Adolescent Knowledge about the Influence of Smoking on Periodontal Health- Value of Intervention.

A Pilot Survey.

Lisa Schön, Batoul Shebel
Tandläkarprogrammet, 300 hp
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Tutor: Py Palmqvist

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ABSTRACT

**Background:** Smoking is a risk factor for periodontitis, and tobacco use among adults has remained unaltered at 25% between 2007 to 2016. Dental personnel are important informers about health risks of smoking including the association between smoking and periodontitis.

**Aims and methods:** A survey was conducted where three schools in Umeå, Sweden participated. 128 students were divided into a control and a test group. An intervention including a lecture about healthy oral conditions was given to the control group and a lecture about smoking and its association to periodontitis to the test group. Questionnaires about the students smoking habits and their knowledge about adverse effects of smoking were filled in by the students before and after the intervention. The aim of the study was to investigate if short information given by dental personnel could change the attitude to smoking and the knowledge about its correlation to periodontitis among adolescents.

**Results:** According to our study, 28/128 students (22%) smoked at baseline. At follow up, the students in the test group demonstrated increased knowledge about the effects of smoking on periodontal health compared to the control group. Motivating factors to quit smoking were the aesthetical side effects of smoking and its association to periodontitis.

**Conclusion:** The study suggested that short information in school can alter the attitude toward smoking and may serve as a useful tool to prevent smoking in adolescents. Knowledge about adverse aesthetical and periodontal effects of smoking may be useful in smoking prevention.
INTRODUCTION

Smoking is a well-known risk factor for diseases such as lung cancer and cardiovascular diseases but also for developing periodontitis (Bergström, 2006; Stabholz et al., 2010). According to Centralförbundet för Alkohol- och Narkotikaupplysning (CAN), an organization responsible for surveys of tobacco consumption in Sweden, the tobacco consumption (i.e. smoking and/or snuff) between years 2007 to 2016 has been around 25 % among 17-84 years old. Individuals in the age group 16-29 are more frequent consumers of tobacco than other age groups and 25 % of them smoke cigarettes daily or occasionally. 8% of 17-84 years old in Sweden are daily smokers (Henriksson et al., 2017) and in Västerbotten county the corresponding number is 7 % (Folkhälsomyndigheten, 2018).

A report from Canada, 2016, reported that 90 % of the adult smokers began smoking before the age of 18. This emphasizes the importance of early smoking prevention and the need for interventive programmes (Harvey et al., 2016; Fanshawe et al., 2017).

According to §1 in Tandvårdslagen (SFS: 1985:125), the dental team has the responsibility to prevent, examine and treat oral diseases. As smoking is a risk factor for developing periodontitis the dentist plays an important role to inform the patient about the risk of smoking (Yevlahova and Satur, 2009). In a study from 2009, patients’ knowledge and views about oral effects of smoking and the role of dentists in smoking cessation were examined. 81% of the smokers in the study reported that they would try to quit smoking if their dentist would show them negative effects of smoking on their oral health. The study also suggested that dentists should motivate patients to stop smoking by showing them negative aesthetic side effects of smoking (Terrades et al., 2009).

Furthermore, a Swedish study among students performed in Uppsala, Sweden suggested that the best way to change health behaviour in adolescents is not by using facts only, but also by complementary reflections. The study also concluded that regardless of their level of the knowledge about oral health, a majority of the students regarded their teeth as important (Hedman et al., 2006).
The study by Terrades et al. from 2009 compared the patients’ knowledge about the negative effects of smoking on general health to that of oral health. It was concluded that the knowledge about adverse effects of smoking on general health was greater than that of oral health. 98% of the patients in the study were aware of the relation between smoking and lung cancer and 92% were aware of its relation to cardiovascular disease. However, 80% were aware of the relation to gum disease. Surprisingly, 60% of the patients thought that smoking was related to dental caries. The study thus indicated a lack of knowledge among patients about the effects of smoking on oral health (Terrades et al., 2009).

