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Dental Public Health

Community Health Project Report 2014

An Outreach Dental Project to a Remote Drug Rehabilitation Centre



An Outreach Dental Project to a Remote Drug Rehabilitation Centre

Community Health Project 2013 – 2014

Group 4.6

Choi Kin Wang, Kelvin

Lam Sze Man

Lee Min Long

Leung Wing Ki

Tam Sophia Jacqueline

Wan Hoi Suen

Wang Chon Pei

Wu Wing Kei

Yiu Chi Wai

Advisor:

Dr. Anthony Wong

1. ABSTRACT

Aims: To provide basic outreach dental care services and to investigate the oral health status of young residents in a drug rehabilitation centre. **Subject:** Young residents in a drug rehabilitation centre named Christian Zheng Sheng College in Hong Kong. **Methods:** A questionnaire about previous pattern of drug abuse and smoking habits, perceived drug impact on oral health sensations and oral health behaviour was self-completed by each participant. Clinical examinations using the World Health Organization (WHO) criteria and preventive treatments, including scaling and fluoride varnish, were then performed on participants with signed consents. A report was given to each participant after treatments. **Results:** Sixty-two participants were recruited in the outreach service. Amongst which 50 are boys and 12 are girls. Their ages ranged from 10 to 22 with mean age of 18.3 (SD=2.41). Forty-two of the participants (67.7%) reported to have taken drugs. Most ex-drug users (83.3%, 35) were multi-drug abusers. Ketamine was the most common drug taken, used by 90.4% of the participants. Most ex-drug users (90.0%) reported that there might be a change in oral health condition. Most of them perceived “dryness of the mouth” (81.0%, 34). The mean DMFT of the population was 3.85 (SD=3.5), with most constituted by DT, with a mean of 2.80 (SD=3.5). Around half of the participants (51.7%, 30) had the highest pocket depth of 4-5mm, while 5 participants (8.6%) had pocket of 6mm or more. The maximum CPI score increased with the duration of stay in the rehabilitation centre (P= 0.006). Male participants tended to have higher maximum CPI score (P = 0.003). **Conclusion:** A range of oral health services was provided including oral hygiene instruction, scaling and fluoride treatment in an outreach setting. The participants generally had poor oral health.

2. Table of Contents	Page
1. ABSTRACT	1
2. TABLE OF CONTENTS	2
3. INTRODUCTION	3
4. AIMS AND OBJECTIVES	5
5. MATERIALS AND MATHODS	
5.1 Selection of centre	6
5.2 Preparation for the project	6
5.3 Outreach Dental Service	8
5.4 Service Daily Log	10
5.5 Data Analysis	11
6. RESULTS	
6.1 Background of Participants	12
6.2 Drug abuse status	13
6.3 Perceived drug impact on oral health condition	16
6.4 Oral health behavior	17
6.5 Dental Caries Experience	19
6.6 Periodontal Condition	19
6.7 Attrition and Erosion	20
6.8 Comparison of Mean DMFT of non-drug users and ex-drug users	21
6.9 Maximum CPI score against the duration of stay in the rehabilitation centre	21
6.10 Comparison of Maximum CPI score of male and female participants	22
6.11 Treatments provided	23
7. DISCUSSION	
7.1 Study Population	24
7.2 Comparison with previous community health projects	24
7.3 Dental caries experience comparison with general population	26
7.4 Periodontal condition comparison with general population	27
7.5 Comparison of Mean DMFT of non-drug users and ex-drug users	28
7.6 Maximum CPI score against the duration of stay in the rehabilitation centre	28
7.7 Comparison of Maximum CPI score of male and female participants	28
7.8 Response from the subjects and centre	29
8. CONCLUSION AND RECOMMENDATIONS	30
9. ACKNOWLEDGEMENTS	31
10. REFERENCES	32
11. APPENDICES	
Appendix I. Introduction Letter (Chinese and English Version)	35
Appendix II. Consent Form	37
Appendix III. Questionnaire	39
Appendix IV. Charting Form	41
Appendix V. Oral Examination Report	43
Appendix VI. Equipment List	44

3. INTRODUCTION

According to the 2013 statistics from Narcotics Division, Security Bureau of Hong Kong Government, the drug abuse population under the age of 21 is 1161, which was 10.3% of total drug abuse population. Amongst the population, approximately one-third were female¹. The reported drugs included opiates and psychotropic substances such as ketamine, midazolam, methamphetamine and cocaine. Multi-drug abuse had become a rising trend in the population².

Drug users exhibited changes in lifestyle including physical effects of drugs, dietary habits, organisational and time constraints, and unfavourable social conditions³. Altered oral health sensations associated with illicit drug abuse, such as dryness of mouth, tenderness in jaw muscle or jaw joint and dentine hypersensitivity, were reported⁴.

To eradicate the drug abusing habit, drug dependent individuals might be placed under compulsory placement scheme operated by the Correctional Services Department or could voluntarily seek assistance from over 40 drug rehabilitation centres and half-way houses in Hong Kong. Residence from 1 month to several years would be provided. Residents would undergo rehabilitation programmes including detoxification, drug treatment and rehabilitation and social reintegration⁵.

Several overseas studies revealed that residents in drug rehabilitation centres generally had a higher DMFT score and poorer periodontal status, as reflected by periodontal pocket depth (PPD) and Community Periodontal Index (CPI), when compared to the national survey of general citizens of similar age groups. The studies

concluded that they had greater need of dental care. However, they were generally underserved due to the lack of awareness and poor access to dental care^{6,7,8}.

In Hong Kong, multiple outreach dental service projects^{9,10,11,12,13} had been conducted to promote oral health care in a variety of special need groups. However, there was a lack of dental services targeting the residents in drug rehabilitation centres. It might be due to remote locations of these centres and logistic reasons.

4. AIMS AND OBJECTIVES

4.1 Aims

1. To provide basic dental services to the young residents in a remote drug rehabilitation centre.
2. To investigate the oral health status and the oral health behaviour of the participants.

4.2 Objectives

1. To provide basic dental treatments through outreach mode of service to the participants.
2. To assess the caries experience and periodontal health status of the participants by clinical examination.
3. To obtain information regarding their oral health behaviour through self-reported questionnaire.

5. MATERIALS AND METHODS

The target group of this project was residents in Christian Zheng Sheng College, a drug rehabilitation institution located on Lantau Island in Hong Kong.

5.1 Selection of centre

Christian Zheng Sheng Association Limited ran a number of drug rehabilitation centers in different locations on Lantau Island ¹⁴. Each center focused on a particular group of drug addicts and rehabilitative persons. Christian Zheng Sheng College was one of the centres. It was established in 1985 to serve as a drug dependence treatment institution. It was subsequently registered as a private educational institute in 1998 with an aim to correct youngsters with drug addiction and behavioral problems. It targeted both young male and female rehabilitative students. There were approximately 80 residential students ¹⁵.

5.2 Preparation for the project

In November 2013, initial contact with the person-in charge of Christian Zheng Sheng College was made through phone calls. Project content and confirmation was also made through invitation letter (Appendix 1) and emails. It was planned to spend two days for the services. Consent form (Appendix 2), Oral health questionnaire (Appendix 3), dental chart (Appendix 4) and examination report (Appendix 5) were designed, edited and revised in a series of group meetings.

****Dentition Status****

Score	Status	Score	Status
0	Sound	7	Bridge abutment. Special crown or veneer/Implant
1	Decayed	8	Unerupted tooth/ partially erupted tooth
2	Filled, with decay	9	Attrition
3	Filled, no decay	10	Erosion
4	Missing, as a result of caries	11	Not recorded
5	Missing, any other reasons	T	Trauma (fracture)
6	Fissure Sealant		

Table 5.1 Codes for Dentition Status recorded Dental Examination

Dental status of each tooth of the subject was recorded according to the WHO oral health survey ¹⁵ in the dental chart. Each tooth was assigned with a code respective to its dental status (Table 5.1). Decayed tooth (DT), missing tooth (MT), filled tooth (FT) and DMFT scores were calculated for each subject to illustrate how the dentition was affected by dental caries. DT represented the number of decayed teeth (Score 1) and the number of filled but decayed teeth (Score 2). MT represented the number of missing teeth as a result of caries (Score 4). FT represented the number of filled teeth with no active caries (Score 3). DMFT represented the summation of DT, MT and FT. The periodontal examination of each subject was recorded in terms of Community Periodontal Index (CPI). Index teeth 17/16, 11, 26/27, 36/37, 31, 46/47 were examined. Measurements on the index teeth were performed with a WHO Community Periodontal Index probe. First and second molars were used as index teeth in each posterior sextant. If the index tooth was not present in a sextant, all the teeth remained in that sextant were examined. Modification of CPI was made depending on the subject's age. For subjects above 18 years old, conventional CPI were recorded. For subjects between 15 to 18 years old, only first molars were examined for posterior sextants due to possible false pockets created by non-fully erupted second molars. For subjects below 15 years old, only healthy (code 0), bleeding (code 1), calculus/marginal overhang (code 2) were charted. Results from intra-oral and extra-oral examinations were recorded. Indicated preventive treatments, such as OHI, scaling, and topical fluoride, were also marked.

