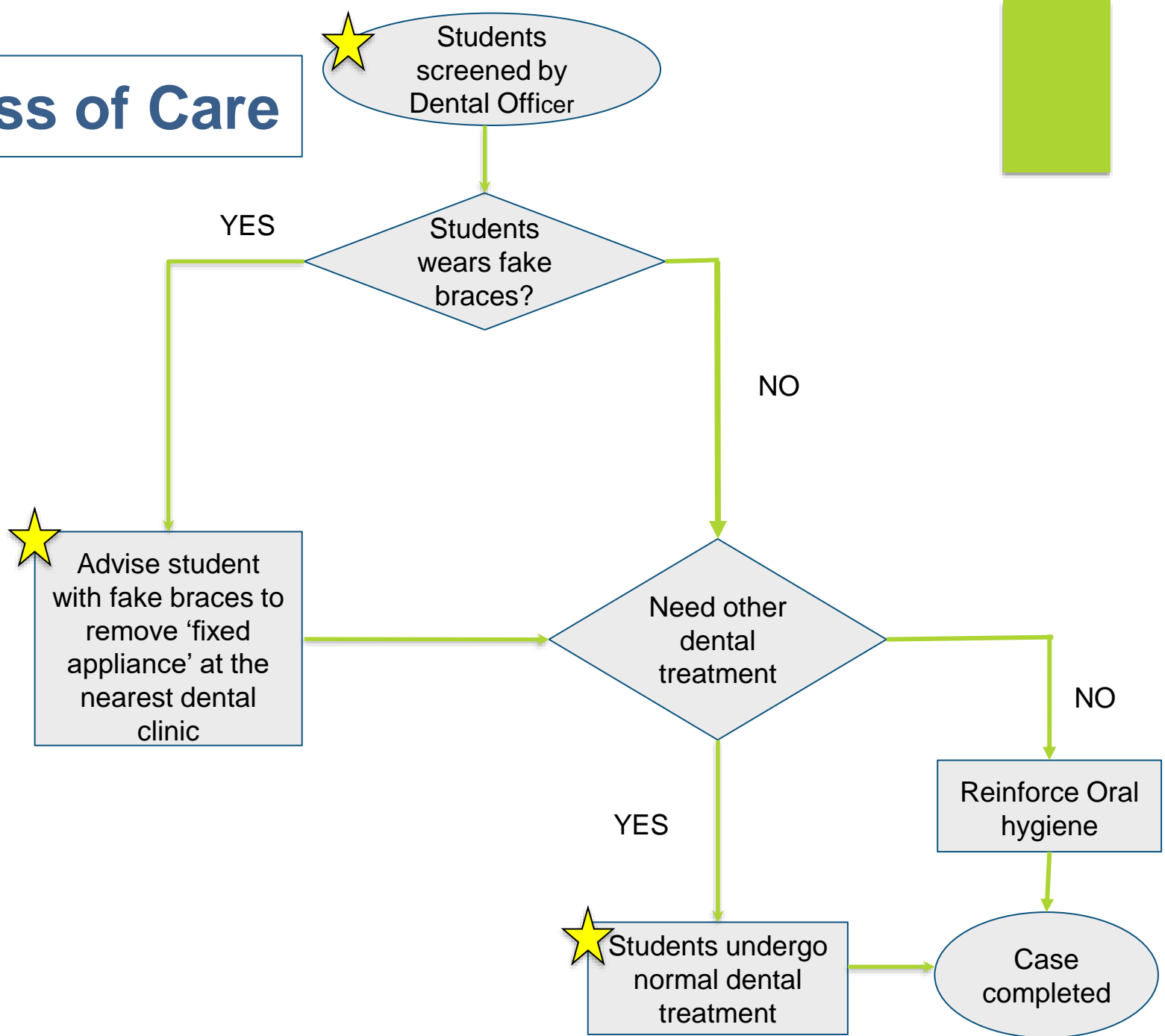
Total number of students using fake braces

Standard (sentinel event):