The aim of the present study was to investigate if short information given to upper secondary school (high school) students could improve their knowledge about the negative effects of tobacco on periodontal health and thereby influence their smoking habits.

The null hypothesis was that the intervention would have no effect on the level of knowledge or smoking habits among the students.
MATERIALS AND METHODS

Students

The present intervention study was conducted in three upper secondary schools in Umeå, Sweden during the period June 2017 to January 2018.

Four schools, i.e. Dragonskolan, Midgårdskolan, Minervaskolan and Waldorskolan were invited to participate in the study. The school principals were contacted by email and phone, and a short information about the study was given. Three of the invited schools were interested to participate in the study while Minervaskolan declined. A short meeting was conducted with the participating school principals where detailed information about the study was given, and a certificate from our mentor (appendix 1) and the written approval from Umeå University Ethics committee were shown.

The participating classes were divided into classes together forming a control group and classes together forming a test group. Students and classes were not randomized and collection of data was not blinded. According to the original plan the total amount of participating students from the three schools would be 140 with 70 students in the control group and 70 students in the test group. However, due to dropout of two classes from Dragonskolan a total of 128 students participated at baseline. Of these, 11 were from Waldorskolan and 69 from Dragonskolan. These students constituted the test group. Since Dragonskolan unexpectedly failed to gather two contracted classes of 35 students each, classes which were both planned to be part of the control group, Midgårsskolan was contacted at the last minute and only 48 students could be added to the control group. The numeric difference between the control (48 students) and test group (80 students) is due to several practical difficulties regarding the dropout from Dragonskolan. Since different classes than was originally planned had to be added to the study, schedules and resources eventually made it impossible to include the same number of students in the control as in the test group.
Ethics

All included students were over 15 years old and thus consents from their guardians were not required. The study was voluntary and anonymous however, if there are smokers among the adolescents, they could feel denounced by the questionnaire and thereby interrupt their participation. The students were given written information about the study (appendix 2) to read through before deciding on participation and they were informed that their answers would only be presented at group level.

Study design

A small pilot study was conducted in a small group of students at the medical faculty before the start of the original study. It was carried out in order to try out and adjust the questionnaire and lectures. Seven university students of which two were medical students and five were dental students were included in the pilot group. This test made sure that the final questions were clear and that the given lectures were held on an appropriate level for high school students.

Electronical questionnaires were handed out to the control and test groups before (baseline) and after the intervention (at follow up). The intervention took place three months after the first questionnaire had been distributed at baseline and the second questionnaire was distributed directly after the intervention. Data was collected from the questionnaires in a non-blinded manner.

The electronical questionnaires were distributed to the students by a link delivered by the authors to their class mentors. The mentors were instructed to delete the link when all participating students had answered the questionnaires. Attendance lists handled by the class mentors made sure that only the students who were present at baseline participated at follow up (figure 1).
The control group was given an intervention consisting of a short lecture including information about oral anatomy and healthy oral conditions. The test group was given an intervention including information about smoking and its effects on oral health including periodontitis. After answering the second questionnaire at follow up the control group was also given the information about the negative effects of smoking on periodontal health which had been left out in the original lecture (figure 1).

**Questionnaires design**

The questionnaires included both questions, which could be answered by ”yes”, or ”no” and multiple choice questions. It also included questions, which could be answered by free text (appendix 3). The multiple choice questions regarded knowledge about the negative side effects of smoking on general and oral health, tobacco habits and location of previous information about smoking. The second questionnaire was identical to the first one, with the exception of two additional questions regarding the lectures (appendix 4).

**Literature search**

The background information was collected by the use of the database PubMed and Cochrane Databases. Furthermore, reports from Centralförbundet för Alkohol- och Narkotikaupplysning (CAN) and Folkhälsomyndigheten were used. The Mesh-terms used were: smoking cessation, dental patients, adolescents, knowledge, prevention, tobacco, periodontal diseases, etiology, smoking, counseling, dentist-patient relations, health knowledge, attitudes, practice.

