No-shows in dental care – perspectives on adolescents' attendance pattern
To my family
ANIDA FÄGERSTAD

No-shows in dental care – perspectives on adolescents’ attendance pattern
Title: No-shows in dental care – perspectives on adolescents' attendance pattern

Publisher: Örebro University 2019
www.oru.se/publikationer

Print: Örebro University, Repro 10/2019

ISSN 1652-4063
Abstract

All children and adolescents living in Sweden have free dental care with regular check-ups. Yet, missed and cancelled dental appointments are not unusual. The overall aim was to explore potential explanatory factors associated with non-regular dental care and to seek a deeper understanding of why some adolescents fail to attend their dental appointments.

An integrative review (Paper I) identified and summarized different sets of environmental, individual and situational factors that could be associated with dental avoidance or non-attendance. Paper II found similar levels of dental fear between children and adolescents (8-19 yrs) with a Swedish or a non-Swedish background. The occurrence and patterns of missed dental appointments among 16–19-year-olds were investigated in Paper III, where we report that 13.1% of 23 522 booked dental appointments were missed in 2012. Boys had more missed appointments than girls, while no age differences were found. In a case-control design, adolescents with missed appointments more often had sociodemographic load, dental fear or dental behaviour management problems, poor oral health, emergency visits, tooth extractions, operative treatments, and over the past years, more missed and cancelled appointments. A history of missed and cancelled dental appointments predicted future missed and cancelled appointments. Twelve adolescent girls with missed appointments were interviewed in Paper IV and described several potential barriers or facilitators to accessing dental care. They highlighted that knowing what will happen during the dental visit was decisive to whether or not they would attend their appointments.

In conclusion, factors specifically associated with dental avoidance still need to be investigated. Dental fear should still be seen as potential causal factor for dental avoidance. Missed and cancelled dental appointments should never be ignored since they could predict future missed and cancelled appointments. The results indicate that missed dental appointments among adolescents remain a challenge for Swedish dental care.

Keywords: adolescents, avoidance, dental attendance, dental care, dental fear, dental health services, oral health, utilization.

Anida Fägerstad, School of Health Sciences, Örebro University, SE-701 82 Örebro, Sweden, anida.fagerstad@regionorebrolan.se
# Table of Contents

LIST OF PUBLICATIONS .................................................................................................................. 9
LIST OF ABBREVIATIONS ................................................................................................................. 10
PREFACE ............................................................................................................................................. 11
INTRODUCTION .................................................................................................................................. 12
BACKGROUND ...................................................................................................................................... 13
Oral health .......................................................................................................................................... 13
Dental health services ....................................................................................................................... 14
   Dental health services in Sweden .................................................................................................. 14
Adolescence and health behaviour ................................................................................................. 15
   Adolescents and oral health behaviour ....................................................................................... 16
Dental fear/anxiety ............................................................................................................................ 16
Dental attendance among adolescents ............................................................................................. 17
   Consequences of non-regular dental attendance ................................................................... 18
RATIONALE ...................................................................................................................................... 20
AIMS .................................................................................................................................................... 21
MATERIALS AND METHODS ............................................................................................................. 22
Study design ....................................................................................................................................... 23
Settings and study population ......................................................................................................... 23
   Paper I ........................................................................................................................................... 23
   Paper II .......................................................................................................................................... 24
   Paper III ......................................................................................................................................... 24
   Paper IV ......................................................................................................................................... 25
Data collection .................................................................................................................................... 26
   Paper I ........................................................................................................................................... 26
   Paper II .......................................................................................................................................... 28
   Paper III ......................................................................................................................................... 29
   Paper IV ......................................................................................................................................... 29
Analyses ............................................................................................................................................. 30
   Integrative review analysis ........................................................................................................ 30
   Quantitative data analyses .......................................................................................................... 31
   Qualitative data analysis ............................................................................................................. 31
Ethical considerations ....................................................................................................................... 32
RESULTS .......................................................................................................................... 34
Manifestations of dental avoidance or non-attendance (Paper I) .................. 34
Background and concomitant factors associated with dental avoidance or non-attendance (Paper I) ........................................................................................................ 36
  Environmental factors ......................................................................................... 37
  Individual factors ............................................................................................... 37
  Situational factors ............................................................................................... 38
Dental fear among children and adolescents with a Swedish vs. non-Swedish background (Paper II) ........................................................................................................ 38
Missed dental appointments among adolescents (Paper III) .................. 40
  Differences between cases and controls – findings from the dental records ........................................................................................................ 40
Triggers for deciding to meet or miss dental appointments (Paper IV) .... 43
DISCUSSION ........................................................................................................ 46
Main findings and reflections ........................................................................... 46
Partly different sets of factors associated with dental avoidance or non-attendance (Paper I) ........................................................................................................ 47
No differences in dental fear among children and adolescents with a Swedish vs. a non-Swedish background (Paper II) ............................................................. 48
The importance of a history of missed and cancelled appointments (Paper III) ........................................................................................................ 49
The ambiguous will to take on adult responsibility for dental care (Paper IV) ........................................................................................................ 50
Methodological considerations ....................................................................... 52
  Paper I .............................................................................................................. 52
  Paper II ........................................................................................................... 53
  Paper III ........................................................................................................... 53
  Paper IV ........................................................................................................... 54
CONCLUSIONS .................................................................................................. 56
CLINICAL IMPLICATIONS ................................................................................ 57
IMPLICATIONS FOR FUTURE RESEARCH ................................................ 59
AKNOWLEDGMENTS ...................................................................................... 60
REFERENCES .................................................................................................. 62
APPENDICES .................................................................................................... 76
LIST OF PUBLICATIONS