A field visit was conducted in early January to Christian Zheng Sheng College. The purpose of the visit was to find out the available working area, work out the logistics plan, estimate the quantity and types of equipment needed, and deliver the consent forms for distribution to students and their parents.

Few weeks before the service, an equipment list (Appendix 6) was drafted, and relevant equipment such as WHO probes, ultrasonic scalers (Electro Medical System, Switzerland), and suction units were prepared. Duties of different group members were designated, and two trained examiners were calibrated.

Early in the morning of the first service day, equipment were transported to Central Pier from the Prince Philip Dental Hospital. The whole group, with the resources, then travelled to Cheung Chau, followed by another ferry ride to Christian Zheng Sheng College.

5.3 Outreach Dental Service

In the institution, an area was allocated for carrying out oral health survey, oral hygiene instruction (OHI), oral examination and delivery of treatment for the students. Each student was provided with a questionnaire before the oral examination.

An OHI and questionnaire corner was set up. OHI were demonstrated to participants with tooth models and oral hygiene aids. There were 13 questions in the questionnaire regarding the age and gender of the student, type(s) of drugs and smoking and drug abuse habits, the perceived impact(s) of drug abuse on oral health and oral hygiene habits.

Three portable dental chairs were set for oral examination and delivery of preventive treatments. Each station involved an operator and an assistant. Medical history, extra-oral and intra-oral examination, dental status and Community Periodontal Index (CPI) were recorded on a standard charting form. During each clinical examination, a LED light handle with a disposable hand mirror and a WHO probe were used. Two

stations were involved in both oral examination and preventive treatment, and the third station was assigned only for delivering preventive treatments. Re-examination was carried out on every 10 students for monitoring inter-examiner reliability.

After examination, individualized preventive treatment plan was formulated and written on charting form, including OHI, scaling and topical fluoride application. Scaling was given with EMS, hand scaling instruments together with portable high-volume suction. Incipient caries, sensitivity and cavitated lesions were treated with topical fluoride varnish (Duraphat, Colgate,US).

At the end of the treatment, an individualized examination report was completed and given to each student.

5.4 Service Daily Log

The daily log of the two-day outreach dental project is illustrated as follow:

Day 1	
Time	Activities
6:15	Gathering materials at PPDH
6:30	Van arrival Loading van
7:00	Leaving PPDH
7:25	Arriving Central Pier Loading materials onto ferry from Central to Cheung Chau Island
7:40	Ferry sailing from Central to Cheung Chau Island
8:40	Arriving Cheung Chau Island
9:30	Loading materials onto ferry from Cheung Chau Island to Christian Zheng Sheng College
10:00	Ferry sailing from Cheung Chau Island to Christian Zheng Sheng College
10:30	Arriving Christian Zheng Sheng College Set up
11:00	Distributing questionnaire Instructing oral hygiene Examining and charting oral condition Providing preventive treatments (i.e. scaling, fluoride varnish) Disinfecting instruments
13:30	Lunch
14:15	Distributing questionnaire Instructing oral hygiene Examining and charting oral condition Providing preventive treatments (i.e. scaling, fluoride varnish) Disinfecting instruments
16:30	Disinfecting instruments End of Day 1

Table 5.2: Service Daily Log (First Day)

Day 2

Time	Activities
7:40	Arriving Central Pier
8:40	Ferry sailing from Central to Cheung Chau Island
9:15	Arriving Cheung Chau Island
10:00	Ferry sailing from Cheung Chau Island to Christian Zheng Sheng College
10:30	Arriving Christian Zheng Sheng College Set up
10:45	Distributing questionnaire Instructing oral hygiene Examining and charting oral condition Providing preventive treatments (i.e. scaling, fluoride varnish) Disinfecting instruments
13:30	Lunch
14:15	Distributing questionnaire Instructing oral hygiene Examining and charting oral condition Providing preventive treatments (i.e. scaling, fluoride varnish) Disinfecting instruments
16:30	Disinfecting instruments End of Day 2

Table 5.3: Service Daily Log (Second Day)

5.5 Data Analysis

The data were coded and analysed using the statistical package SPSS version 20.0. Frequency distribution of the responses to the questions relating to background information, drug abuse history, perceived drug impacts on oral health condition and oral health behaviour was produced. Kappa statistic was used to analyse the inter-examiner reliabilities. The mean numbers of decayed, missing and filled teeth were calculated and the distribution of the highest Community Periodontal Index scores was produced. Variation in background, drug abuse history, oral health behaviour and clinical findings such as DMFT were analysed using Chi-square test or other non-parametric test. The level of significance was set at 0.05.

6. RESULTS

6.1 Background of Participants

Sixty-two participants were recruited in the outreach service. Amongst which 50 were boys and 12 were girls with a male to female ratio of 4.2 to 1. The age of the participants ranged from 10 to 22 and the mean age was 18.3 (SD=2.41) (figure 6.1). They consisted of 6 non-smokers and 56 ex-smokers. For those who smoked, the mean pack-year was 4.3 (SD=3.95). The heaviest ex-smoker smoked 40 cigarettes a day for 8 years (figure 6.2).