**Statistical Analysis**

The electronic questionnaires were made by the use of the Gapps software (Google Apps for Work) and were compiled by the authors.

Statistical analysis was performed using the SPSS software program (SPSS Inc, Chicago, USA,). The chi-square and Fisher-tests were used to identify statistically significant differences, and the statistical level of significance was set to 0,05 i.e. \( p \leq 0,05 \) was regarded as significant.
RESULTS

The expected numbers of students from the three schools were 140 students. Since Dragonskolan failed to give us two of the contracted classes, the total amount of students at baseline was reduced to 128 \textit{i.e.} a dropout of 12 students. The control group thus included 48 students at baseline of which 37 remained at follow up, \textit{i.e.} a drop out of 11 students in the control group. The test group included 80 students at baseline of which 45 remained at follow up. Thus the dropout in the test group was 35 students.

Previous information about smoking

At baseline the students were asked if they had received previous information about the effects of smoking on general health. They were also asked from which source they had received such information. 123/128 (96%), of the students in both groups had received such information before and a majority, 108/128 (84%), had received information in school. Only 58/128 (45%) had received information from dental personnel.

Tobacco use

At baseline, 28/128 \textit{i.e} 22\%, of the students in both groups smoked cigarettes either daily or occasionally. At follow up, no significant difference was seen in form of tobacco use. The smoking frequency for the control and test group is presented in table 1.
Knowledge about effects of smoking on general and oral health

All students in both groups 128/128 (100%) were familiar with the association between smoking and lung cancer, which was the most commonly known adverse effect of smoking compared to the other answering alternatives oral health, cardiovascular disease, stroke and asthma. No significant differences in knowledge between or within groups were seen at baseline or at follow up.

Similarly, most students at baseline knew the relationship between smoking and oral health. 96/128 (75%) of the students answered that smoking had a great influence on the development of periodontitis. The corresponding numbers for bad breath were 120/128 (94%), discoloured teeth 124/128 (97%), gingivitis 110/128 (86%) and surprisingly 62/128 (48%) answered that smoking had a big impact on development of dental caries. While no significant differences in knowledge were noted in the control group at follow up, a significant increase (p= 0.02) was seen in the test group regarding knowledge about the association between smoking and periodontitis, where 73% at baseline compared to 91% at follow up answered that they were familiar with the association. Surprisingly, a significant increase (p= 0.037) was also seen regarding the association between smoking and dental caries in the test group, where 45% at baseline and 64% at follow up answered that they were familiar with such an association. No other differences were seen at follow up.

As a comparison, the students in both groups showed good knowledge on how to avoid dental caries. 127/128 (99%) answered that tooth brushing and 109/128 (85%) that the use of fluoride was important to avoid development of dental caries.
Motivation to stop smoking

At baseline, motivating reasons to quit smoking in both groups were saving money 23/128 (18%), avoiding lung disease 20/128 (16%), avoiding cardiovascular disease 18/128 (14 %) and improved physical condition 18/128 (14%).

While no significant differences were shown in the control group, the intervention significantly increased the alternatives better oral health \( (p=0,0003) \), avoiding cardiovascular disease \( (p=0,046) \), better breath \( (p=0,01) \), saving money \( (p=0,006) \) and discoloured teeth \( (p=0,031) \) as motivating factors to quit smoking in the test group.

The students were asked in a corresponding voluntary free text question if there were any additional factors that would motivate them to stop smoking. 2 additional factors were mentioned. These were group support by friends and the fact that smoking was disgusting.

Students’ perception of whether dental staff should provide information about negative oral health effects of smoking

At baseline, 94/128 (73%) of the students answered that dental staff should inform them about effects of smoking on oral health. No significant differences were seen at follow up.