Zero cases of fake brace usage



Process of Care



Model of Good Care



No.	Process	Criteria	Standard (%)	Pre-Remedial (%)
1.	Students screened by dental officers	<ul style="list-style-type: none"> • Examination and diagnosis done • Checklist / questionnaire for fake braces determination • Give awareness about fake braces to all students screened. 	100% 100% 100%	100% 0% 2.98%
2.	Advice for fake braces removal at nearby dental clinic	<ul style="list-style-type: none"> • Advice given to students wearing fake braces • Written referral to government dental clinic using SOP provided by orthodontists • Inform parents through letter and phone calls to ensure removal of fake braces • Further intervention & awareness to students with fake braces • Involve teachers by doing campaign to fight against fake braces • Educational talk to parents during PIBG meeting 	100% 100% 100% 100% 100%	100% 0% 0% 0% 0%

No.	Process	Criteria	Standard (%)	Pre-Remedial (%)
3.	Students undergo normal dental treatment	<ul style="list-style-type: none"> • Give treatment to all student that have consent • Follow-up students for review to confirm removal of fake braces • Recall students for review to determine new cases fake braces usage 	<p>100%</p> <p>100%</p> <p>100%</p>	<p>100%</p> <p>0%</p> <p>0%</p>

Methodology

Pre-remedial study

- Study design: Observational (cross-sectional)
- Study tools
 1. Review recorded source (LP8)
 2. Questionnaires
 3. Interview
- Study Samples: All secondary school children in SMK Seri Pantai
- Sampling method: Convenience sampling
- Study period: June to August 2019

Methodology

Remedial study

- Study design: Interventional (quasi-experimental)
- Study tools
 1. Review recorded source (LP8)
 2. Questionnaires
 3. Interview
- Study Samples: All secondary school children in SMK Seri Pantai
- Sampling method: Convenience sampling
- Study period: July 2019 to January 2020

Inclusion & Exclusion Criteria



- **Inclusion:** All secondary school children in SMK Seri Pantai present during incremental dental visit
- **Exclusion:** None

Identification of Strategy for Change (Remedial Measures)



BORANG SOAL SELIDIK MENGENAI FAKE BRACES DI KALANGAN PARA PELAJAR SMK SERI PANTAI

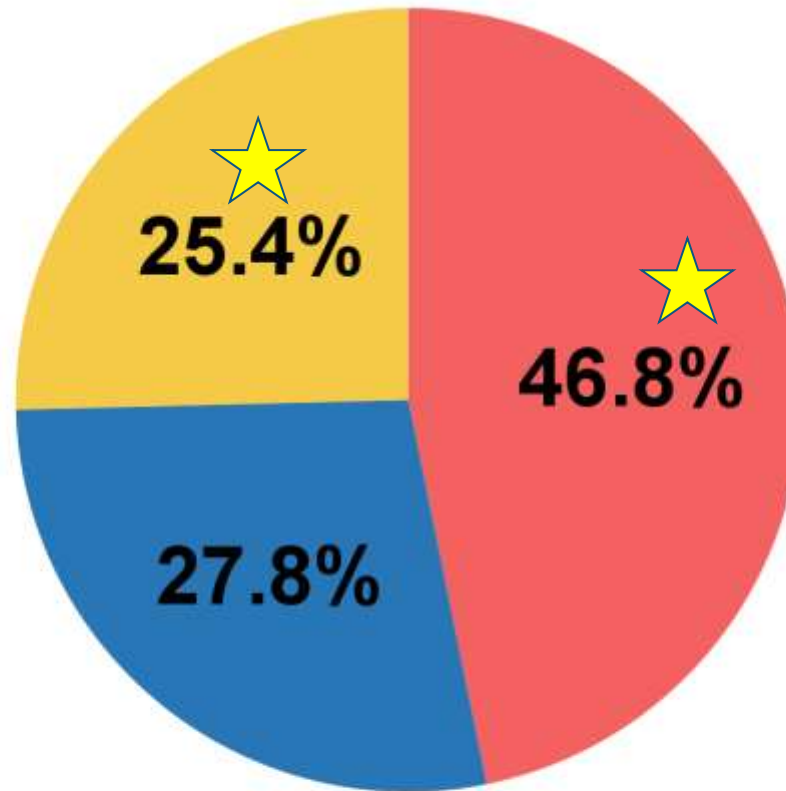
Terima kasih di atas kerjasama anda untuk menyertai kaji selidik ini.

Tujuan kajian ini dijalankan adalah untuk mendapatkan maklumat mengenai sikap serta pandangan para pelajar terhadap 'fake braces'.