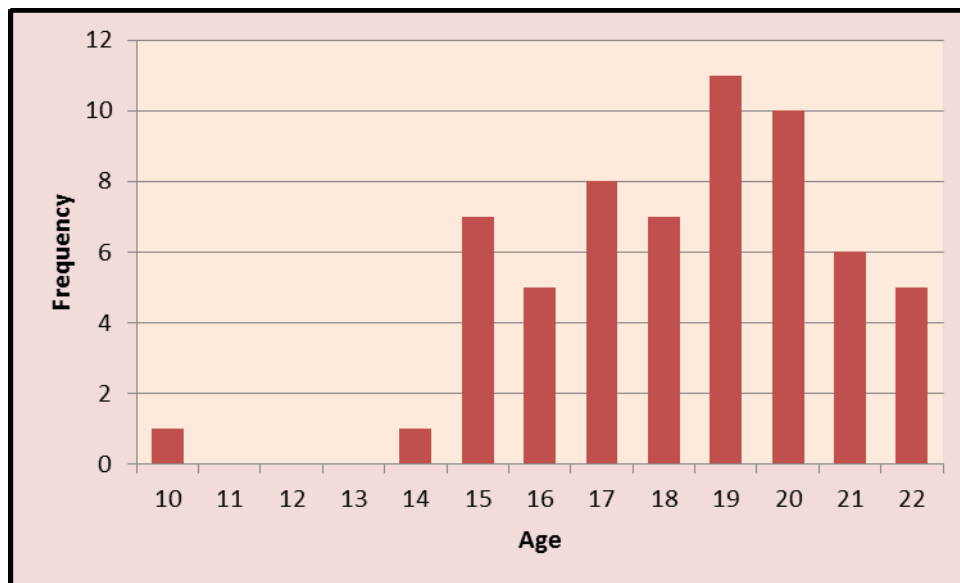


Figure 6.1: Age distribution of the participants

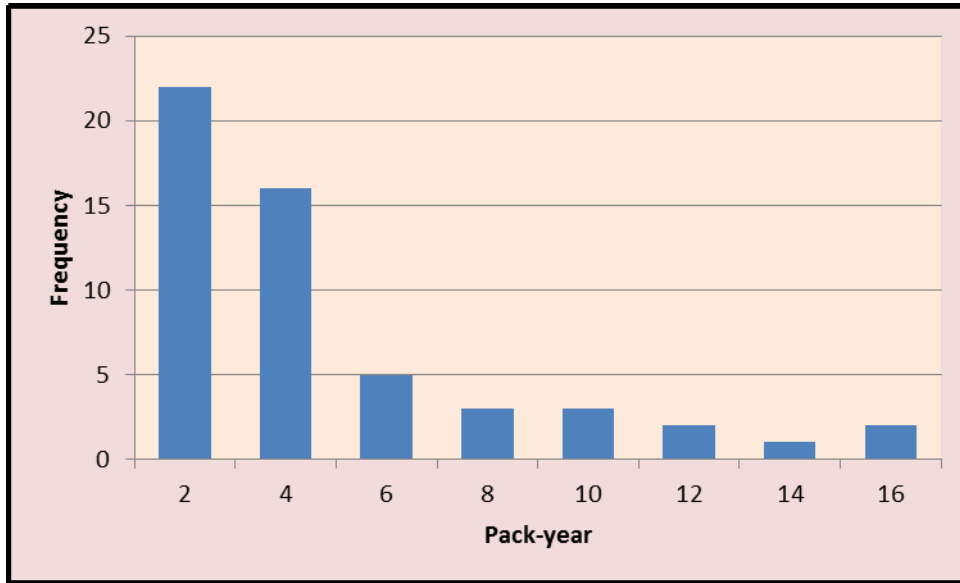


Figure 6.2: Pack-year distribution of the ex-smokers

6.2 Drug abuse status

Forty-two of the participants (67.7%) reported to have taken drugs.

6.2.1 Types of drugs taken

Most (83.3%, 35) ex-drug users were multi-drug abusers. One multi-drug abuser reported to have taken seven types of drugs. Ketamine was the most common drug taken, used by 90.4% (38) of the participants, followed by cannabis (64.3%, 27), cocaine (54.8%, 23), methamphetamine (ice) (52.4%, 22) and ecstasy (45.2%, 19) (figure 6.3).

6.2.2 Duration of abusing drugs

The length of time the participants recalled using drugs ranged from less than one year (19.0%, 8), one to two years (42.9%, 18) to more than three years (38.1%, 16) (figure 6.4).

6.2.3 Frequency of drugs taking

Most participants took drugs frequently. Around 90% of the participants consumed drugs more than once a week. Among these participants, 76.3% took drugs more than 3 times per week (figure 6.5).

6.2.4 Length of time of quitting drugs

Twelve participants (30.0%) had quit drugs for 1 year. The mean period of quitting drugs was 3.5 years (SD=2.2), while the lengthiest period reported for being drug-free was 9 years (figure 6.6).

6.2.5 Methods of taking drugs

Seven participants (17.1%) took drugs only by oral means, seven (17.1%) only by nasal means. About two-thirds (65.9%) of participants took drugs both orally and nasally. None of them consumed drugs intravenously (figure 6.7).