A supplementary voluntary free text question was asked regarding what type of information dental staff should provide. At baseline 52/128 students answered the question. 36/128 students wanted to know how smoking affects oral health and 9/128 how it affects general health. 2 students also wanted dental personnel to give information on how to quit smoking and 5 students wanted to know about the aesthetical side effects of smoking i.e. discolouring of teeth. At follow up, no different answers were seen in either group apart from 3 students in the control group and 9 students in the test group mentioning periodontitis and aesthetical side-effects as preferred information.
**Change in attitudes toward smoking after the intervention**

Interestingly, when asked wether the provided information had changed the students view on smoking, the number of students who answered yes to this question at follow up had significantly increased in the test group compared to the control group ($p=0.002$). In the control group, $6/37$ (16 %) answered ”Yes” and $31/37$ (84 %) answered ”No”. In the test group $22/45$ (49 %) answered, ”Yes” and $23/45$ (51%) answered ”No” (figure 2).

At the corresponding voluntary free text question where the students were able to motivate their answers at follow up. Interestingly, $13/45$ students in the test group answered that their attitude toward smoking had changed. 4 of the responders replied that they had obtained a wider view on the negative effects of smoking, 7 answered that they now had been given further reasons to not smoke and 2 mentioned the negative aesthetic effects of smoking.

Of the $45/82$ students in both groups who answered that their attitude toward smoking had not changed, 45 mentioned that they already knew that smoking is bad for health.

**Benefits of the intervention**

Both groups were asked at follow up, about the benefits of the intervention. In a free text question $64/82$ students answered, $32/82$ in both groups answered that they had received more knowledge about healthy conditions in the oral cavity. $2/37$ in the control group answered that they had received knowledge about oral hygiene and $4$ knowledge about adverse effects of smoking on the oral health. In the test group $7$ students mentioned the clinical pictures and the concomitant knowledge about adverse aesthetic effects as motivating. $11/45$ students in the test group mentioned that they had received more detailed information about periodontitis. $8/82$ students in both groups answered that the given information was informative.
DISCUSSION

The present study suffered from several weaknesses. Initially, a major weakness was the lack of randomization into groups. Additionally, the authors did not perform data collection in a blinded manner that means bias in the study, also that the follow up time was short, only 3 months.

Another problem was the high dropout number in the study. In addition, the dropout was not equally distributed between groups. The total amount of students at baseline was 128. At the follow up however, the dropout from both groups was 46 students (36%). The dropout in the control group was 11 and in the test group 35 students. The control group dropout number was possibly lower due to the fact that the intervention was scheduled during a mandatory physical education lesson. A reason for the high dropout number in the test group may be explained by the intervention not being scheduled during a mandatory lesson. In addition, some of the dropouts in both groups may be due to changes in school, schedule as well as sickness or vacation among the students.

In the present study, 28/128 students (22 %) answered that they smoked either daily or occasionally at baseline. Our study thus corroborates previous reports by CAN (Henriksson et al., 2017), where 25 % of the 16-29 years olds were reported as cigarette smokers.

The students’ general knowledge about adverse effects of smoking on both general and oral health were good at baseline, but the overall knowledge was better regarding the general health. At baseline all students, i.e. 100%, in both groups knew smoking to be a risk factor for lung cancer. This shows that the relation between smoking and lung cancer is well known, which has also been shown in a cross-sectional study in China where self-administrated questionnaires were given to secondary school students. The study showed that 97% of the participants were aware of the correlation between smoking and lung cancer (Xianglong et al., 2016).
This can be compared to our study were awareness of the correlation between smoking and periodontitis was 75% among the students. Hence, the knowledge about causes of periodontitis among adolescents is lacking in 25% of the students, indicating a need for improved information given by schools as well as dental and health care professionals. A similar correlation has been shown in the scientific report performed in Canada by Elton-Marshall et al. in 2018. In the report, students answered questionnaires regarding their knowledge on the effects of smoking. The students were between 11-17 years old. The study showed that 93.9% of the responders answered that smoking affected lung cancer, and 77.6% answered that it affected gum or mouth disease (Elton-Marshall et al., 2018).