This thesis is based on the following papers, which are referred to in the text by their Roman numerals:


Papers I, II, III and IV are reprinted with the permission of the copyright holders.
LIST OF ABBREVIATIONS

ANOVA analysis of variance
BMI body mass index
CFSS-DS Children’s Fear Survey Schedule – Dental Subscale
DBMP dental behaviour management problem
DF dental fear
FDI Fédération Dentaire Internationale (World Dental Federation)
IQR interquartile range
OR odds ratio
PDC public dental clinic
SCB Statistics Sweden
SD standard deviation
SDT Self-Determination Theory
SES socio-economic status
WHO World Health Organization
Since 2001, when I started my journey as a dental hygienist, I have had the opportunity to meet and treat many children and adolescents in the clinical setting. When I started working at the public dental clinic (PDC) Wivallius in Örebro, back in 2008, I had the privilege to meet individuals from different parts of the world and with different cultural backgrounds.

When meeting with adolescents, I was often asked when they would start to pay for their dental visits. The impression I got was that not many adolescents would attend their dental appointments if they had to pay for them.

I also noticed that many dental appointments were either missed or cancelled and I wondered why. Was it because of dental fear (DF), or was it due to something else?

My first reflection was that DF is a huge reason for dental non-attendance or for lack of regular attendance. However, it was not until I started preparation for this thesis that I began to search for more nuanced answers.

When I first started working on this thesis, I wanted to know more about DF, especially among children and adolescents at PDC Wivallius. This led to Paper II. After reading many research articles, another question emerged: what prevents some adolescents from attending booked dental appointments? In Sweden, dental care for children and adolescents is free of charge, so why not take advantage of that opportunity? Which other possible explanations for no-shows could there be? This became the focus of this thesis, and resulted in Papers I, III and IV.

My journey as a doctoral student has come to an end and can be summarized in this thesis, but I sincerely hope that this is just a beginning of another journey.
INTRODUCTION

“My last dental visit went well. I have a better picture of the dentist now. I got a lot of help and what is it called? More ... what is it called? Help how to take care of ... Because I have very bad teeth. I hated the dentist very much before. And ... I was scared to go to the dentist before. Then I got criticized by the dentist when I got to the dental clinic. But actually, the dentist ... or the dental hygienist, or whatever ... is very good. And ... it makes me safer about going to the dentist. I've been afraid of the dentist since ... I was 5 years old. Then it has not got any better ... with all those negative dental visits. That just made it even worse.

Before, I needed to ... When I got the letter with the booked dental appointment, I called the clinic and cancelled ... Because it becomes like an anxiety-loaded thing I need to do. Sometimes I forget my dental appointments and sometimes I just avoid going to the dentist. It is because I am afraid and because I know that I do not take care of my teeth like I'm supposed to. I just don't prioritize going to the dentist.

Now when I still don't need to pay to go to the dentist ... I don't take care of my teeth properly. Now I get problems with my teeth. So I have a lot of cavities that need to be fixed ... But ... I try to change my routines so that they will be better so that I don't need to go to the dentist very often in the future when I will need to pay for my dental visits.”

This is part of an interview with an adolescent girl regarding her experiences of dental care and her thoughts about her future dental visits.

Missed appointments (“no-shows”) in dental care may lead to delays in dental treatments that in turn may contribute to negative consequences for the individual’s oral health. In addition, every missed dental appointment constitutes a financial burden for the dental clinic and affects the productivity and distribution of dental personnel resources. Moreover, these missed dental appointments prevent other patients from receiving care.

Health behaviour patterns developed in adolescence can have an impact on health throughout adult life. To find out what prevents adolescents from attending their dental appointments is of importance and the main purpose of this thesis.
BACKGROUND

Oral health

According to the World Health Organization (WHO), oral health is integral to general health\(^1\). Oral health means being free of chronic oro-facial pain, oral and pharyngeal cancer, oral tissue lesions, birth defects such as cleft lip and palate, and oro-dental trauma and noma\(^1\). A new definition of “oral health” was adopted in 2016 by the General Assembly of the Fédération Dentaire Internationale (FDI) (World Dental Federation), namely: “Oral health is multifaceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow, and convey a range of emotions through facial expressions with confidence and without pain, discomfort, and disease of the craniofacial complex.”\(^2\).

Oral health is usually discussed in relation to the two most important global oral health burdens, caries and periodontitis\(^3\).

For the majority of adolescents in Sweden, oral health has been reported to be good\(^4\). Self-perceived oral health in adolescents living in Sweden has been investigated in some studies, revealing that the majority of adolescents perceived their oral health as good\(^5\)–\(^8\). In a study by Ericsson et al.\(^5\) 90% of 19-year-olds (more girls than boys) perceived their oral health as good. However, some studies report poor oral health in the form of gingivitis and high scores of plaque among 19-year-olds in Sweden\(^5,\)\(^9\)–\(^11\). Moreover, boys reportedly have more plaque and gingivitis compared with girls\(^5,\)\(^9\)–\(^11\). Other studies found that caries disease was more common among children and adolescents with low socio-economic status (SES)\(^4\) and among children and adolescents with a non-Swedish background\(^12,\)\(^13\).