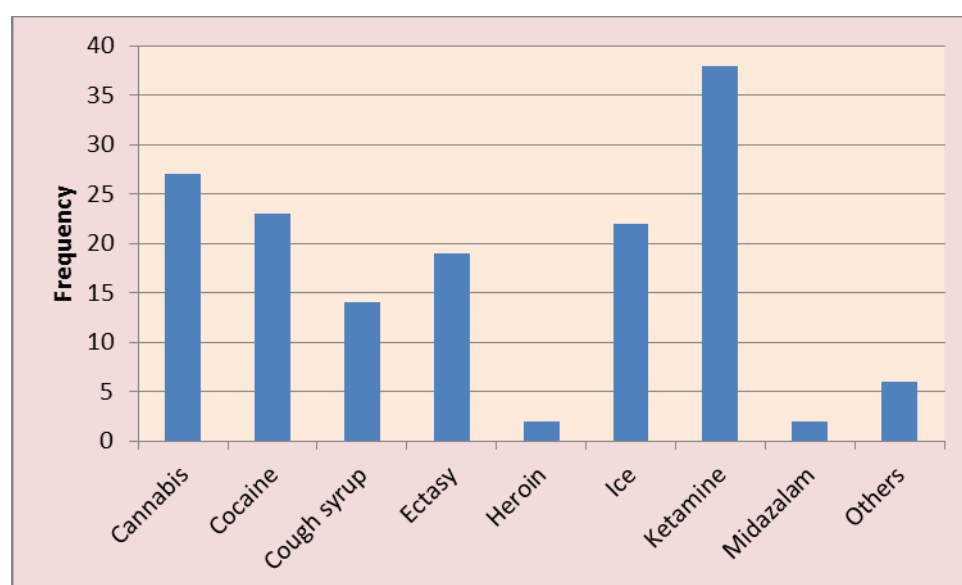


Figure 6.3: Frequency of ex-drug users by drug types

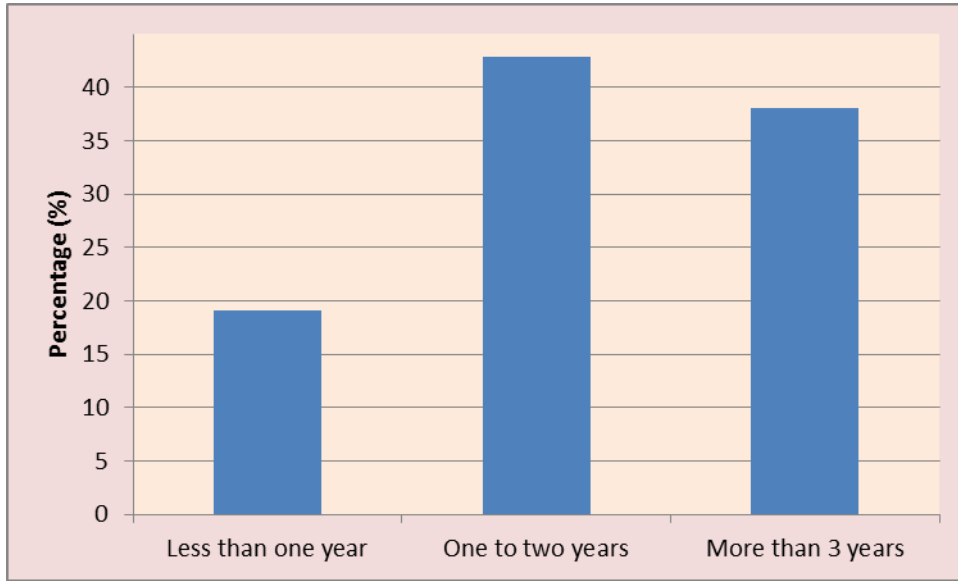


Figure 6.4: Percentage of ex-drug users by duration of drug use

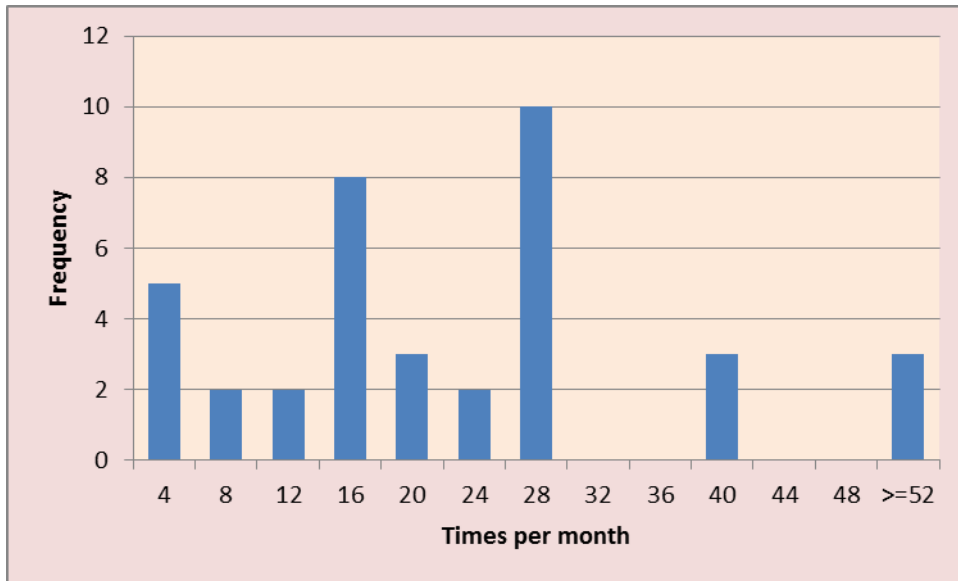


Figure 6.5: Frequency of ex-drug users by frequency of drugs taking

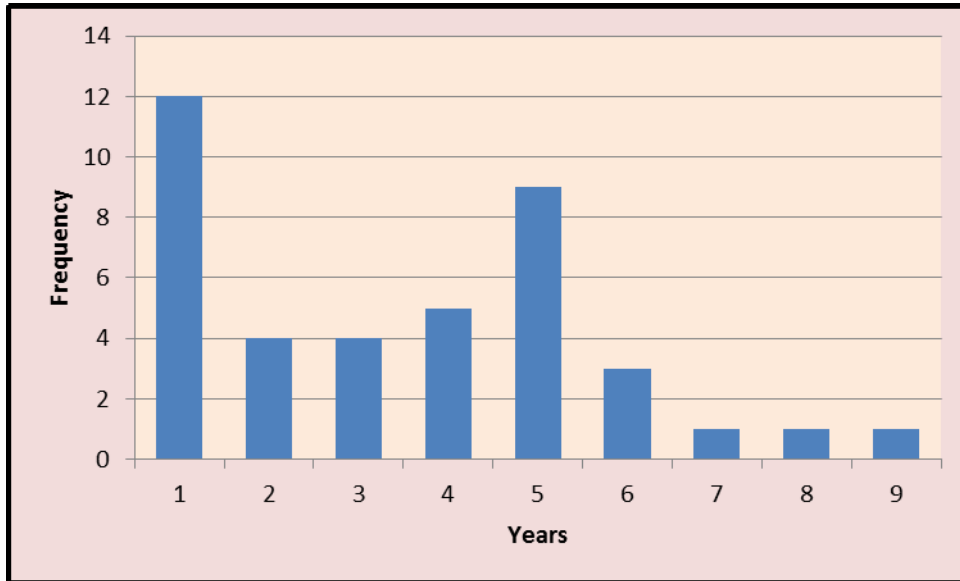


Figure 6.6: Time since last drug use as reported by the participants

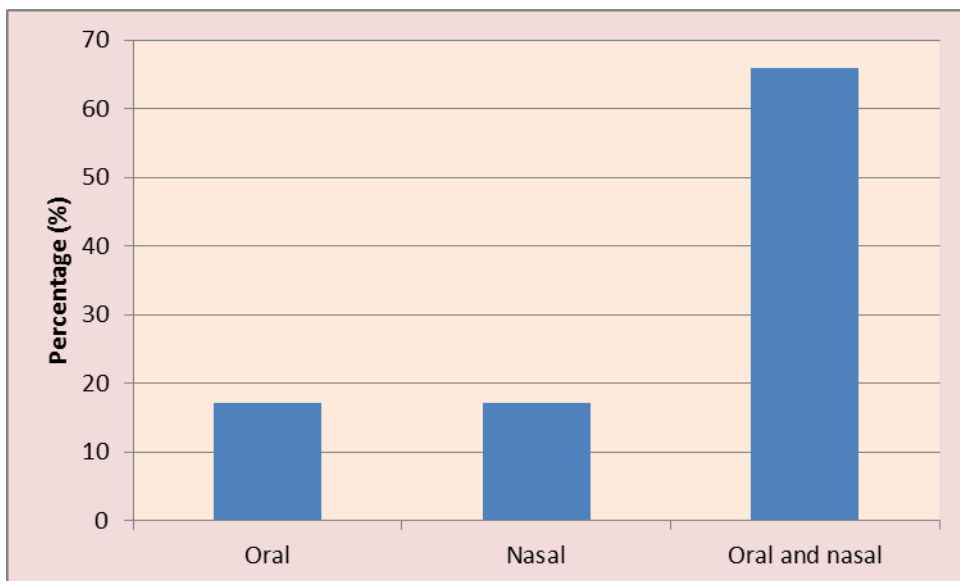


Figure 6.7: Mode of drug intake as reported by the participants

6.3 Perceived drug impact on oral health condition

Most of the participants (90.0%) reported that there might be a change in oral health condition. Most of them perceived “dryness of the mouth” (81.0%, 34; Table 6.1). More than forty percent of participants recognized a habit of “grinding” (47.7%, 20)

and “chewing” (42.9%, 18), and also sensitive teeth (40.5%, 17). More than one-third of participants were aware of “Lip and cheek biting” (38.1%, 16), and “swollen gums” (33.3%, 14). Over a quarter of participants recognized “toothache” (29.3%, 12) and “joint pain” (29.3%, 12). Relatively small amount of participants perceived “tooth fracture” (16.7%, 7) and “difficult mouth opening” (11.9%, 5).

	None (%)	Mild (%)	Moderate (%)	Severe (%)
Dry mouth	19	28.6	40.5	11.9
Grinding	52.4	28.6	16.7	2.4
Uncontrolled chewing	57.1	31	11.9	-
Sensitive teeth	59.5	21.4	14.3	4.8
Lip and cheek biting	61.9	14.3	21.4	2.4
Swollen gums	66.7	23.8	7.1	2.4
Toothache	70.7	17.1	12.2	-
Joint pain	70.7	24.4	2.4	2.4
Tooth fracture	83.3	9.5	4.8	2.4
Difficult mouth opening	88.1	9.5	2.4	-

Table 6.1: Oral health sensations reported relating to drug abuse experiences

6.4 Oral health behavior

Forty-four (71.0%) of the participants brushed twice a day, while 14 (22.6%) brushed once a day, and 4 (6.45%) brushed irregularly (figure 6.8). Majority of participants (80.3%) did not use cleaning aids other than toothbrush. The rest of them used floss, mouth rinse or both (figure 6.9).

Fifty-seven (91.9%) of the participants were irregular dental attendees. The mean time since their last visit was 4.7 years (SD=2.9).

