HKU Youth Quitline
Quit Smoking and Healthy Lifestyle

November 10, 2016 (Thursday)

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HKU Youth Quitline counsellors
Content

• Introduction of Youth Quitline

• The achievements of Youth Quitline

• Characteristics of participants of Youth Quitline
  • Demographic characteristics
  • Depressive mood
  • Daily habits

• Future prospect of Youth Quitline
Introduction of Youth Quitline
The first smoking cessation hotline specific for youth smokers aged ≤25 in Hong Kong

Established in August 2005

Included in the Integrated Smoking Cessation Hotline ‘1833-183’ (Press 5) of Department of Health since June 2011

Objectives

To provide smoking cessation hotline service to youth smokers

To help youth smokers quit smoking or reduce cigarette consumption
Content of Smoking Cessation Telephone Counselling

- To help youth smokers…

  - Evaluate nicotine dependence level
  - Strengthen intention to quit
  - Think more about smoking hazards and benefits of quitting
  - Understand and overcome withdrawal symptoms
  - Record quitting progress
  - Provide strategies for relapse prevention

HKU Youth Quitline
5111 4333
HKU Youth Quitline

Achievements of the Service
Achievements

• Handled 9,267 telephone enquiries and provided smoking cessation counselling to 1,952 youth smokers

• In 2016 (January 1, 2016 – July 31, 2016), handled 863 telephone enquiries and provided smoking cessation counselling to 162 youth smokers
Telephone Counselling Helped Participants Quit Smoking or Reduce Cigarette Consumption

• 233 participants *quit smoking* at 6-month follow-up, accounting for 23.5% of all participants@ (n=990#).

• 114 of them *reduced daily cigarette consumption ≥50%*, accounting for 11.5% @ (n=990).

• 220 of them *had made quit attempt*, accounting for 22.2%@ (n=990#).

@: Participants who were lost to follow-up at 6-month were regarded as smokers. Lost to follow-up refers to participants who failed to be contacted after 7 call attempts at the time to follow up.

#: Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health)
Telephone Counselling Increased Participants’ Knowledge of Smoking Hazards

• Participants were asked whether they agreed with the following sentence at baseline and 6-month follow-up. “Agree” was regarded as correct while “Disagree” and “Don’t know” were regarded as incorrect. (n=1147#).

• “1 out of 2 smokers dies early due to smoking.”

• At 6-month follow-up, the percentage of participants who answered correctly increased significantly by 10.1%.

Statistical test: Chi-square test p<0.001***

#: Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health); missing data was excluded from the percentage calculation.
Telephone Counselling Boosted Participants’ Confidence to Quit Smoking

- After receiving telephone counselling service, participants’ confidence to quit smoking increased significantly by 5%.

Confidence to quit smoking (n=481#)

![Bar chart showing confidence scores]

(Score: 0-Not confident at all, 10-Very confident)

Statistical test: Paired sample t-test p<0.05*

#: Data were collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health); only included the participants who both answered this question at baseline and 6-month follow-up.
After receiving telephone counselling service, participants’ perceived difficulty in quitting smoking decreased significantly by 7%.

Perceived difficulty in quitting smoking (n=463#)

(Score: 0-Not difficult at all, 10-Very difficult)

Statistical test: Paired sample t-test p<0.01**

#: Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health); only included the participants who both answered this question at baseline and 6-month follow-up.
Telephone Counselling Relieved Participants’ Depressive Mood

- After receiving telephone counselling service, the percentage of participants who had “NO depressive mood” significantly increased by 15%, while the percentage of participants who had “mild or notable depressive mood” significantly decreased (n=1147#).

<table>
<thead>
<tr>
<th></th>
<th>Baseline Percentage of people (%)</th>
<th>6-month Percentage of people (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No depressive mood</td>
<td>56.6%</td>
<td>71.5%</td>
</tr>
<tr>
<td>Mild depressive mood</td>
<td>34.1%</td>
<td>23.0%</td>
</tr>
<tr>
<td>Notable depressive mood</td>
<td>9.3%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

Statistical test : Chi-square test  p<0.001***
# : Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health), missing data was excluded from calculation.
Youth Quitline
Demographic Characteristics of Participants
Demographic Characteristics of Participants -
This year (January 1, 2016 to July 31, 2016)

• 162 participants were recruited this year (January 1, 2016 to July 31, 2016).