In general, all students in our study demonstrated good knowledge at baseline about smoking and its negative effects on oral conditions, i.e. periodontitis, discoloured teeth, gingivitis and bad breath. While no difference was seen in the control group at follow up the test group showed a significant difference in knowledge about smoking and its effects on periodontitis, which indicating a beneficial effect of the intervention.

Remarkably, at baseline, 48% of the students in both groups answered that smoking had a negative effect on caries. Surprisingly, a significant increase in this misconception was seen at follow up in the test group, even though the authors had not mentioned this at all. This indicates that there is a lack of knowledge among students about the relation between smoking and caries, and possibly also about the distinction between caries and periodontal disease. This may be because of oral health is associated to caries rather than periodontitis, even though the development of each condition is based on different risk factors. Interestingly, the same results was seen in the study by Terrades et al. in 2009 where 60% of the patients thought that smoking was related to dental caries (Terrades et al., 2009). A correlation between smoking and dental caries has not been scientifically shown, a fact that appears to be unknown for a great number of students.
The students’ knowledge about how to avoid caries was good at baseline in both groups in the present study. 99% answered that brushing teeth and 85% that using fluoride were ways to avoid caries. This suggests that basic knowledge about caries is very high among the students compared to periodontitis, as only 75% knew about the negative relation between smoking and periodontitis. Our study suggests that an impact such as that of the caries prevention scheme could be achieved for periodontitis as well. This would require increased preventive information given by dental professionals and school staff. Preventive information regarding periodontitis including risk factors such as smoking could be introduced at a young age to prevent periodontitis from occurring at middle age.

In the test group a significant difference was demonstrated at follow up for the alternatives better oral health, discoloured teeth and better breath as motivating factors for smoking cessation. Hence, the intervention may have given the students a deeper understanding of how smoking effects oral health and physical appearance. It also demonstrates that not only healthy oral conditions but also social factors such as discoloured teeth and bad breath are motivating factors for adolescents to quit smoking. These results suggest that dental personnel should give more profound information to patients and use these factors when motivating patients to quit smoking.

A significant difference between the control group and the test group was seen in attitudes towards smoking at follow up. This indicates that the information given to the test group made an impact in the attitude towards smoking and that the intervention had an effect. The long term effects of a similar intervention were investigated in a study of first grade (13 years old) students from the Netherlands where a test group attended a smoking prevention programme. One year after the intervention, an increased number of smokers were seen in the control group compared to the test group. The study suggested that the short information about smoking which was given prevented the students from starting to smoke up to one year after the intervention. (Crone et al., 2002). It would be interesting to investigate if the increased knowledge among the students demonstrated after the intervention in our study would remain at the same level in a similar long term follow up study and if smoking status remained or decreased with time.
The students in the test group were asked in a free text question about the benefits of the intervention. 7 of 45 mentioned negative aesthetic effects of smoking as motivating factors to quit smoking. This indicates that the adverse effects on the appearance demonstrated in the clinical pictures in the presentation given were motivating for the students. This is supported by the study by Terrades et al. from 2009 which concluded that aesthetic factors such as tooth staining, bad breath and bad taste are more frequently mentioned by the patients as negative. Similar results were seen in a Swedish study from Umeå in 2011 where 90 % of the participating citizens from Västerbotten County, reported better breath and taste to be important benefits of smoking cessation (Lundqvist, 2016). The study by Terrades et al. from 2009 concluded that dental staff should use aesthetical factors as motivating tools for smoking cessation. It was also stated that patients wanted dental professionals to be engaged in the patients’ smoking habits, which is supported by another study where 78 % of the smokers wanted dental personnel to be involved in their smoking cessation scheme (Nurul et al., 2017). Interestingly, this was corroborated by the results of our study where the majority of the students in the test group wanted the dental professionals to inform them about the effects of smoking on oral health, including periodontitis, and negative aesthetical side effects.