Untuk makluman anda, sebarang maklumat yang diberikan dalam borang soal selidik ini akan dianggap rahsia dan digunakan untuk tujuan kajian sahaja.

<https://docs.google.com/forms/d/1KJEYXlkfae5xfvF6rVExGu9EH-jt9bwvXzYgrmOr01E>

Factors That Increase Fake Braces Usage Among Students



- Misunderstanding and wrong information perceived
- Following latest trend
- Low awareness among the public

Strategy for Change (Students)

Problem	Remedial Action
<p>Misunderstanding and wrong information perceived.</p> <p><i>Unreliable source of information from family and friends</i></p>	<p>Collaborate with Principal and PIBG of SMK Seri Pantai</p> <ol style="list-style-type: none">1. Meeting with parents during PIBG meeting2. Educational talk to students and teachers3. Pamphlet4. Campaign <ul style="list-style-type: none">- Short video competition regarding fake braces- Selfie and Wefie Competition- Daily facebook posts throughout the week to raise awareness about fake braces
<p>Low awareness among public</p> <ol style="list-style-type: none">1. School children are not aware of the dangerous side effects of fake braces2. Parents/ guardians allow fake braces	<p>Giving talks to increase awareness regarding fake braces to school children of SMK Seri Pantai.</p> <p>Continue collaboration and share of information and recent updates with school to raise awareness of fake braces.</p>

SURVEY REGARDING THE AWARENESS OF FAKE BRACES AMONG DENTAL OFFICERS OF KP BANGSAR & KP CAHAYA SURIA (QUALITY ASSURANCE PROJECT LEMBAH PANTAI)

Thank you for participating in this survey.

The objective of this survey is to gather information regarding the awareness of fake braces among dental officers working at KP Bangsar & KP Cahaya Suria.

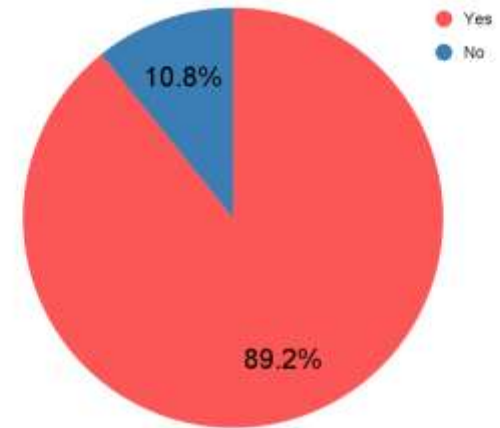
Any information provided for this survey will be private and confidential and will only be used for the purpose of this quality assurance project.

<https://docs.google.com/forms/d/1Rq6lMdUhmEdvdVcj1Dcc8gznuPA3o3zln4908nlmTwE/edit?ts=5dc12668>

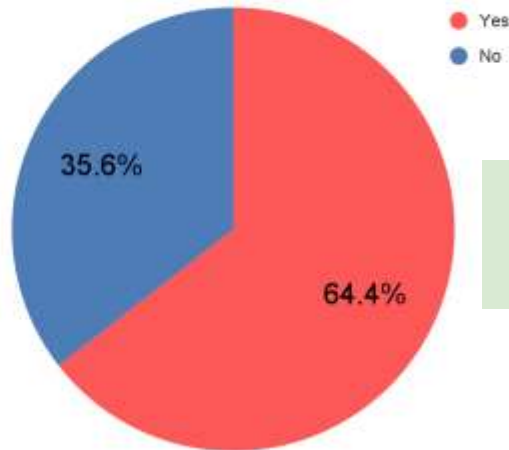


89.2% of dental officers have seen fake braces cases

Dental officers Who Have Encountered Fake Braces



Dental Officers Who Don't Know to Manage Fake Braces



64.9% of officers do not know how to properly manage fake braces cases

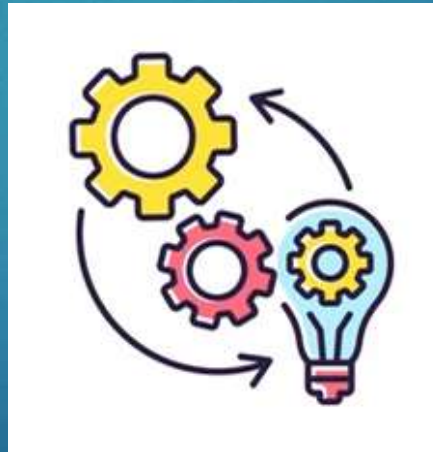
100% officers think that they need a guideline to manage fake braces cases