• More male participants (n=140, 86.4%) were found compared to female (n=22, 13.6%).

• The mean age of participants was 19.9 (standard deviation=2.8).

• Majority of participants were students, with 108 of them (67.9%) were students and 43 of them (27.0%) were employees.
Smoking Habit of Participants - This year (January 1, 2016 to July 31, 2016)#

No gender difference was found in average daily cigarette consumption
• The average daily cigarette consumption of participants this year was 10, with mean for male was 9.3 and female was 10.6, which was similar to previous years’ results (p>0.05).

No gender difference was found in average nicotine dependence level
• The average nicotine dependence level of participants this year was mild, with mean score for male was 2.5 and female was 2.7, which was similar to previous years’ results (p>0.05)@.

@ (Fagerstrom Test of Nicotine Dependence, scored 0-10, 0-3 mild, 4-5 moderate, 6-10 severe)
# n=162; Statistical test: independent sample t-test
Missing data was excluded from the percentage calculation.
Wishing to live a healthy life

Illness or personal health problems

Save money

Half of the participants (49.2%) would like to quit smoking because “want to live a healthy life”. “Illness or personal health problems” ranked the second with 28.9%.

Participants could choose more than 1 option, missing data was excluded from the percentage calculation.
Quit Smoking and Healthy Lifestyle

• Mood and daily habits of youth smokers may affect their number of daily cigarette consumption and self-efficacy of quit smoking, for example:

• Depressive mood
• Drinking habit
• Exercise habit
Youth Quitline
Depressive Mood of Participants
Depressive Mood of Participants

- 43% of the participants had depressive mood, and 9% of them had notable depressive mood.

**Depressive mood of participants**

- Had depressive mood
  - No depressive mood
  - Mild depressive mood
  - Notable depressive mood

In the past 30 days, how often you have “been bothered or troubled” by each of six states:
- Always (4 marks), Sometimes (3 marks), Seldom (2 marks), Never (1 mark)

1. Feeling too tired to do things?
2. Having trouble going to sleep or staying asleep?
3. Feeling unhappy, sad, or depressed?
4. Feeling hopeless about the future?
5. Feeling nervous or tense?
6. Worrying too much about things?

Total score = add all marks together
No depressive mood (6-12 marks)
Mild depressive mood (13-18 marks)
Notable depressive mood (19-24 marks)


Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health)
Missing data was excluded from the percentage calculation.
Different Level of Depressive Mood and Determination to Quit Smoking

- Participants who had depressive mood perceived more difficulty in quitting than those who did not.
- Also, participants who had depressive mood had lower confidence to quit smoking than those who did not.

<table>
<thead>
<tr>
<th></th>
<th>No depressive mood</th>
<th>Mild depressive mood</th>
<th>Notable depressive mood</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived difficulty in quitting smoking#</td>
<td>6.0</td>
<td>6.6</td>
<td>7.2 ↑</td>
<td>&lt;0.001***</td>
</tr>
<tr>
<td>Confidence to quit smoking@</td>
<td>6.5</td>
<td>6.1</td>
<td>5.6 ↓</td>
<td>&lt;0.001***</td>
</tr>
</tbody>
</table>

#(Score: 0- Not difficult at all, 10- Very difficult )
@(Score: 0- Not confident at all, 10- Very confident)

Statistical test: ANOVA
Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health), missing data was excluded from calculation.
Depressive Mood and Daily Cigarette Consumption

- The average daily cigarette consumption of participants having notable depressive mood was **significantly higher** than less depressed groups.
- The number of daily cigarette consumption of participants having notable depressive mood were **33%** more than not depressive group.

### Statistical test: ANOVA

Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health), missing data was excluded from calculation.
Depressive Mood and Nicotine Dependence

• The average score of nicotine dependence of participants having notable depressive mood was **significantly higher** than less depressed groups’.

Statistical test: ANOVA, p< 0.001***
Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health), missing data was excluded from calculation.
Depressive Mood and Obstacles of Quitting Smoking – Pressure in Daily Life

- The higher level of depressive mood the participants had, more percentage of participants agreed with “pressure in daily life” was one of the obstacles of quitting smoking.