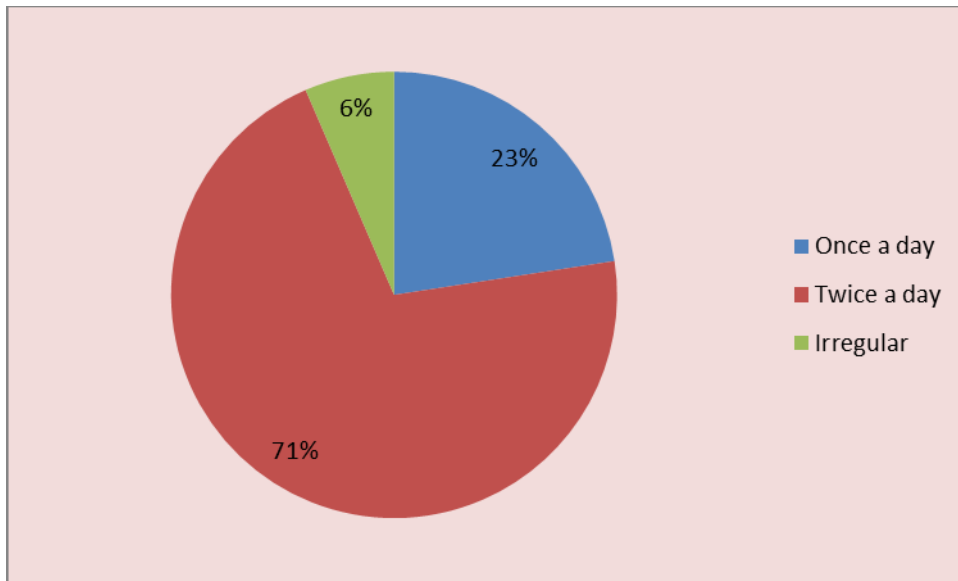


Figure 6.8: Tooth brushing habits of participants

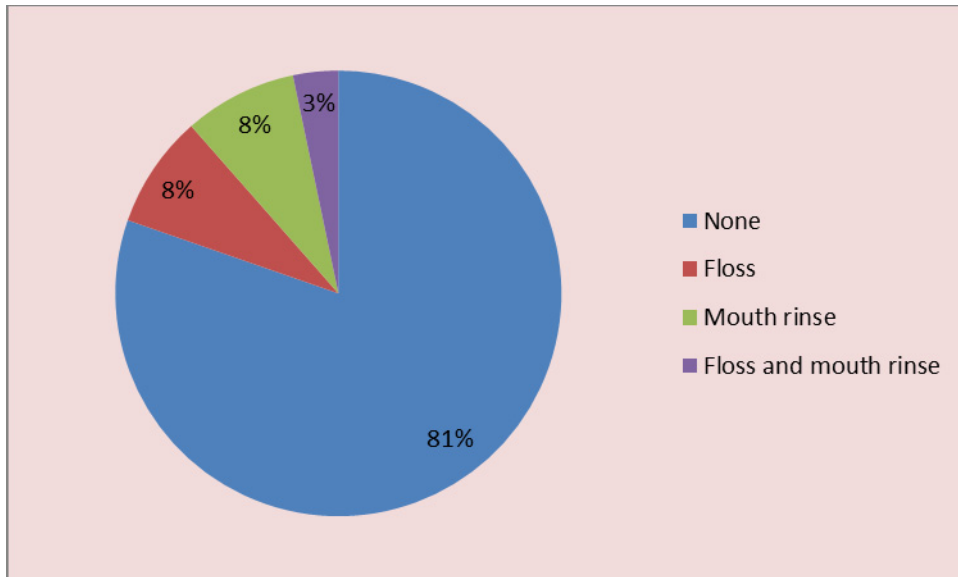


Figure 6.9: Oral hygiene aids used other than toothbrush

6.5 Dental Caries Experience

The mean DMFT of the population was 3.85 (SD=3.5; Table 6.2), with the lowest score of 0 presented by 10 participants and the highest score of 19 by 1 participant. Most of the mean DMFT was constituted by DT, with a mean of 2.80 (SD=3.5). While the mean MT and FT were 0.07(SD=0.3) and 0.98 (SD=1.4) respectively.

More than two-third (70.5%, 43) of the participants had untreated dental caries. The highest score of DT was 18, which was presented by 1 participant only. Majority of participants (95.0%, 58) had no missing teeth due to caries. Around half of them (55.7%, 34) did not have filled teeth, while 20 (32.8%) of them had 1 to 2 filled teeth. The highest FT was 5, which was presented by 3 participants. The Kappa statistic for dentition status is 0.72.

Tooth decay experience	Mean Score (SD)	Percentage of population (%) (n=61)
DMFT	3.85 (3.5)	83.6
DT	2.80 (3.5)	70.5
MT	0.07 (0.3)	4.9
FT	0.98 (1.4)	44.3

Table 6.2: Mean score and percentage of participants with tooth decay experience (DMFT)

6.6 Periodontal Condition

6.6.1 Highest pocket depth

Twenty three participants (39.6%) out of 58 who were probed showed highest pocket depth of 0-3mm (Table 6.3). Around half of the participants (51.7%, 30) had highest

pocket depth of 4-5mm, while 5 participants (8.6%) had pocket of 6mm or more.

Highest pocket depth	Frequency	Percent (%)
0-3 mm	23	39.6
4-5 mm	30	51.7
≥ 6 mm	5	8.60

Table 6.3: Highest pocket depth

6.6.2 CPI scores

None of the participants had healthy gums in all the six sextants. More than half (56.9%) had all sextants with CPI 1 or above (Table 6.4). On average, a participant had 0.7 sextant with healthy gums, 2.2 sextants with bleeding, 1.5 sextants with calculus or overhangs, 1.5 sextants with shallow pockets (4-5mm) and 0.2 sextant with deep pockets (6mm or more). The Kappa Statistic is 0.55.

	Healthy	Bleeding	Calculus/ Overhangs	4-5mm pocket	6mm or more pocket
Mean number of sextants affected	0.7	2.2	1.5	1.5	0.2
% among population	0	10.3	29.3	51.7	8.6

Table 6.4: Periodontal conditions as measured by the highest CPI score among participants

6.7 Attrition and Erosion

Forty participants (65.6%) examined showed attrition in their teeth while only one

showed erosion. Each participant had an average of 2.7 teeth with attrition (SD=3.5).

6.8 Comparison of Mean DMFT of non-drug users and ex-drug users

The mean DT, MT and DMFT of non-drug users were lower than those of ex-drug users (Table 6.5). However, according to the Mann-Whitney U test, all p-values were larger than 0.05, which meant all the differences were not statistically significant.

	Non-drug users (N=18)	Ex- drug users (N=42)	Significance
Mean DT (SD)	2.11 (1.78)	3.17 (3.75)	Not significant
Mean MT (SD)	0.00 (0)	0.10 (0.37)	Not significant
Mean FT (SD)	1.33 (1.46)	0.86 (1.42)	Not significant
Mean DMFT (SD)	3.44 (2.23)	4.12 (3.96)	Not significant

Mann-Whitney U test, $p > 0.05$

Table 6.5: Mean DMFT of non-drug users and ex-drug users

6.9 Maximum CPI score against the duration of stay in the rehabilitation centre

For the participants who had stayed in the centre for 1 year or less, most of them (66.7%) had maximum CPI of 2 (Table 6.6). For the participants who had stayed in the centre for 2 to 5 years, most of them (66.7%, 75.0%, 100%, 70.0% respectively) had maximum CPI of 3. Two participants have stayed in the centre for 6 years, one of them had maximum CPI of 3, and another one had maximum CPI of 4. The only one participant who had stayed in the centre for 7 years has maximum CPI of 2.

According to the chi-square test, the p-value was 0.006, which meant the longer the duration of participants had stayed in the rehabilitation centre, the larger the proportion of them had a higher maximum CPI.

Maximum CPI score	Duration of stay in the rehabilitation centre (years)						
	1	2	3	4	5	6	7
1	3	1	1	0	1	0	0
2	14	2	1	0	0	0	1
3	3	8	6	5	7	1	0
4	1	1	0	0	2	1	0

Chi-Square Test, p = 0.006

Table 6.6: Distribution of participants. Duration of stay in the rehabilitation centre against maximum CPI score

6.10 Comparison of Maximum CPI score of male and female participants

Most (80%) of female participants had maximum CPI of 2, while only 32.6% of male participants had maximum CPI of 2 or less (table 6.7). Around one-fifth (20.0%) of female and 57.1% of male participants had maximum CPI of 3 (pockets of 4-5mm). A small group (10.2%) of male participants and no female participants had maximum CPI of 4 (pockets of 6mm or more). According to the chi-square test, the p-value was 0.003, which meant male participants tended to have higher maximum CPI score.

Maximum CPI	Frequency and Percentage of Participants	
	Male	Female
1	6 (12.2%)	0 (0%)
2	10 (20.4%)	8 (80.0%)
3	28 (57.1%)	2 (20.0%)
4	5 (10.2%)	0 (0%)
Total	49 (100%)	10 (100%)

Chi-Square test, $p = 0.003$

Table 6.7: Maximum CPI against gender of participants

6.11 Treatments provided

Most (96.8%, 60) of the participants received dental examination with the exception of two due to the complication of their medical histories. Dental scaling and fluoride treatment were also provided to 88.7% (55) and 70.9% (44) of the participants respectively.

7. DISCUSSION

7.1 Study Population

In this project, residents in Christian Zheng Sheng College were chosen because it was a drug rehabilitation center in Hong Kong which was well known for serving both young male and female ex-drug users. It was suitable for this project because the oral conditions for both male and female ex-drug users could be examined in the same institute. Besides, Christian Zheng Sheng College was located in a remote area on Lantau Island, which could only be reached by two rides of ferry. As it was inconvenient for residents to seek dental treatments, outreach dental services were needed.

7.2 Comparison with previous community health projects

Two community health projects were conducted 12 years ago by the students of The University of Hong Kong regarding ex-drug users in Hong Kong. In the previous projects, majority of the participants were males with most of them ranging from 15 to 30 years old ^{17, 18}. One of the previous projects showed that the drugs most commonly used were heroin and cannabis ¹⁷ while the other one revealed that the drugs most frequently taken were amphetamine “Speed” and “Ecstasy” ¹⁸. It was contrary to the findings of this project which revealed that the drugs most commonly used were ketamine and cannabis (Figure 6.3), which was similar to the findings from the report of 2013 statistics in Narcotics Division, Security Bureau of Hong Kong Government, which stated that ketamine was the most popular drug of both male and female drug abusers under 21 years old ¹.