A qualitative study conducted in Sweden showed that 15–19-year-olds were not aware of “oral health” as a term. Yet they stated that oral health is important and described it mostly as the health of teeth\(^14\). When interviewing adolescents regarding their oral health, Östberg et al.\(^8\) identified two aspects of oral health, action (the physical things we do that affect the condition of the mouth) and condition (the status of the mouth). Oral health as an action was mostly associated with tooth brushing, while condition was related to good oral health (i.e. no caries disease) and appearance of the teeth (i.e. aesthetics).
Dental health services

Dental health services differ between countries in terms of organization, accessibility, availability and cost. In most Western industrialized countries, dental health services are available for the population, offering preventive and curative care through private or public systems. Dental health services in developing countries are mostly available at regional and central hospitals in urban centres, with almost no priorities given to either preventive or curative care. In many countries in Africa, Asia and Latin America, dental health services are limited to pain relief and emergency care mainly because of shortage of dental personnel. Other countries offer free dental care for children and adolescents up to a specified age, while some offer insurance for specific dental treatments.

Dental health services in Sweden

The Swedish dental health services are regulated by law and government regulations. According to the National Dental Service Act (Tandvårdslagen) of 1985:125, “the goal of dental health care is good oral health and dental health care on equal terms for the entire population.” The county councils administer the dental health service for children and adolescents in Sweden. They have a planning responsibility to ensure that all children and adolescents get their regular dental check-ups and receive dental care when needed. Children and adolescents are free to choose which (public or private) dental clinic they want to attend, where they can meet dentists, dental hygienists and dental nurses for individualized preventive and curative care. Besides regular dental check-ups and individualized care, public dental health services are also working with health promotion efforts at child care centres, preschools, and primary and secondary schools.

To ensure access to dental health services regardless of SES or insurance status, all children and adolescents living in Sweden are offered free dental care with regular check-ups at intervals determined by individual risk assessments. The frequency of the check-ups depends on the condition of the individual’s oral health and risks or need for treatment. This means that children and adolescents with poor oral health are invited to visit the dental clinic more often than those with good oral health. To improve oral health among children and adolescents, the dental health services focus on prevention.

Until 2016, all children and adolescents 0–19 years old had access to free dental care in Sweden. The National Dental Service Act was revised after
that year, and, according to clause 7, dental care today is free of charge for all children and adolescents up to and including the year they turn 23.

Adolescence and health behaviour

The US National Library of Medicine defines an adolescent as a person between 13 and 18 years of age\(^2^8\). According to the World Health Organization (WHO), an adolescent is an individual between 10 and 19 years old\(^2^9\). In this thesis, the main focus is on adolescents between 13 and 19 years of age.

Child development involves biological, emotional and psychological changes\(^3^0\). In middle childhood (8–12 years), children can apply logical reasoning\(^3^0\). Abstract thinking starts around 11–12 years of age\(^3^1\). During middle childhood, children see their parents as having the knowledge and power to make important decisions\(^3^2\). They also begin to establish their own identity and start to take more responsibilities\(^3^3\). The relationship with their peers start to become important in children’s social and emotional development\(^3^2\).

Adolescence is a period of physical, psychological, sociocultural and cognitive development and a period of transition from childhood to adulthood\(^3^4\). A goal for many adolescents is to be free from their parents and to have control over their own lives\(^3^5\). Even though they want to be independent, most adolescents still want to have a close relationship with their parents\(^3^6\). The entire adolescence may feel like a time of balancing between dependence on and independence from family, peers and community\(^3^7\). The relationship with peers and social responsibilities become more central, while the relationship with family becomes less prominent\(^3^5\). Further, the opinions of peers become more important than opinions of the family\(^3^8\). The development of social skills is of importance in finding friendships, romance and employment\(^3^5\).

At the beginning of adolescence, parents are mostly responsible for all aspects of adolescents’ health. At the end of adolescence, that responsibility transfers from the parents to the adolescents themselves\(^3^7\). During this period, adolescents may establish health behaviours that can affect health throughout their life\(^3^4\). Health risk behaviours such as smoking, alcohol and drug use, certain sexual behaviours, and eating disorders can have an impact on health in both the short and the long term. Missed dental appointments (no-shows) may be seen as another risk behaviour that may be established during adolescence and can have negative oral health consequences\(^3^9\)–\(^4^3\).
Adolescents and oral health behaviour

Oral health self-care behaviours such as tooth brushing and use of fluoridated toothpaste have been found to have an effect on oral health status⁴⁴.

A positive relationship between self-care and oral health has been found in several studies among adolescents⁵-⁸, ¹⁴, ⁴⁵, ⁴⁶. Ericsson et al.⁵ found that 76% of adolescents living in Sweden brushed their teeth at least twice a day. Moreover, 84% of the adolescents believed that they were taking good care of their teeth and 60% declared that cleaning their teeth was very important⁵. The importance of having clean, healthy teeth in social situations influenced oral hygiene behaviour the most⁴⁷. What motivated adolescents to take care of their teeth was the appearance of white teeth⁸, which can be seen as a symbol of good oral health¹⁴. The appearance of the teeth could also affect adolescents’ self-image and contribute to their self-confidence¹⁴, ⁴⁸, ⁴⁹. Moreover, good oral health in general has been found to be an important aspect of and prerequisite to success in life⁴⁸ and to getting a good job⁴⁸, ⁴⁹.

However, despite the fact that tooth brushing is important to adolescents, they sometimes brush their teeth only once or less than once a day. Forgetfulness and lack of time are the main reasons for non-regular tooth brushing⁸, ¹⁴.