Statistical test: Chi-square test p<0.001***
Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health) Participants could choose more than one option, missing data was excluded from calculation.
HKU Youth Quitline

Daily Habits of Participants
Drinking Habit of Participants

• 267 participants were drinkers (drink at least one day per week) (24.2%).

- 27.8% drank at least one day per week
- 48.0% drank 1-3 days per month or below
- 24.2% had no drinking habit/quit drinking

Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health), missing data was excluded from percentage calculation.
Daily Cigarette Consumption and Drinking Habit

- More than **60% of the participants** reported they smoked more after drinking.
- About **30% of the participants** who smoked more than 10 cigarettes per day drank at least once per week.

Statistical test: Fisher’s exact test; p<0.001***

Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health, missing data was excluded in the percentage.)
Exercise Habit of Participants (In the past 7 days)

- About 30% of the participants did not do exercise at all in the past 7 days of baseline.

Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health, missing data was excluded from the percentage calculation.)
No. of Daily Cigarette Consumption and Exercise

- Participants who smoked more did less exercise.
- Nearly 40% of the participants who smoked more than 10 cigarettes every day did not do any exercise in the past 7 days of baseline.

Statistical test: independent sample t-test; p<0.05*
Data was collected from Nov 2011 to July 2016 (The period funded by Tobacco Control Office, Department of Health, missing data was excluded from the percentage calculation.)
Conclusion

• Apart from encouraging participants to quit smoking, we hope to deliver the message of healthy lifestyle, both physical and mental, to youth smokers through Youth Quitline.
  • **Relieve pressure and depressive mood**
  • **Quit drinking or try to drink less**
  • **Keep regular moderate-intensive exercise**
HKU Youth Quitline

Future Prospect
Gain in Popularity of the Youth Quitline among Smokers

Increase accessibility of Youth Quitline
- Increase coverage of promotion (e.g. pamphlet, stickers, posters, etc.)
- Provide more channels for contact, e.g. online forum, social media
- Strengthen connection with schools/institutions via outreach to actively approach more smokers and encourage them to join our programme

Youth Quitline Website (www.hku.hk/yquit)
- Layout and content are updated
- More smoking cessation information is added to attract youth smokers to browse
Optimise the Content of Peer Counsellor Training Programme

• In-depth training on topic like “stress management and establishing healthy lifestyle” to the existing smoking cessation counsellor training programme, e.g. methods to relieve pressure and reduce alcohol consumption, so that counsellors can be equipped to teach youth smokers the strategies to cope with stress and establish healthy lifestyle, and to help them quit smoking as well.
Use of Electronic Cigarette among Youth Quitline Participants

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Sir Robert Kotewall Professor in Public Health
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HKU Youth Quitline counsellors
Electronic Cigarette Survey
(January 4, 2013 – April 30, 2016)
Electronic Cigarette (E-cigarette) Survey

• From 2013 to 2016, we interviewed 622 youth smokers who participated in the Youth Quitline programme regarding the topic of e-cigarette.

• 469 participants answered E-cigarette (EC) questions (469/622=75.0%).

• 276 reported they had used e-cigarette (276/622=44.4%).

Gender distribution of EC users

- Male: 227
- Female: 49

Had never used EC: 24.6%
Had used EC: 31.0%
Missing data: 44.4%
Demographic Characteristics of Users

• **Age distribution of EC users**#
  - **15-17 years old** participants accounted for over 40% of all **those who had used** e-cigarette ("users"), whose percentage was the highest among all age groups.
  - **Female users** were **younger** than male users, aged **16.9** and **18.1** respectively.

• **Occupation**
  - Over 70% (443/622=71.2%) of users* were full-time students of senior secondary school or above, followed by junior secondary school.

#: Missing data on age was excluded from the percentage calculation.
*: Missing data on occupation was excluded from the percentage calculation.
Prevalence of EC Use by Age Group

- **Younger** participants had **higher EC use prevalence** (p-value<0.001).

- The average age of users was 17.8#, which was **significantly lower** than non-users 19.2 years (independent sample t-test, p-value<0.001).

# Missing data on age was excluded from calculation.
Prevalence of EC Use by Sex and Age

- The EC prevalence of male and female participants were 44.8% (226/504) and 45.2% # (47/104) respectively (p=0.95), with no significant difference.

- There was significant difference of EC prevalence among different age groups of male participants (p<0.001, p for trend <0.001) while the difference among female participants was borderline significant, probably due to small numbers (p=0.1, p for trend 0.08).