Strategy for Change (Dental Officers)



Problem	Remedial Action
Lack of management of fake braces usage	<ol style="list-style-type: none">1. Identify students who are wearing fake braces2. Referring students using fake braces to dental clinics3. Notifying parents' of students using fake braces via memo4. Collaborating with PIBG of SMK Seri Pantai5. Collaborate with orthodontic department to manage fake braces6. Giving CDE regarding the pathway to manage fake braces cases to dental officers7. Formulate checklist for dental officer to manage fake braces cases

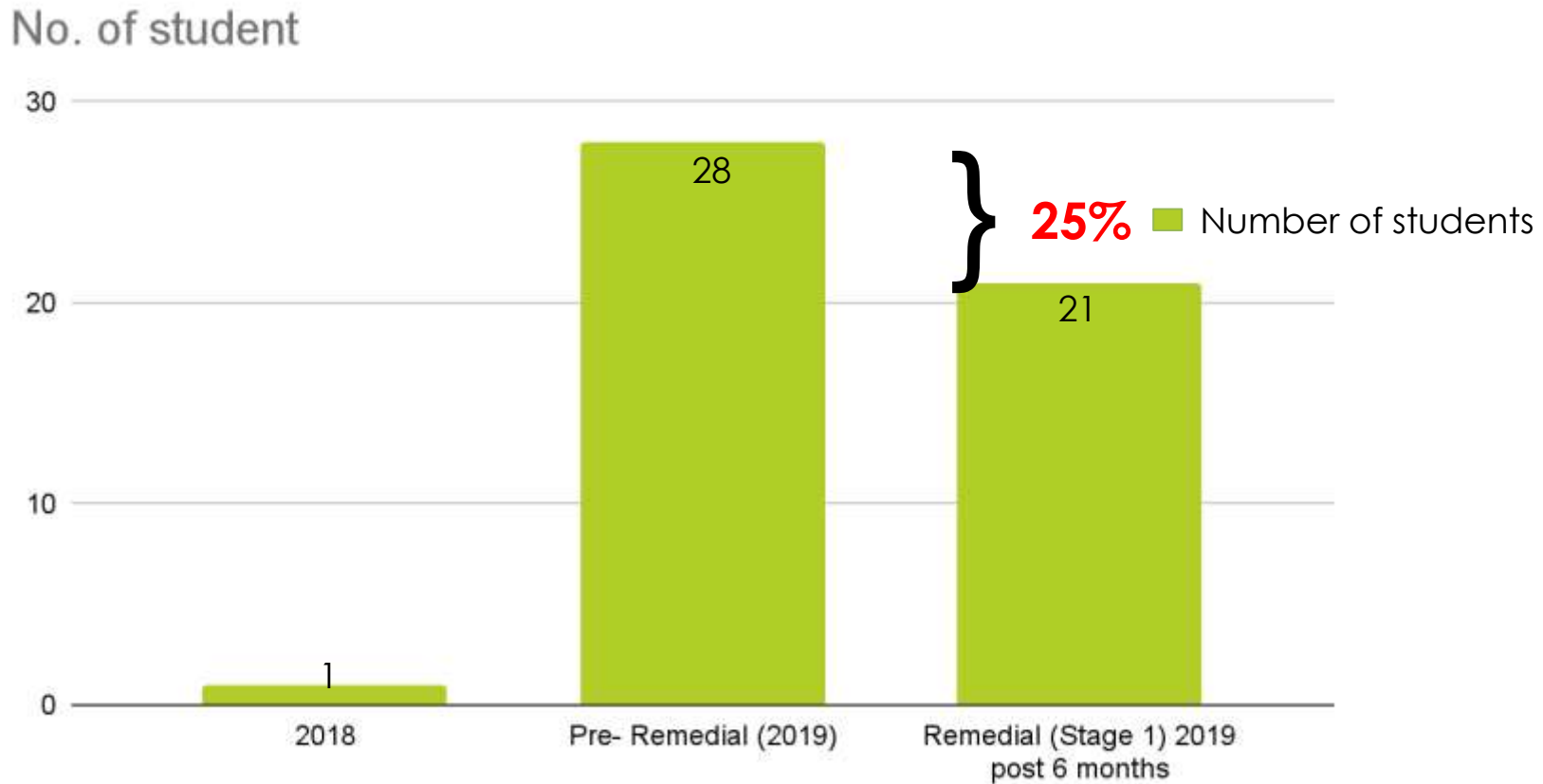
Implementation of Remedial Measures



Stage 1 Intervention



Results After Stage 1 Intervention

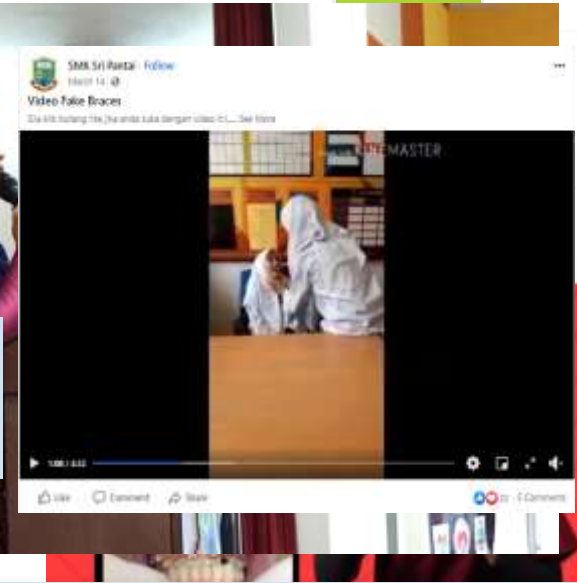


Stage 2 Intervention





Daily Facebook Post throughout Campaign



Educational talk to students and teachers

“Put a Fullstop to Fake Braces” Campaign