The oral health behaviour of girls has been found to be better than that of boys⁵, ⁶, ⁴⁵, ⁵⁰, ⁵¹. Furthermore, girls have been shown to have better knowledge about caries and gingivitis than boys⁶, ⁵². Non-regular eating habits, consumption of sweet drinks or sweet food every day, risky alcohol habits and overweight have been reported to be more common among non-attending adolescents than among those who regularly visit dental care⁵³.

Dental fear/anxiety

Different terms have been used to cover the concepts of dental fear (DF) and dental anxiety. As summarized by Klingberg and Broberg⁵⁴, “DF” refers to a normal emotional reaction to one or more specific threatening stimuli in the dental situation, while “dental anxiety” relates to a state of apprehension that something dreadful is going to happen during dental treatment. “Dental phobia” represents a severe type of dental anxiety (i.e. marked and constant anxiety in relation either to clearly discernible situations/objects such as drilling or injections, or to the dental situation in general)⁵⁴. However, the concepts are often applied interchangeably in the literature⁵⁴. In this thesis, the term used is “DF”.
Dental fear is likely to be of multifactorial origin and several potential aetiological factors have been proposed, including general fear (in younger children) and temperamental aspects (e.g. impulsivity, shyness, negative emotionality). Pain and negative experiences of past dental treatment have been considered major triggers for DF. Issues related to socio-economic factors, parental DF, family and child rearing (e.g. living with young mothers, living in single-parent families) and culture can be potential risk factors for development of DF.

Several studies have reported that DF is more common in girls and younger children, but others have failed to show any relationship between DF and gender or age. Dental fear can lead to avoidance of dental care and serious oral health problems for the patient. The reported prevalence of DF among children and adolescents from several countries in Europe, North America, Asia and Africa varies from <2% to >20%.

Dental attendance among adolescents

Despite the fact that dental care for children and adolescents living in Sweden is free, reports on missed and cancelled dental appointments are not unusual. Currently, there is no nationwide register of information on missed dental appointments for children and adolescents, which makes it difficult to study the phenomenon at the national level. In one Swedish county, the prevalence of missed appointments among 19-year-olds was reported to be 11.0%. The same report revealed that many of those 19-year-olds would only visit a dentist because of pain or other problems.

Painful and unpleasant dental experiences can develop into DF and, in turn, can lead to non-regular dental attendance. In a group of 15-year-olds in the city of Jönköping, Sweden, 2.9% of the girls and 1.7% of the boys reported that they had not been to the dentist in 3–5 years or more and the reason was DF. A recently published Norwegian study revealed that 7.5% of adolescents between 15 and 18 years of age reported that they had missed a dental appointment because of DF.

Non-regular dental attendance (as indicated by different study-specific measures) has been shown to increase with increasing age and to be more common among boys than among girls.

Further, a positive association between low SES and non-regular dental attendance has been reported in previous studies. According to the...
National Board of Health and Welfare in Sweden, factors such as low parental SES, living in a single-parent family, having young parents or having parents with low educational level increase the risk for missed dental appointments among children and adolescents. A Swedish study by Hallberg et al. investigated why some parents fail to take their children to the dentist. The study revealed that parents who felt overloaded in daily life did not prioritize taking their children for dental care. These parents themselves were non-regular dental attenders and gave low priority to their own oral health.

One Swedish study reported that dental non-attendance was more common among foreign-born adolescents than among those born in Sweden.

In the adolescent population, reported reasons for non-regular dental attendance were long waiting time for dental treatments, lack of time, treatment not needed, fear of the dentist, parental responsibility to book (i.e. lack of own ability to schedule) an appointment, lack of transportation, difficulty getting an appointment, and costs. Among adults, DF, insurance and cost, lack of time, treatment not needed, fear of the dentist, parental responsibility to book (i.e. lack of own ability to schedule) an appointment, lack of transportation, difficulty getting an appointment, and costs have been reported as reasons for non-regular dental attendance.

In the literature, different terms such as “missed” or “cancelled dental appointments”, “avoidance”, “non-attendance” and “non-utilization” have been used to cover the concept of no-shows in dental care. In this thesis, the term “no-show” includes missing dental appointments without cancelling or rescheduling them.

**Consequences of non-regular dental attendance**

Non-regular dental care may have a negative effect on both patients’ oral health and dental clinics. Missed and cancelled dental appointments can contribute to individual negative consequences for oral health and lead to emergency dental care.

Among adults with high DF, long-standing avoidance of dental care has been associated with feelings of guilt and shame, which in turn enhance both avoidance and DF, and a vicious circle is established.

Every missed and cancelled dental appointment may constitute a financial burden for the dental clinic. Also, missed and cancelled appointments may prevent other patients from receiving dental care. For the patients, broken appointments and non-regular dental care may lead to prolonged
intervals between seeing the dentist, discontinuity of dental care\textsuperscript{112} and delays in dental treatment\textsuperscript{115}. 
RATIONALE

Many health behaviour patterns including dental attendance patterns are established during adolescence. Adolescents are individuals who will soon make their own decisions regarding whether to go or not to go for dental care, once they need to pay for their dental treatments. In this transition period from childhood to adulthood, adolescents with missed and cancelled dental appointments should be seen as a risk group as non-regular dental attendance can have a long-standing negative impact on oral health.

Although the phenomena of missed appointments, avoidance behaviours and non-attendance among adolescents have been investigated and associated with a variety of background and other factors it remains to be established what exactly really prevents adolescents from going to the dentist. In order to enable good oral health and a continuation of regular dental care into adulthood, it is of preventive importance to investigate the factors that are associated with non-regular dental care among adolescents. Further, to get a deeper understanding of what facilitates or prevents adolescents from attending their dental appointments, it is also important to explore their own experiences regarding dental care.