In these projects, perceived impacts of drug abuse on oral health conditions were

investigated. This project showed that the most common perceived impact was “dryness of mouth”, followed by a habit of “grinding” and “chewing”, which was different from one of the previous projects which found that the most frequent perceived impact was toothache, followed by dry mouth and tooth fracture ¹⁷. Another previous project found that the most common oral health sensations were “dryness of mouth” and feeling of “chewing something” which was similar to the results of this project ¹⁸. “Dryness of mouth” perceived by the participants might be due to effect of long term drug abuse on salivary gland function, especially since majority of the participants took drugs for more than 1 year and were multi-drug abusers before (Figure 6.4).

Dental caries experience was studied among the participants using mean DMFT. Mean DMFT of ex-drug users in the previous project was 3.81 which was slightly lower than the results shown in this project ¹⁸. Majority of mean DMFT in both projects was constituted by mean DT, while the mean DT of the participants of this project was found to be higher ¹⁸. Besides, a lower mean FT of participants was noted in this project (Table 6.2). The reason might be residents in Christian Zheng Sheng College were less accessible to dental treatment due to its remote location. Besides, the residents were not provided with floss or interdental brush in the centre, thus having a poorer plaque control.

Periodontal conditions of the participants could not be compared between these projects because the previous projects did not record the maximum CPI score of the participants.

7.3 Dental caries experience comparison with general population

A study investigating the dental caries experience in 18 year-old adults in Hong Kong showed that mean DMFT was 1.4 which was lower than participants of this project ¹⁹. Most of the mean DMFT of the participants was constituted by mean DT and this was higher than those from Hong Kong young adults' study ¹⁹. However, mean FT of this project's participants was lower than those of Hong Kong young adults' study ¹⁹. When comparing with the 18 years old students of The University of Hong Kong ²⁰, the mean DMFT of residents in Christian Zheng Sheng College was higher (0.32 vs. 3.85). It implied that subjects in a drug rehabilitation centre might be more negligent towards oral hygiene practice. In addition, majority of residents were irregular dental attendee and might have a lower chance to receive dental treatment. However, other factors such as educational background and economic condition might vary among individuals which might contribute to the difference in caries experience. Further investigations might be carried out to study these factors. A study conducted in China showed that heroin users in drug rehabilitation centres had higher mean DMFT than our study population ⁶. This might be attributed to the lack of water fluoridation and School Dental Care Service in China. Through these programs, Hong Kong ex-drug abusers might be subjected to better early prevention of dental caries since young age. An Ireland study ⁸ revealed that residents in alcohol/drug rehabilitation centres had a mean DMFT score higher than those of this study. This might be explained by wider age range of 18 to 73 of the Ireland study population since mean DMFT was a measure of cumulative caries experience of teeth and the score might increase with ages. It might be difficult to compare two groups of individuals with such a large age variation.

7.4 Periodontal condition comparison with general population

Comparing to the periodontal condition findings of study on students of The University of Hong Kong, the periodontal status of residents of Christian Zheng Sheng College was worse, with proportionally more individuals having shallow pockets of 4-5mm (51.7% vs. 2.3%)²⁰. Another study of Hong Kong young adults showed that mean number of sextant with maximum CPI score 3 was 0.04 which was much lower than the participants of this project (1.5)¹⁹. In that study, no individual was found to have deep pocket more than 5mm which was contrary to findings of this project in which 8.6% participants had maximum CPI score 4 (Table 6.3). The most important reason for poorer periodontal status of the residents might be that majority of them were ex-smokers in which smoking was a risk factor for periodontal disease. The second reason might be the lack of dental floss or interdental brush in the centre, causing residents to have poor plaque control in the interdental areas. Another possible reason might be due to inadequate prevention of periodontal disease as reflected by infrequent dental check-up and the lack of annual scaling. However, it seemed that the periodontal status of the young ex-drug abusers in Hong Kong was worse than that in China. A study in China showed that 8% of residents in drug rehabilitation centres had deep pockets which was much less than that of our study population.⁶ However, the above study did not clearly state which index (such as CPI or BPE) was used to investigate the periodontal condition and the definition of deep pocket was not clearly stated. Therefore, comparison and conclusion could be difficult to draw.

7.5 Comparison of Mean DMFT of non-drug users and ex-drug users

The difference in mean DMFT of non-drug users and ex-drug users in Christian Zheng Sheng College was found to be statistically insignificant, which was contrary to the results of similar studies in the past ^{7, 18}. A possible reason for this was the relatively small study sample, which might not represent the population of ex-drug users. Also, it was found at a later stage that not all residential students were ex-drug user. As a result, the sample size was further reduced.

7.6 Maximum CPI score against the duration of stay in the rehabilitation centre

It was found that the longer the duration of stay of participants in the rehabilitation centre, the larger the proportion of them had a higher maximum CPI. The reason might be that 91.9% of the participants were irregular dental attendees, as they were not allowed out of the rehabilitation centre except for special reasons. The remote location of the centre also minimized accessibility of dental services. Without regular dental check-up, the participants were not given sufficient treatments and guidance in maintaining periodontal health. This might also contribute to the participants' lack of dental awareness in performing good oral hygiene practice.

7.7 Comparison of Maximum CPI score of male and female participants

Male participants tended to have higher maximum CPI score. A possible reason was that female participants had higher dental awareness. In addition, this finding might be attributed to the relatively few female proportion in the sample size, rendering the comparison less reliable. A possible confounding factor was that the residing duration on average of girls was less than boys.

7.8 Response from the subjects and centre

Outreach dental service was generally welcomed by Christian Zheng Sheng College. They were keen to provide support to this project. From the initial planning stage, they offered generous assistance in venue provision and logistics for materials and equipment. Among the 80 residents who were invited to participate, 62 agreed, thus showing their appreciation for this kind of service. Positive feedbacks were received from the participants.

8. Conclusion and Recommendations

8.1 Conclusion

Despite the relatively small sample size in this study,

1. from the clinical examination, the participants had high number of untreated dental caries and most of them had periodontal problem.
2. simple outreach dental services were provided to the participants during the project.

8.2 Recommendations

The government and non-governmental voluntary organisations together with the dental profession should seek ways of providing adequate oral health care for the young residents in drug rehabilitation centres. Outreach dental services can be the choice of service mode in order to provide basic dental services to this community.

9. ACKNOWLEDGEMENTS

We would like to express our heartfelt gratitude to our supervisor, Dr Anthony Wong, for his advice and guidance throughout the project. We would also like to convey our appreciation to Dr Emily Jiang and Ms Joe Choi from the Outreach Team of the Department of Dental Public Health for their assistance in the outreach service.

We would like to show our gratefulness to all the staff, teachers and students from the Christian Zheng Sheng College for their generous support and participation in this project.

We would also like to thank Professor Edward CM Lo, Professor Colman McGrath and Ms Carpi Wong (senior DSA of Periodontology Clinic) for their help in material and equipment allocation.

10. REFERENCES

1. Narcotics Division. Central Registry of Drug Abuse 2013. Security Bureau, Hong Kong SAR Government.
http://www.nd.gov.hk/statistics_list/doc/en/t16.pdf (updated on 27 March 2014.)
2. Narcotics Division, Security Bureau. Central Registry of Drug Abuse: Sixty-second Report 2003 - 2012. Hong Kong: Hong Kong SAR Government. 2012
http://www.nd.gov.hk/pdf/report/crda_62nd/chapter2_trends.pdf
3. P. G. Robinson, S. Acquah and B. Gibson. Drug users: Oral Health-related Attitudes and Behaviours. *British Dental Journal* 2005; **198**: 219 – 224.
4. C. McGrath and B. Chan. Oral health sensations associated with illicit drug abuse. *British Dental Journal* 2005; **198**: 159 – 162.
5. Narcotics Division, Security Bureau, Hong Kong SAR Government.
<http://www.nd.gov.hk/en/treatment.htm> (revised on 29 June 2012)
6. M Du, R Bedi, L Guo, J Champion, M Fan, R Holt. Oral health status of heroin users in a rehabilitation centre in Hubei province, China. *Community Dental Health* 2001; **18(2)**: 94 – 98.
7. T Rooban, A Rao, E Joshua, K Ranganathan. Dental and oral health status in drug abusers in Chennai, India: A cross-sectional study. *Journal of Oral and Maxillofacial Pathology* 2008; **12(1)**: 16-21.
8. E O'Sullivan. Dental health of Irish alcohol/drug abuse treatment centre residents. *Community Dent Health*. 2012; **29(4)**: 263-267.
9. Y Chan, T Chow, O Lam, K Lee, J Tam, W Tam, C Wong, K Yip, X Zhang. Dental Care Without Borders – Outreach Service for the Elderly in Peng Chau. *Community Health Project 2013*. Dental Public Health, Faculty of Dentistry, the University of Hong Kong.
10. Hong Kong St. John Ambulance. St. John Ambulance Brigade.
http://www.stjohn.org.hk/en/ser_bri03.shtml (accessed on 28 Apr 2014)