Insta Video Competition

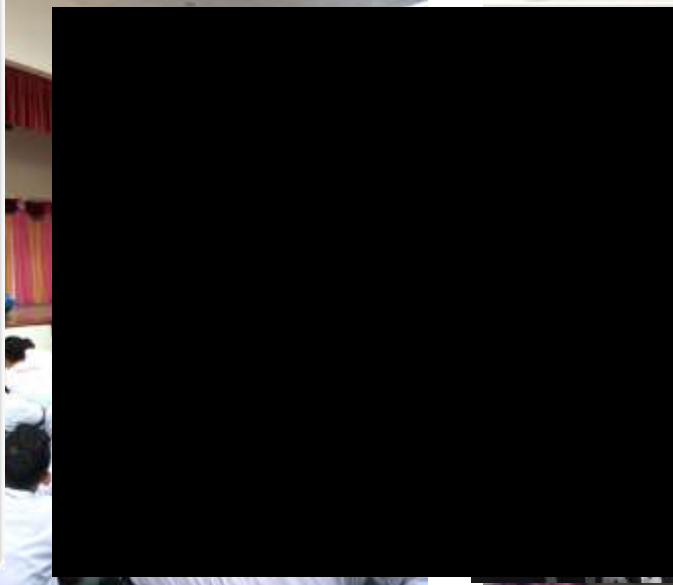
PAMERKAN SENYUMAN ANDA TANPA FAKE BRACES!

PERTANDINGAN SELFIE & WEFIE

SEMPENA MINGGU 'PUT A FULLSTOP TO FAKE BRACES'

- Terbuka kepada seluruh warga SMK Sri Pantai Kuala Lumpur.
- Peserta perlu mengambil gambar selfie atau video berlatarbelakangi 'Put a Full Stop to Fake Braces' (hanya selfie/video sahaja akan dinilai).
- Post gambar selfie/video di Instagram dalam tajukan "public" dengan hashtag #SayNoToFakeBraces.
- Jumlah penyertaan tidak terhad. Satu pemenang akan dipilih untuk setiap hari sepanjang kempen ini.
- Tempoh penyertaan adalah dari 14 hingga 30 Mac 2020.
- Pemenang harian adalah berdasarkan jumlah "LIKE" terbanyak dan caption yang kreatif.
- Setiap kelas wajib menghantarkan sekurang-kurangnya satu penyertaan.
- Pemenang-pemenang akan diumumkan di laman Facebook rasmi SMK Sri Pantai.