As previously mentioned, one factor that is associated with non-regular dental attendance among adolescents is DF. Most studies on DF in Sweden have been performed on Swedish-speaking participants, excluding participants from our growing population of new inhabitants from a non-Swedish background. Therefore, the possibility to investigate DF in a multicultural population and compare Swedish youths with young people with a non-Swedish background was of special interest.

This thesis aims to contribute to the knowledge about the individual and the societal, costly problem of missed appointments in dental care. It is hoped to give some insights into signs to be aware of and suggest some things we can do to help adolescents overcome the barriers to attending appointments. These insights and suggestions may be of importance, not only for dental care and the dental personnel, but also for other health services that interact with adolescents.
AIMS

The overall aim of this doctoral thesis was to explore potential explanatory factors associated with non-regular dental care and to seek a deeper understanding of why some adolescents fail to attend their dental appointments.

Specific aims were:

- to review articles exploring manifestations of avoidance of dental care, or non-attendance to dental appointments, to identify background and concomitant factors specifically associated with dental avoidance among adolescents (13–19 years old) (Paper I);

- to explore self-rated DF in a multicultural population of child and adolescent dental patients (8–19 years old), with gender, age and SES into account, and also to investigate whether the level of DF, as measured using the Children’s Fear Survey Schedule – Dental Subscale (CFSS-DS), differed between patients with a non-Swedish background and patients with a Swedish background (Paper II);

- to investigate the occurrence and pattern of missed dental appointments among 16–19-year-old adolescents in a Swedish county; to explore associations between background and concomitant factors and missed appointments; and, further, to investigate if these patterns of associations differed between areas with different socio-demographic profiles (Paper III); and

- to explore and describe experiences of and views about dental care among adolescent dental patients with a recent history of missed dental appointments at public dental clinics (PDCs) in a Swedish county (Paper IV).
MATERIALS AND METHODS

The empirical studies (Papers II–IV) in this thesis were performed in Örebro County, Sweden, from June 2011 to September 2018. Örebro County has 301 890 inhabitants (population for the year 2018)\textsuperscript{116}, of whom 69 436 are children and adolescents between the ages of 0 and 19\textsuperscript{116}. Dental care is provided by PDCs and by private dentists. Approximately 90% of children and adolescents in the county get their dental care, including regular check-ups and treatments, at one of the PDCs\textsuperscript{117} (Figure 1).

One of the PDCs located in a multicultural area in the city of Örebro was chosen as the setting for the study presented in Paper II. Settings for Papers III and IV included all PDCs in the county. During the period when data collection for Paper III was conducted, there were 23 PDCs in the county. In 2017, the number of PDCs in the county increased to 24 (Paper IV).

Figure 1. Public dental clinics (PDCs) in Örebro County and within the city of Örebro, 2017 (maps provided by Cecilia Pierre Tallroth, communications strategist at Public Dental Health Services in Region Örebro County).


**Study design**

Paper I was an integrative review, which is a method that allows broad inclusion of diverse data sources\(^{118}\). The study in Paper II had a cross-sectional design including boys and girls between 8 and 19 years old. The first part of Paper III was based on data on booked and missed dental appointments among boys and girls aged 16–19 years during 2012 and the second part had a case-control design based on the retrospective data from the dental records. An inductive, descriptive design with a qualitative approach was used in Paper IV including 16–19-year-old girls.

**Settings and study population**

**Paper I**

The study presented in Paper I is an integrative review of articles on dental avoidance or non-attendance among adolescents. The integrative review process parallels systematic reviewing by specifying the question or research problem, and involving a thorough and systematic literature search, data evaluation, data analysis and presentation of the results\(^{118}\).

In our literature search we used the databases PubMed, CINAHL Plus with Full text, and PsycINFO. A systematic search was done using the MeSH terms “dental health care” OR “health care services/dent*” with use of the asterisk as an open-ended term and key words often used in the literature for the topics of this study aim, such as “dental avoidance”, “dental attendance”, “dental non-attendance”, “dental utilization”, “dental no-show”, “dental appointments”, “missed dental appointments”, “dental visit” and “dental priority”. The Boolean operators AND and OR were used to cover all key word pair combinations (e.g. “dental AND avoidance” OR “dental AND attendance”) (Appendix I). The search of the articles was limited to peer-reviewed quantitative or qualitative studies in English, published in 1994–2014 and covering adolescent populations (13–19-year-olds). The main literature search took place in May 2014 with assistance from a librarian at the Medical Library at Orebro University, and was updated in June 2014 and January 2015. In total, 3002 articles were identified; 2984 during the search of electronic databases and 18 from hand searches. Reference lists of relevant articles were skimmed for related publications, but no additional studies were identified. After removing duplicates, 2067 articles were included in the further evaluation.
Paper II
This study about DF was performed at a PDC located in a multicultural area of Örebro city. During 2011 when data collection was made, the population of this area was almost 6500, of whom 2600 were children and adolescents. Approximately 70% of the inhabitants had an immigrant background and the main groups were Somalis and Iraqis. More than 100 different languages were spoken in the area. Therefore, this area was found to be very suitable for the study.