It has been claimed that knowledge about tobacco is not sufficient for behavioural changes to prevent future tobacco use. A study in Sweden in 2004 investigated if knowledge about smoking influenced the students’ future smoking habits. 2581 students participated in the study and were asked annually from the 6th to the 9th grade about their tobacco habits. 95 % of the students stated that they had received information about the negative effects of smoking as early as the age of 11. Even so, one third of the students reported that they used tobacco regularly in 9th grade and 1 of 4 reported that they were current users of tobacco, which indicates that only knowledge about the negative effects of smoking is not enough for behavioural changes among adolescents to prevent future tobacco use. The study concludes that aesthetic factors may have a big impact on younger people since aesthetic adverse effects occur earlier than the negative consequences for general and oral health of tobacco use (Rosendahl et al., 2005).
CONCLUSION

The aim of the study was to investigate if short information to adolescents in school could improve their knowledge about the negative effects of smoking on periodontal health and thereby have an impact on their smoking habits. The study demonstrated that the information given in the test group gave these students a greater knowledge about negative effects of smoking on oral health, in terms of periodontitis and negative aesthetical effects, compared to the control group. Hence, the study suggests that short information including clinical pictures by dental professionals can change the attitude to smoking in adolescents. No differences in smoking habits were seen in the study after the intervention, suggesting that a long-term follow-up study should be performed to establish if the increased knowledge achieved among the students would remain and affect their smoking habits in a longer perspective. Additionally, as previous studies have demonstrated, social factors including negative aesthetical effects of smoking should be used to prevent adolescents from smoking and motivate them to stop smoking. The knowledge about caries prevention among students exceeds their knowledge about prevention of periodontitis. Dental professionals should therefore increase their preventive information about periodontitis to the same extent as the information about caries prevention.

ACKNOWLEDGEMENT

The authors would like to thank the participating schools Dragonskolan, Midgårdsskolan and Waldorfskolan for their approval to execute this pilot study. We would also like to thank our tutor Py Palmqvist, DDS PhD Department of Odontology Section for Molecular Periodontology Umeå University, for supervision throughout the study.
REFERENCES


Nurul AY, Roslan S, Mariani MDN, Noriah Y (2017), Dental patient knowledge about the


Table 1: Smoking frequency

<table>
<thead>
<tr>
<th>Cigarettes/month at baseline</th>
<th>0</th>
<th>1-10</th>
<th>11-20</th>
<th>&gt;20</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of cigarettes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>36/48 (75 %)</td>
<td>6/48 (13 %)</td>
<td>3/48 (6 %)</td>
<td>3/48 (6 %)</td>
</tr>
<tr>
<td>Test</td>
<td>65/80 (81 %)</td>
<td>12/80 (15 %)</td>
<td>1/80 (1 %)</td>
<td>2/80 (3 %)</td>
</tr>
</tbody>
</table>
Figure 1: Study design
Figure 2: Distribution of answers to the question "Has this information changed your attitude towards smoking?"
Intyg om examensarbete


Namn: __________________________ Ort: Umeå Datum: 2016 12 13

Namnfortydeliggande: Py Palmqvist

Lektor i Molekylär Parodontologi, Övertandläkare i Parodontologi, Odontologiska Institutionen, Medicinska Fakulteten, Umeå Universitet
Appendix 2

Information till deltagare

2017 03 03

Examsarbetsets titel:
Pilotundersökning av ungdomars kunskap om rökningens påverkan på parodontal hälsa, rökvanor och betydelse av information. En interventionsstudie.

Studieansvarig studenter vid Umeå universitet, Institutionen för odontologi:
Lisa Schön och Batoul Shebel

Utbildning och nivå:
Tandläkarutbildning, Umeå Universitet

Skriv in rubrik:
Ungdomars kunskap om rökningens påverkan på oralhälsa jämfört med allmänhälsa.