11. Department of Health, Food and Health Bureau. Pilot Project on Outreach Primary Dental Care Services for the Elderly in Residential Care. Hong Kong SAR Government 2011.
http://www.fhb.gov.hk/download/press_and_publications/otherinfo/120605_h_dental/leaflet.pdf (accessed on 28 Apr 2014)
12. Hong Kong Special Care Dentistry Association. 4-year Pilot Project on Dental Service for Patients with Intellectual Disability. Hong Kong.
<http://www.hkscca.org/home---.html> (accessed on 28 Apr 2014)
13. Legislative Council. Dental Care Policy and Services for the Elderly and People with Disabilities. Hong Kong SAR Government.
<http://www.legco.gov.hk/yr13-14/english/panels/hs/papers/hs1216cb2-477-3-e.pdf>
(accessed on 28 Apr 2014)
14. Christian Zheng Sheng Association Limited. Hong Kong.
<http://www.hkschooltv.com/ZhengSheng/Welcome.html> (accessed on 28 Apr 2014)
15. Narcotics Division. The fifth Three-year Plan on Drug Treatment and Rehabilitation Services in Hong Kong (2009 – 2011). Security Bureau, Hong Kong SAR Government 2009. http://www.nd.gov.hk/pdf/fifth_three_year_plan_annex6_c.pdf (revised on March 2009)
16. World Health Organization. Oral Health Surveys: Basic Methods. 5th Edition. Geneva 2013.
17. W Lau, M Poon, H Tsang, K Tso, W Tso, Y Wan. Dental care service for ex-drug users in Hong Kong. *Community Health Project 2002*. Dental Public Health, Faculty of Dentistry, The University of Hong Kong.
18. S Chan, H Chung, N Hung, B Kaur, S Lam, T Ley, K Li, H So, K Wong. Drug abuse and oral health: the ecstasy and the agony. *Community Health Project Report 2002*. Report Series no. 121. Dental Public Health, Faculty of Dentistry, The University of Hong Kong.
19. H Lu, M Wong, E Lo, C McGrath. Risk indicators of oral health status among young

adults aged 18 years analyzed by negative binomial regression. *BMC Oral Health*. 2013 Aug 19;13(1):40.

20. M Yeung, T Choy, A Wong, C Chu, E Lo. Oral health status and habits of young Hong Kong adults. *The 22nd International Association for Dental Research (SEA Division) & 19th South East Asia Association for Dental Education*, Manila, Philippines, 8-10 October 2008. Conference Paper.

Appendix I. Introduction Letter

(Chinese Version)



敬啟者：

我們是香港大學牙醫學院的四年級學生，現正籌備一個口腔公共衛生專題項目，希望為約一百位戒毒青少年提供簡單的口腔檢查和預防治療，及評估毒品對口腔健康的影響。是次項目希望能為戒毒青少年帶來正面影響，現誠邀 貴機構參與。

是次項目將於 2014 年 3 月 3 至 9 日間進行，內容包括：

1. 口腔衛生檢查
2. 口腔衛生指導
3. 預防治療 (洗牙、氟素治療等)
4. 問卷調查

(所有資料將以不記名方式紀錄)

如有任何查詢，請致電蔡建宏先生（電話：6712 5288）或尹凱旋小姐（電話：9764 1467），或電郵（dentalpoint6@gmail.com）。我們誠意邀請 貴機構參與是次計劃。

此致
基督教正生會
林先生

香港大學牙醫學院四年級學生代表
蔡建宏

香港大學牙醫學院兼職臨床講師
黃浩行醫生

二零一三年十二月三日

(English Version)



Dear Mr. Lam ,

Re: Dental care service for young ex-drug users in Hong Kong

We, as a group of fourth year dental students of the University of Hong Kong, are conducting a project to provide dental care service to ex-drug users in Hong Kong.

We are cordially inviting your organization to participate in this project. The project will be conducted in early March, from 3rd March to 9th March, which includes an oral examination and the delivery of simple dental care service to the participants. We would like to invite your organization to schedule within this period for us to provide this service.

Please do not hesitate to contact Mr. Choi (Tel: 67125288) or Miss Wan (Tel: 97641467) should you have any questions. We sincerely hope that you will give this project your kind support. Thank you very much for your kind attention.

Yours sincerely,

Choi Kin Wang Kelvin
Student Representative
Group 4.6
Faculty of Dentistry
The University of Hong Kong

Dr. Anthony Wong
Group advisor

香港大學牙醫學院牙周病學及公共衛生學
Periodontology & Public Health, Faculty of Dentistry
3/F, Prince Philip Dental Hospital, 34 Hospital Road, Hong Kong.
TEL: (852) 2859 0301 FAX: (852) 2858 7874

Appendix II. Consent Form



2014 年度口腔公共衛生專題項目

基督教正生會家長、監護人和同學：

香港大學牙醫學院四年級學生現正進行一項口腔公共衛生專題項目，希望為約一百位戒毒青少年提供簡單的口腔檢查和預防治療，及評估毒品對口腔健康的影響。

是次項目將於 2014 年 3 月 3 至 9 日間進行，基督教正生會已同意參與這項專題項目。

如承蒙參與，閣下/貴子女將會接受以下口腔衛生服務，包括：

1. 口腔健康檢查
2. 口腔衛生指導
3. 預防治療 (洗牙、氟素治療等)
4. 問卷調查

(是次服務將為一次性，將不會提供跟進或轉介治療。)

參與這項服務是完全自願及免費的。此項目蒐集的資料將會保密。我們尊重參與者之私隱，不會發佈或出版任何揭露閣下/貴子女身份的資訊。

如有任何疑問，閣下可致電牙醫學院學生代表蔡先生（電話：6712 5288），或電郵至 dentalpoint6@gmail.com。

香港大學牙醫學院四年級學生代表
蔡建宏

香港大學牙醫學院兼職臨床講師
黃浩行醫生

二零一四年一月二日

香港大學牙醫學院牙周病學及公共衛生學
Periodontology & Public Health, Faculty of Dentistry
3/F, Prince Philip Dental Hospital, 34 Hospital Road, Hong Kong.

2014 年度口腔公共衛生專題項目

參與者同意書

1. 本人已詳閱及明白上述須知。
2. 本人同意參與上述項目。

參與者 姓名：_____ 參與者 簽名：_____

監護人 姓名：_____ 監護人 簽名：_____

*如參與者未滿十八歲，必須得家長或監護人同意，方可參加。

日期：_____年_____月_____日

見證人 姓名：_____ 簽名：_____

日期：_____年_____月_____日

醫生 姓名：黃浩行_____ 簽名：_____

日期：_____年_____月_____日

Appendix III. Questionnaire (English Version)

Faculty of Dentistry, The University of Hong Kong Community Health Project 2014 - Oral Health Questionnaire

1. Age: _____ years old
2. Gender: [1] Male [2] Female
3. Which of the following drugs have you taken in the past? (You can choose more than one)

<input type="checkbox"/> [1] Heroin	<input type="checkbox"/> [6] Methamphetamine
<input type="checkbox"/> [2] Ecstasy	<input type="checkbox"/> [7] Ketamine
<input type="checkbox"/> [3] Midazolam	<input type="checkbox"/> [8] Cough syrup
<input type="checkbox"/> [4] Cannabis	<input type="checkbox"/> [9] Other: _____
<input type="checkbox"/> [5] Cocaine	
4. For how long did you take drugs?

<input type="checkbox"/> [1] Less than one year	<input type="checkbox"/> [2] Between one to two years	<input type="checkbox"/> [3] More than three years
---	---	--
5. When was the last time you used drugs? _____
6. On average, how often did you take drugs?