All 8–19-year olds who were invited for a regular dental check-up examination at the clinic from June to October 2011 were consecutively enrolled in the study. Altogether 492 patients received written information about the study together with a dental appointment letter. Of these, 315 patients (179 boys and 136 girls) were, in conjunction with their visit at the clinic, asked to participate and 304 agreed. A total of 177 patients (84 boys and 93 girls: 85 aged 8–12 years, 53 aged 13–16 years, and 39 aged 17–19 years) did not receive an invitation to participate because of: delays of ≥20 minutes (n=91), no-shows (n=21), or, for 8–14-year-olds, attendance without their parents (required for agreement to study participation when aged below 15-years; n=31)). Further, although an interpreter service was routine, three patients were not asked to participate because they did not understand Swedish and no interpreter was present, and 31 patients had moved out of the area. Due to missing data, three responders of the 304 were excluded, leaving 301 for analysis (172 boys and 129 girls; 98 aged 8–12 years, 96 aged 13–16, and 107 aged 17–19 years).

Paper III
This study was based on data on individuals who were 16–19 years old in 2012. The inclusion criteria were that they had to have had at least one scheduled appointment for a dental examination or treatment at any of the PDCs (n=23) in Örebro County during 2012. In total, 10 158 individuals met this criterion. A list of booked and missed appointments for all these individuals during 2012 was used to compute the frequency of missed dental appointments during 2012.

For the case–control design, a computer-based, non-stratified random selection of 749 cases with at least one missed appointment according to the list of booked and missed appointments during 2012 was made. From the same list, age-, gender- and PDC-matched controls without missed appointments during 2012 were identified. After checking that they met the inclusion criteria, 522 case-control pairs of adolescents were included in the
A case–control design. Two hundred and twenty-seven pairs were excluded because the missed appointment could not be confirmed (n=166) or because of no history of booked appointments (n=52), no control available (n=1) and no access to digital records (n=8).

Further, based on the number and percentage of missed and/or cancelled appointments during 2012, two subgroups of cases were defined: those who had missed at least two appointments or missed one and cancelled at least two appointments were categorized as serious avoiders if the rate of missed/cancelled appointments exceeded 20% of their booked appointments for the year (n=232). All other cases (n=290) were classified as moderate avoiders.

Dental records for the period 2009–2012 were reviewed for all case-control pairs.

**Paper IV**

This study was based on interviews with 16–19-year old girls. The inclusion criterion was that there had to be notes in their dental records on missed dental appointment(s) at any of the PDCs (n=24) in Örebro County during the preceding 3 months in 2018.

Potential participants were purposefully selected aiming for diversity of gender, age, and PDC’s location in areas with different sociodemographic profiles (urban, small towns, rural, and low and average/high SES) to find a variety of ways of experiencing the phenomenon we wanted to study.

In total, 2335 adolescents missed their dental appointments during the period from January to September 2018. The eligible participants (n=152) were first sent an information letter (Appendix II) within 3 months of the missed appointment; then, about 1 week later, they were contacted by phone by the author of this thesis, and asked whether they were interested in participating in the study.

A telephone call was made, according to the protocol, to all 152 to whom the letter had been sent, but contact could be established with only 18 (one boy and 17 girls); the others were not reachable. Finally, twelve girls from eight PDCs agreed to participate in face-to-face or telephone interviews (Table 1).
Table 1. Participants’ characteristics and demographics

<table>
<thead>
<tr>
<th>Participants</th>
<th>Age, yrs</th>
<th>Type of interview</th>
<th>PDC’s location and sociodemographic profile of the area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19</td>
<td>Face-to-face</td>
<td>Small town</td>
</tr>
<tr>
<td>2</td>
<td>19</td>
<td>Face-to-face</td>
<td>Rural</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>Face-to-face</td>
<td>Urban</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>Face-to-face</td>
<td>Urban</td>
</tr>
<tr>
<td>5</td>
<td>18</td>
<td>Face-to-face</td>
<td>Urban</td>
</tr>
<tr>
<td>6</td>
<td>19</td>
<td>Face-to-face</td>
<td>Urban</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>Face-to-face</td>
<td>Urban</td>
</tr>
<tr>
<td>8</td>
<td>18</td>
<td>Face-to-face</td>
<td>Small town</td>
</tr>
<tr>
<td>9</td>
<td>19</td>
<td>Telephone</td>
<td>Urban</td>
</tr>
<tr>
<td>10</td>
<td>18</td>
<td>Telephone</td>
<td>Small town</td>
</tr>
<tr>
<td>11</td>
<td>19</td>
<td>Telephone</td>
<td>Urban</td>
</tr>
<tr>
<td>12</td>
<td>19</td>
<td>Telephone</td>
<td>Rural</td>
</tr>
</tbody>
</table>

PDC=public dental clinic; SES=socioeconomic status.

Data collection

Paper I

A first screening of the 2067 identified titles was done by the first author (A.F.). This resulted in exclusion of 1930 articles that did not meet the inclusion criteria. Abstracts of the remaining 137 articles were independently screened by two authors (A.F. and K.A.). If the abstract was missing or did not provide sufficient information, the full article was retrieved for further examination. The remaining 53 articles that appeared to meet the inclusion criteria were thereafter independently reviewed in full text by all three authors (A.F., J.W. and K.A.). Of these 53 articles, 31 were excluded because they did not meet the inclusion criteria, leaving 22 articles for evaluation of quality and relevance (see PRISMA flow chart diagram, Figure 2119). At the final stage of data collection, the quality of these remaining 22 full-text articles was further evaluated using a pre-set protocol (Appendix III) constructed by combining two review templates for quantitative studies120, 121 as there is no gold standard for quality evaluation in an integrative review118. The protocol included assessments of inclusion and exclusion criteria, aims, study design, study population, selection methods, measurements, and analysis and result reporting. Study quality and relevance to the aim of this review were each classified as high, moderate or low.
To qualify for high quality a study had to meet the following criteria: the drop-out rate had to be stated and to be <20%; and, where applicable, consideration of confounders had to be included. For classification of high relevance, a study had to meet the following criteria: it had to contain relevant material; further, the results had to be clearly described and be consistent with the aims of the review.