NADIAN MENAJUK MENANTI ANDA!



tion

ices akan mengakibatkan kesakitan, jangkitan, masalah gusi, gigi berlubang, menambah kos dan kesukaran rawatan.

ntikan pengumuman para pemenang pertandingan selfie/wefie dan pertandingan video melalui Video Penutupan Kempen yang akan datang.

abtylia, roslan · Follow

abtylia, roslan 🤗🤗🤗 senyumlah tanpa fake braces senyumlah kami melu! nmpk Cantik n Cantik 🥰🥰🥰

✖️Kna tidak boleh memakai fake braces untuk mengikut trend atau pun sbwtokan fashion! 🙅

👉Fake braces boleh merendahkan bahaya dan berisiko tinggi!

👉Harga yg ditawarkan memang murah tpn kebersihan n rawatan tidak diaga sebagai margin!

👉Pemakaian fake braces boleh menyebabkan mulut berbau, gigi longgar, gusi meradang, gigi berlubang, infeksi mulut Dan bnyk lagi... 🙅🙅🙅 Yg paling teruk ia boleh menyebarkan KEMATIAN kerana braces ni boleh tertanggal dan masuk ke dalam esophagus! 🙅🙅🙅

41 likes

APA ITU FAKE BRACES?

Braces palsu yang menyerupai braces sebenar dan dipasang oleh tukang gigi yang tidak bertauliah.

Di mana fake braces ini diperolehi?

1. Media sosial seperti Instagram, Facebook dan Twitter.
2. Dijual secara haram di salon, pasar, rumah, hotel dan lain-lain.



Siapakah yang layak untuk memberi rawatan braces?

- ✔ Doktor gigi bertauliah yang terlatih untuk memberi rawatan braces
- ✔ Pelajar kepakaran Ortodontik
- ✔ Pakar Ortodontik

APA BEZANYA FAKE BRACES DENGAN



Further activities

Winner for Selfie/ Wefie and Insta Video Competition



Elakkan fake braces untuk senyuman menawan sepanjang hayat!



senyuman yang menawan sepanjang hayat!



A FULLSTOP TO FAKE BRACES

Elakkan fake braces untuk senyuman yang menawan sepanjang hayat!



Referring students using fake braces based on SOP guideline to



Remedial Actions Taken for Dental Officers

Giving CDE regarding the pathway to

Senarai Semak Pengurusan Penggunaan Pendakap Gigi Palsu (Fake Braces)

Nama:	
IC:	
Tarikh:	
Tegaskan:	
No. Telefon:	
Arahan:	

Untuk kegunaan Pegawai Perigian

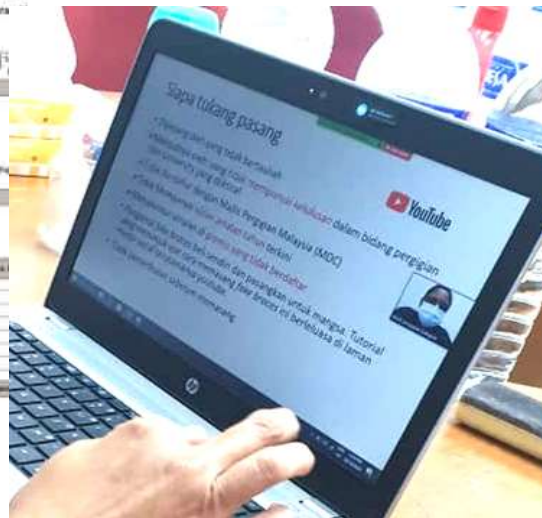
1	Pendakap palsu tidak dipasang dengan sempurna pada gigi.	
2	Hasil dan jenis gigi tidak sesuai untuk memasang fake braces di klinik perigian tersebut.	
3	Walaupun tidak mematuhi SOP, tidak mengesahkan/mengeluarkan fake braces & salinan anak untuk dipamerkan/ditawarkan untuk memasang fake braces di klinik perigian tersebut.	

*Masa bekerja semasa di pejabat jawatan DPT untuk pemeriksaan semulajadi.

Untuk kegunaan Pegawai Perigian DPT

1	Perigian palsu dan salinan gigi dipasang fake braces dengan sempurna.	
2	Perigian palsu dan salinan gigi dipasang fake braces dengan sempurna.	
3	Cetakan gigi palsu fake braces kepada semua murid-murid dan DPT-GTY.	
4	Memeriksa betul ke atas pelajar yang memakai fake braces dengan melibatkan 3 orang kakitangga untuk memastikan pengalihan prosedur palsu.	