#: Missing data on sex was excluded from calculation.
Current Use of E-cigarette

- In 254 users interviewed from June 2015, 12 (12/254=4.7%) indicated that they had used e-cigarette within 30 days before the day of interview.
- Advices on the risks of using e-cigarette and cessation were given to participants after the interview.

# Missing data was excluded from calculation.
Reasons for Initiating E-cigarette*

- 66 of 254 users (26%) # used e-cigarette due to curiosity.

*These data were collected from Jun 2015 to Apr 2016.
#Participants could select more than one choice.
Users’ Perception of E-cigarette

• Where to buy e-cigarette
  • 90 of 276 users* (32.6%) bought e-cigarette by themselves.
  • 42 of 90 (42/90=46.7%) bought it from consignment store.

• Whether their e-cigarettes contain nicotine
  • 113 of 276 users (40.9%) were not sure whether their e-cigarettes contained nicotine.

*These data were collected from Jan 2013 to Apr 2016.
Users’ Attitude towards E-cigarette

• Could e-cigarette help reduce smoking traditional cigarette?
  • 47 of 276 users (17.0%)# said yes.

• Could e-cigarette help quit smoking?
  • 75 of 276 users (27.2%)# said yes.

• Was using e-cigarette healthier than smoking traditional cigarette?
  • 57 of 276 users (20.7%)# said yes.

• Was using e-cigarette safer and cleaner than smoking traditional cigarette?
  • 75 of 276 users (27.2%)# and 94 of 276 users (34.1%)# said yes respectively.

*These data were collected from Jan 2013 to Apr 2016.
Smoking Status of Users (Baseline)

• **Cigarette consumption**
  • Users’ average daily cigarette consumption was relatively **higher** (10.2 cigarettes) than non-users (9.2 cigarettes).
  • Same as above, users’ daily cigarette consumption at weekend was relatively **higher** (11.8 cigarettes) than non-users (10.1 cigarettes).
  • Similar significant differences were also found in both sexes.

• **Nicotine dependence scale**
  • The **average score of nicotine dependence** of users was 2.8, which meant “mild dependence” (0 as the lowest, 10 as the highest), but was **slightly higher** than non-users (score: 2.5).
  • Similar significant differences were also found in both sexes.

• **Self-efficacy of smoking cessation**
  • Generally, users had lower confidence to quit smoking than non-users, scored 6.1 and 6.2 respectively (0 as the lowest, 10 as the highest). But in **female participants**, users had **significant lower confidence** than non-users, scored 5.9 and 7.0 respectively (p = 0.01).
The 6-month quit rate ratio (prevalence rate ratio) of users and non-users was 0.99, p = 0.99.

Users had lower odds of quitting than non-users (odds ratio 0.7, p = 0.28), with logistic regression model adjusted for quitting intention at baseline, nicotine dependence level, age and sex.

<table>
<thead>
<tr>
<th></th>
<th>Quit rate at 6-month</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC user</td>
<td>14.0% (39/276=14.0%)</td>
</tr>
<tr>
<td>Non-user</td>
<td>13.9% (27/193=13.9%)</td>
</tr>
<tr>
<td>Other participants</td>
<td>14.4% (22/153=14.4%)</td>
</tr>
<tr>
<td>Overall</td>
<td>14.1% (88/622=14.1%)</td>
</tr>
</tbody>
</table>
In those 128 participants who were successfully interviewed but had not quit smoking at 6-month follow-up,

- The average nicotine dependence level of users was significantly higher than non-users, scored 3.1 and 2.2 respectively (0 as the lowest, 10 as the highest; independent sample t-test, p-value < 0.05).

- Users had a significantly lower confidence in successful quitting than non-users, scored 6.3 and 7.5 respectively (0 as the lowest, 10 as the highest; independent sample t-test, p-value: 0.02).
Legislation and Education

• **Enact legislation to totally ban** the sale of e-cigarette.
• Enact legislation to **enlarge** non-smoking area.
• **Educate** teenagers and parents about the health risks of e-cigarette.
• **Clarify** adolescents’ **perception** of e-cigarette through health education.
• For those who wish to quit, dial 5111 4333 / 1833183 to get more effective and supportive help, which is free.
- End -
Thank you!