All three authors (A.F., J.W. and K.A.) independently evaluated the 22 articles. Uncertainties were resolved by discussion until consensus was reached. One article was excluded because of both low quality and low relevance. Therefore, 21 articles were finally included in the review.

Figure 2. Process of literature selection through the different phases of the review process. (after Moher et al. 2009).
Paper II
For assessment of DF, the CFSS-DS was used for self-ratings\(^{122}\), meaning that accompanying parents did not take part in the ratings. The CFSS-DS is one of the most frequently used tools for parental ratings or self-ratings of children’s DF\(^{122}\). It has been validated and used among different cultures and populations\(^{74, 79, 82, 123-125}\). It consists of 15 items ranging from 1 (“not afraid at all”) to 5 (“terrified”), giving a sum score range of 15–75. A sum score of ≥38 on the CFSS–DS has commonly been used as “standard” cut-off\(^{43, 54, 122}\) since it has been found to be indicative of DF\(^{126}\). Ten Berge et al.\(^{77}\) defined a sum score of 32 as borderline or indicating risk for DF (Appendix IV).

Background and SES information was obtained by the treating dental personnel asking the children and adolescents who agreed to participate in the study and their accompanying parents, about their and the parents’ country of birth and the parents’ occupation and level of education (Appendix V).

For those who required language assistance, a professional interpreter was present during the information session, explaining about the study and the study procedure, as well as during the questionnaire completion phase. All data were collected by dental personnel before the children and adolescents were clinically examined.

**Definition of “Non-Swedish” and “Swedish background”**
Patients’ and parents’ country of birth was used to form the categories of “non-Swedish” (i.e. foreign-born with foreign-born parents, or Swedish-born with foreign-born parents) and “Swedish” (i.e. Swedish-born with one foreign-born parent and one Swedish-born parent or with both parents Swedish-born), according to the definition by Statistics Sweden (SCB)\(^{127}\).

**Hollingshead’s four-factor index of social position**
Data on parents’ occupation and education level were combined into a measure of SES using a Swedish translation of Hollingshead’s four-factor index of social position\(^{128}\), modified by Broberg\(^{129}\). In this study, we used an extended version of the index, which includes also parents with no regular occupation\(^{130}\). In cases where information was available for only one parent, the index computed for that parent was used. Hollingshead’s index ranges from 8 to 66 points and was, in the analysis, classified into three categories (“low SES” = 8–29.25; “average SES” = 29.5–40.75; and “high SES” = 41.0–66 points), according to the distribution in the Dahlin–Vilhelmsson
sample where each category represents one-third of the total scores and may be considered Swedish norms\textsuperscript{130}.

\textbf{Paper III}

\textit{Lists of booked, missed and cancelled dental appointments}
In this study, the list of booked, missed (i.e. no show) and cancelled (patient-initiated cancellations) dental appointments during 2012 was reported to the first author (A.F.) by a controller at Public Dental Health Services in Region Örebro County.

\textit{The dental records}
The dental records for the period 2009–2012 for the case-control pairs were reviewed. Data were extracted on number and type of dental visits and treatments, oral health status, records of general health problems or tobacco use, as well as missed and cancelled appointments. Further, where available, data on family and everyday situation, and notes on DF or dental behaviour management problems (DBMPs) were also registered.

All extractions from the dental records were made by the first author (A.F.), according to a pre-set protocol (Appendix VI).

\textit{Sociodemographic profile}
The 23 PDCs were grouped into three location categories (urban, small towns, and rural) based on the population density of 2012, according to SCB\textsuperscript{131}. The PDCs were also grouped into two SES categories (low SES and average/high SES) based on a cluster distribution of different sociodemographic profiles in the areas where they were located\textsuperscript{132}.

\textbf{Paper IV}

\textit{The interviews}
Data were collected between February and September 2018 through twelve individual, open-ended, semi-structured interviews using an interview guide developed for this purpose (Appendix VII). The questions in the interview guide focused on missed dental appointments, barriers and facilitators to accessing dental care, attitudes to oral health, and peer and parental influence on dental attendance.

Because of difficulties in scheduling time for the interviews, some of the individuals stated that they preferred a telephone interview over a face-to-
face interview. Therefore, an appointment was arranged for face-to-face interviews with eight participants while four participants were interviewed by telephone. The interviews were conducted in Swedish and carried out by the first author (A.F.) in a quiet room at the research centre. Face-to-face interviews lasted between 12 and 38 minutes (mean 23 minutes) and telephone interviews lasted from 14 to 19 minutes (mean 16 minutes). All interviews were digitally recorded. None of the participants had had any previous contact with the first author (i.e. they had not been treated by A.F. at any time).

After having conducted all the interviews, which were analysed consecutively, the first author, together with co-authors E.C. and K.A., checked whether any new topics had emerged during the last interviews, or whether any additional information could be found.

Analyses

Integrative review analysis
Using an appropriate data analysis method is a critical consideration in the integrative review process\textsuperscript{118}. The guiding framework for Paper I was the five-stage systematic integrative review process developed by Cooper\textsuperscript{133}, consisting of:

- problem formulation
- data collection
- evaluation of data points
- data analysis and interpretation
- public presentation of the results.