Huvudhandledare; Namn/e-postadress:
Py Palmqvist py.palmqvist@umu.se

Information om studien: (Rikta informationen till den det berör, inled med en kort presentation av dig/er själva, tydlig kortfattad information om studien; syfte, tillvägagångssätt, hantering av data, publicering)

Vi är två tjejer, Lisa och Batoul som går Tandläkarprogrammet på Umeå Universitet.
Syfte med studien är:
• Att undersöka vilken kunskap gymnasieelever har om rökningens negativa effekter på munhälsan samt få en uppfattning om rökvanorna.
• Att undersöka om en kort föreläsnings av tandvårdspersonal om rökningens påverkan på munnen kan påverka ungas kunskaper om rökningens effekter på munhälsan och rökvanorna.


Ytterligare upplysningar om studien lämnas av handledaren: (Ange namn, e-postadress och telefonnummer).
Universitetslektor Py Palmqvist, py.palmqvist@umu.se, 070-785 60 23

Härmed tillfrågas du om deltagande i studien

SAMTYCKE

☐Ja, jag vill delta i studien ☐Nej, jag vill inte delta i studien
Appendix 3

Enkät 1

*Obligatorisk

1. Röker du cigaretter? *

○ Ja, dagligen
○ Ja, ibland
○ Nej

2. Du som röker cigaretter ibland eller dagligen: Ungefär hur många cigaretter röker du per månad? *

○ 0
○ 1-10
○ 11-20
○ >20

3 a) Snusar du? *

○ Ja, dagligen
○ Ja, ibland
○ Nej
3 b) Röker du e-cigaretter? *

- Ja, dagligen
- Ja, ibland
- Nej

3 c) Röker du vattenpipa? *

- Ja, dagligen
- Ja, ibland
- Nej

4. Markera med ett kryss de negativa effekter på hälsan som Du känner till är förknippade med rökning. Flera alternativ kan markeras. *

- Hjärt- kärlsjukdom
- Lungcancer
- Stroke (Hjärnblödning)
- Astma
- Munhälsa
5. Vilken betydelse tror du rökning har på följande munnhälsotillstånd? *

<table>
<thead>
<tr>
<th></th>
<th>Ingen betydelse</th>
<th>Stor betydelse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karies (hål i tänderna)</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Tandlossning</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Missfärgade tänder</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Dålig andedräkt</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Tandköttsinflammation</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

6. Hur undviker du att få hål i tänderna? Flera alternativ kan väljas. *

- [ ] Borsta tänderna
- [ ] Skölja med vatten
- [ ] Undvika socker
- [ ] Småäta
- [ ] Tugga tuggummi
- [ ] Använda fluor (tandkräm, fluorkölf, Fluortabletter)

7 a) Har du någon gång informerats om rökningens effekter på hälsan? *

- [ ] Ja
- [ ] Nej
7 b) Var har du fått sådan information? Flera alternativ kan väljas. *

☐ Hälsocentralen
☐ Tandvårdspersonal
☐ Skolsköterskan
☐ På lektionstid
☐ Ej fått någon information

8 a) Vad skulle motivera dig till att sluta röka? Flera alternativ kan väljas. *

☐ Ej aktuellt, jag röker inte
☐ Bättre tandhälsa
☐ Bättre andedräkt
☐ Spara pengar
☐ Förbättrad kondition
☐ Minskad risk för hjärt-och kärlsjukdomar
☐ Minskad risk för muncancer
☐ Minskad risk för lungsjukdom
☐ Mindre missfärgade tänder

8 b) Vill du lägga till något annat som skulle motivera dig till att sluta röka? Motivera.

Ditt svar
9 a) Tycker du att tandvårdspersonal ska informera om rökningens påverkan på tand- och munhälsa? *

○ Ja
○ Nej

9 b) Om ja, i så fall vad?

Ditt svar

SKICKA
Appendix 4

9 a) Har den här informationen som du nu tagit del av ändrat din syn på rökning? *

○ Ja
○ Nej

9 b) Om ja, på vilket sätt?
Ditt svar

9 c) Om nej, varför inte?
Ditt svar

10. Vad har varit mest givande med den här föreläsningen?
Motivera. *
Ditt svar