Collaboration with Dedicated Promotional Team (DPT) to increase fake braces awareness among school students



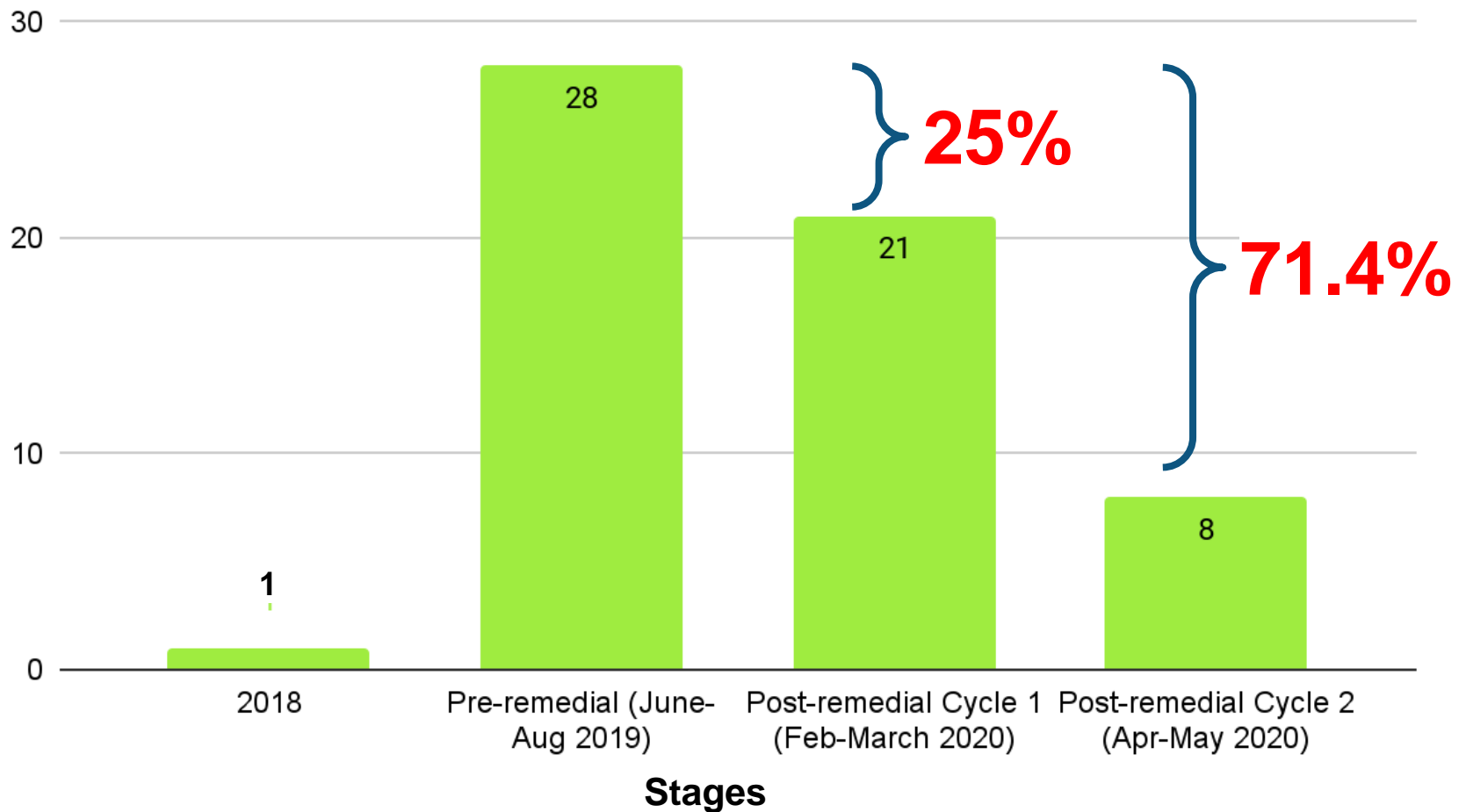
Checklist formulated for dental officers to manage fake braces cases