<input type="checkbox"/> [1] _____ times per week	<input type="checkbox"/> [2] _____ times per month
---	--
7. How did you take drugs

<input type="checkbox"/> [1] Oral	<input type="checkbox"/> [3] Injection
<input type="checkbox"/> [2] Nasal	<input type="checkbox"/> [4] Other : _____

8. What impacts of drug(s) on oral health did you experience?

	[1]None	[2]Mild	[3]Moderate	[4]Severe
[A] Dry mouth				
[B] Tooth sensitivity				
[C] Toothache				
[D] Swollen gums				
[E] Tooth fracture				
[F] Lip and cheek biting				
[G] Uncontrolled chewing				
[H] Tooth grinding				
[I] Joint pain				
[J] Difficult mouth opening				

9. Were you a smoker?

<input type="checkbox"/> [1] Yes, _____ cigarettes a day	<input type="checkbox"/> [2] No
--	---------------------------------
10. If you were a smoker, for how long were you a smoker? _____ years
11. How often do you brush your teeth?

<input type="checkbox"/> [1] Once a day	<input type="checkbox"/> [2] Twice a day or more	<input type="checkbox"/> [3] Don't brush regularly
---	--	--
12. Do you use any other oral hygiene aids? (You can choose more than one)

<input type="checkbox"/> [1] No	<input type="checkbox"/> [2] Floss	<input type="checkbox"/> [3] ID brush	<input type="checkbox"/> [4] Mouth Rinse	<input type="checkbox"/> [5] Others _____
---------------------------------	------------------------------------	---------------------------------------	--	---
13. Do you have regular dental checkups?

<input type="checkbox"/> [1] Yes. _____ times a year.
<input type="checkbox"/> [2] No. When was your last dental visit? _____

香港大學牙醫學院公共衛生項目 2014
口腔健康問卷

1. 你的年齡是： _____ 歲
2. 你的性別是： [1]男 [2]女
3. 你過往曾服食過哪些毒品？ (可選多於一項)
 [1] 白粉 (海洛英) [6] 冰 (甲基安非他明)
 [2] 搖頭丸 (亞甲二氧基甲基安非他明) [7] K 仔 (氯胺酮)
 [3] 藍精靈 (三唑侖/咪達唑侖) [8] 咳藥水
 [4] 大麻 [9] 其他 _____
 [5] 可樂 (可卡因)
4. 你服食毒品多久？
 [1] 少於一年 [2] 一年至兩年 [3] 三年或以上
5. 你最近一次服食毒品是何時？ _____
6. 你平均服食毒品的次數是？
 [1] 每星期 _____ 次 或 [2] 每月 _____ 次
7. 你服食毒品的方法是？
 [1] 口服 [3] 針筒注射
 [2] 鼻服 [4] 其他： _____
8. 你覺得吸食毒品對你的口腔有什麼影響呢？

	[1] 無	[2] 輕微	[3] 中等	[4] 嚴重
[A] 口乾				
[B] 牙齒敏感				
[C] 牙痛				
[D] 牙肉腫痛				
[E] 牙齒崩裂				
[F] 咬唇/咬脗				
[G] 不自覺咀嚼				
[H] 磨牙				
[I] 牙齦痛				
[J] 張口困難				

9. 你曾否有吸煙的習慣？
 [1] 有，每天 _____ 支 [2] 否
10. 如有吸煙的習慣，你吸煙有多久？ _____ 年
11. 你的刷牙次數是？
 [1] 每日一次 [2] 每日兩次或以上 [3] 不定期
12. 你有否使用其他口腔清潔用具？ (可選多於一項)
 [1] 否 [2] 牙線 [3] 牙縫刷 [4] 漱口水 [5] 其他 _____
13. 你有否定期接受牙科檢查？
 [1] 有。每年 _____ 次。
 [2] 否。對上一次接受牙科檢查是幾年前？ _____

Appendix IV. Charting Form

Patient's name: _____ (Chinese)

Case no. : _____

Sex: _____

Age: _____

Date: _____

Medical History

- | | | | | |
|---------------------------------|----------------------------------|------------------------------|--------------------------|--|
| | 是 | | 否 | |
| 1. 閣下現在是否身體不適? | <input type="checkbox"/> | | <input type="checkbox"/> | |
| 2. 閣下現在有否服食任何藥物? | <input type="checkbox"/> | | <input type="checkbox"/> | |
| 3. 閣下曾否服用類固醇、抗凝血藥物 或接受電療? | <input type="checkbox"/> | | <input type="checkbox"/> | |
| 4. 閣下施手術、脫牙或受傷時是否流血不止? | <input type="checkbox"/> | | <input type="checkbox"/> | |
| 5. 閣下是否懷孕? | <input type="checkbox"/> | | <input type="checkbox"/> | |
| 6. 閣下有否患下列疾病? | | | | |
| 心臟病 <input type="checkbox"/> | 糖尿病 <input type="checkbox"/> | 羊癇 <input type="checkbox"/> | | |
| 高血壓 <input type="checkbox"/> | 甲狀腺病 <input type="checkbox"/> | 腦充血 <input type="checkbox"/> | | |
| 血病 <input type="checkbox"/> | 風濕性熱病 <input type="checkbox"/> | 哮喘 <input type="checkbox"/> | | |
| 肝炎、黃膽病 <input type="checkbox"/> | 結核病(肺癆) <input type="checkbox"/> | | | |

備註/藥物

Dentition

	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Dentition status																
Fluoride Tx																
	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Dentition status																
Fluoride Tx																

Dentition Status

Score	Status
0	Sound
1	Decayed
2	Filled, with decay
3	Filled, no decay
4	Missing, as a result of caries
5	Missing, any other reasons
6	Fissure Sealant

Score	Status
7	Bridge abutment. Special crown or veneer/Implant
8	Unerupted tooth/ partially erupted tooth
9	Attrition
10	Erosion
11	Not recorded
T	Trauma (fracture)

DT: _____

MT: _____

FT: _____

DMFT: _____

CPI

17/16	11	26/27
47/46	31	36/37

- 0 = Healthy
- 1 = Bleeding
- 2 = Calculus/ Marginal Overhang
- 3 = Pocket 4-5mm
- 4 = Pocket 6 mm or more
- 9 = not recorded
- X = Excluded Sextant

Extra-oral:

Intra-oral:

Treatment Planning

- OHI
- Scaling
- Topical Fluoride

Treatment Done

- OHI
- Scaling
- Topical Fluoride

Appendix V. Oral Examination Report



香港大學牙醫學院
口腔健康調查報告撮要

日期： / 3 / 2014

致 _____ 家長：

多謝您同意 貴子弟參加是次口腔健康檢查。
這是一個簡單的檢查，過程並不包括拍攝 X 光片。
經檢查後，我們發現 貴子弟

- 沒有蛀牙
- 最少有 _____ 隻蛀牙
- 牙齦發炎
- 口腔衛生情況 良好 / 一般 / 欠佳
- 其他問題： _____

我們建議 您的孩子需要

- 改善口腔衛生
- 盡快尋求牙科治療

牙科醫生： _____
黃浩行醫生

Appendix VI. Equipment List

A. Portal dental equipment and accessories

Portable Dental Chair	3
EMS Machine	3
EMS Bottle	6
Suction Unit	3
Autoclave	1
Disposable Surgical Suction Tube	40
Instrument Cleaning Brush	1
Metal Box	3
Trolley	2
Electric Extension Cord	2

B. Hand Instruments and others

Diagnostic

CPI Probe	30
LED Light Handle	4
Disposable Handle Mirror	100
Headlight	4
Charting Form	100

Scaling

Sickle Scaler	10
EMS Handpiece	9

Scaling tip (A) and Key 9

Fluoride Application

Duraphat - Fluoride Varnish 3 tubes

Dampen dish 20

Microbrush 400

OHI

Tooth model 2

Floss 3 boxes

C. Questionnaire Station

Questionnaire 100

Eraser 3

Pencil 6

Pencil sharpener 1

Clip board 3

D. PPE and Disinfection

Gloves 9 boxes

Mask 1 box

Gown 30 pieces

Face shield 20 pieces

Head cap 40 pieces

Gauze	2 packs
Paper Towel	4 Rolls
Hand scrub (Alcohol)	3 bottles
Hand scrub (Chlorohexidine)	1 bottles
Alcohol Spray	3 bottles
Distilled Water (5L)	3 bottles
Clorox	1 bottle
Suction Cleanser	1 bottle

Others

Black Rubbish Bag	1 pack
Red-white-blue Bag	6