Effects of Change



Fake Braces Data for SMK Seri Pantai

Number of students using fake braces



Improvement in Implementation of Critical Steps on MOGC

No.	Process	Criteria	Standard (%)	Pre-Remedial (%)	Post- Remedial 2020 (%)
1.	Students screened by dental officers	• Examination and diagnosis done	100%	100%	100%
		• Checklist / questionnaire for fake braces determination	100%	0%	100%
		• Give awareness about fake braces to all student screened.	100%	2.98%	100%
2.	Advice for fake braces removal at nearby dental clinic	• Advice given to student wearing fake braces	100%	100%	100%
		• Referral to government dental clinic using SOP provided by orthodontists	100%	0%	100%
		• Inform parents through the letter/memo to advise for removal of fake braces	100%	0%	100%
		• Further intervention & awareness to students with fake braces (3 months review)	100%	0%	100%
		• Involve teachers by doing campaign to fight against fake braces	100%	0%	100%
		• Educational talk to parents during PIBG meeting	100%	0%	0%

Improvement in Implementation of Critical Steps on MOGC

No.	Process	Criteria	Standard (%)	Pre-Remedial (%)	Post-Remedial 2020 (%)
3.	Students undergo normal dental treatment	<ul style="list-style-type: none"> • Give treatment to all student that have consent • Follow up students for review to confirm removal of fake braces • Recall students for review to determine new fake braces usage 	100%	100%	100%
			100%	0%	100%
			100%	0%	100%

Constraints

- Project deferred due to Covid-19 pandemic from 2020 till 2022.
- Re-enforcement of 'Put a Fullstop on Fake Braces' campaign could not be done as school started PDPR.
- Limitations to carry out further intervention as all secondary public schools prohibited entry for a period of time due to the pandemic.



The Next Step



1. Collaborate further with Principal and PIBG of SMK Seri Pantai with joined program.
2. Meeting with parents during PIBG meeting.
3. Educational talk to parents and teachers (**ZOOM meeting**).
4. Re-distribute pamphlet to the parents (**QR Code**).
5. Satisfaction survey for students and parents.
6. Questionnaire to determine level of students awareness of fake braces (post-remedial)
7. Reinforce the fake braces intervention to all dental clinics in Zon Lembah Pantai and eventually all dental clinics that involved in incremental school dental care.

GANTT Chart

No.	Activity	Month	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mac	Apr	May	June	July
		Year	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	2020	2020	2020	2020	2020
1.	Briefing	P	■														
		E	■														
2.	Verification study	P		■	■	■											
		E		■	■	■											
3.	Data Analysis	P			■	■	■										
		E			■	■	■										
4.	Intervention	P			■	■	■	■	■	■	■	■					
		E			■	■	■	■	■	■	■	■					
5.	Post-intervention study	P										■	■	■	■		
		E										■	■	■	■		
6.	Analysis & Report Writing	P													■	■	■
		E													■	■	■

References

1. Shahryar Sorooshian, Alangseri Ayubayu Kamarozaman. Fashion Braces: An Alarming Trend. *Sao Paulo Med J.* 2018; 136(5):497-8
2. Kangwolkij P. Fad teeth braces banned. *Bangkok Post* [Serial Online] 2018. Available from: <https://www.bangkokpost.com/news/general/1393506/fad-teeth-braces-banned>. Accessed in 2019.
3. Idaham, N. I., Wan Othman, W. M. N., & Hassan, H. (2021). Exploring the Experience of Klang Valley Youths on Fake Braces by Bogus Dentists. *Malaysian Journal of Science Health & Technology*, 7(1), 69–74.
4. Haleem, R., Shafiai, N.A.A. & Noor, S.N.F.M. Metal ions leachables from fake orthodontic braces incubated in simulated body fluid. *BMC Oral Health* 21, 507 (2021).
5. Mohd Nor, Nor Azlida & Wan Hassan, Wan Nurazreena & Mohamed Makhbul, Mohd Zambri & Yusof, Zamros. (2020). Fake Braces by Quacks in Malaysia: An Expert Opinion. *Annals of Dentistry*.
6. Kamaruzaman, Dewi Mayang Sari et al. Fake Braces among Teenagers in Manjung District, Perak. *electronic - Perak Medical Journal*, [S.l.], v. 1, n. 2, aug. 2019. ISSN 2682-8596.
7. S H Nasir, N Abu Bakar and R Samad (2018). *Journal of Physics: Conference Series*, Volume 1073, Issue 5

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Thank You!