Data from primary sources were ordered, coded, categorized and summarized in order to answer the research question\textsuperscript{118}. Furthermore, data considering factors with proposed or potential relationships with any of the outcomes (defined as avoidance or non-attendance) were extracted, processed and tabulated. Background data were compared factor by factor. Where they were similar, factors were first ordered in groups, and then coded and categorized. Summarizing related categories led to different themes.

All authors (A.F., J.W. and K.A.) were involved in the data analysis process.
**Quantitative data analyses**

For Papers II and III, descriptive statistics were given as medians, means (standard deviation (SD)) and frequency tables. Group differences were analysed using non-parametric and parametric tests for two (chi square test, Fisher’s exact test, Mann-Whitney U-test, Student’s t-test) or more (Kruskal-Wallis test, analysis of variance (ANOVA)) groups. In Paper II, multivariate comparisons were performed using logistic regression analyses (with ENTER method).

In Paper III, the frequency of missed dental appointments during 2012, at both booking and individual level, by gender, age, and clinic, was computed from the lists of booked and missed dental appointments. Multivariate comparisons of cases and controls were performed using logistic regression analyses (using the ENTER and Forward stepwise methods), with group as outcome variable and selected factors (see Paper III) as potential discriminatory variables.

All statistics were performed using IBM SPSS statistics version 21.0 (SPSS Inc., Chicago, IL, US) (Paper II) and version 22.0 (SPSS Inc., Chicago, IL, US) (Paper III). The level of significance was set at p<0.05.

**Qualitative data analysis**

In Paper IV, the data were analysed using qualitative content analysis with an inductive approach guided by Graneheim & Lundman134.

Two authors (A.F. and E.C.) read through each interview several times to gain a sense of the data before continuing with the analysis. Thereafter, the meaning units including statements relevant to the study aim were extracted from the transcripts. The meaning units were then condensed, abstracted and labelled with a code. The codes were compared for similarities and dissimilarities and grouped into categories and subcategories. The preliminary subcategories and categories were discussed several times by two of the authors (A.F. and E.C.) and revised. These subcategories and categories were also presented and discussed with the other co-authors (K.A. and J.L.) who had a validating role throughout the analysis process. In the last step, the underlying meaning and the latent content of the categories were formulated into a theme.
Ethical considerations

Paper I is an integrative review and therefore the study did not require ethical vetting. Results in Paper I are presented without distortion. The studies reported in Papers II, II and IV were approved by the regional ethical review board (reference numbers 2011/060, 2013/476 and 2017/281, respectively). All studies in this thesis were performed in accordance with the principles stated in the Declaration of Helsinki\textsuperscript{135}.

In Paper II, in accordance with the Swedish Ethical Review of Research Involving Humans (SFS 2003:460, §18)\textsuperscript{136}, patients or, if <15 years old, their parents received written information about the aims and procedures of the study together with the appointment letter. Verbal information about the study and an assurance that participation was voluntary, was given in conjunction with their visit at the dental clinic. They also were verbally informed that they could choose not to participate in, or withdraw from, the study without any consequences for their future dental care. Children and adolescents (8–19 years) and, where applicable, their parents were consecutively asked if they would participate in the study (Paper II).

The study presented in Paper III was based on the dental records for 16–19-year-old adolescents. Since all data from the dental records were extracted only once, and anonymously, no informed consent was needed and the regional ethical review board had no objections to the study. Moreover, since all adolescents in the study described in Paper IV were between 16 and 19 years of age, no parental consent was needed for participation, in accordance with an ethical vetting law in Sweden (SFS 2003:460, §18)\textsuperscript{136}. Adolescents were given both written and verbal information about the study and were assured that their participation was voluntary and that they could withdraw from the study at any time without giving any reason, and without consequences for their future dental care.

Written informed consent was obtained for both Paper II and Paper IV. Since children and adolescents and, where possible, their accompanying parents in Paper II answered the questions about their and their parents’ country of birth and their parents’ occupation and level of education, those questions could be perceived as sensitive. Further, in the interview study (Paper IV), the adolescents were asked what prevented them from attending their dental appointments, which might raise issues of the integrity. Moreover, it may be very sensitive for adolescents to talk about their missed dental appointments or about their confidence in dental personnel. However, for both papers (II, IV), the potential harm was considered minor, compared against the probable gains from those studies\textsuperscript{137}.
The material that was collected for Papers II, III and IV has only been used for the purpose of this thesis. All data were available only to the research group. Questionnaires (Paper II) as well as pre-set protocols (Paper III) were archived and kept in a locked cabinet in a storage room. Furthermore, the computerized files with data from studies II and III as well as digitally recorded interviews (Paper IV) were stored at Örebro County’s IT server.
RESULTS

The studies included in this thesis differ with regard to their aims, design, data collection method and data analysis and are therefore presented separately.

Manifestations of dental avoidance or non-attendance (Paper I)

Research articles included in the integrated review provided an overview of manifestations of avoidance of dental care (dental avoidance) or non-attendance of dental appointments (dental non-attendance) (Table 2). Dental avoidance as an outcome was defined as “cancelled” or “missed appointments” in a system where dental care is free for adolescents and with a recall system in which appointment booking is initiated by the dental care provider. For the outcome defined as “dental non-attendance” (including non-utilization), a variety of manifestations of non-regular dental care were allowed (Table 2). Seven studies from Sweden (n=2) and Norway (n=5), countries where dental care is free for children and adolescents, investigated factors associated with the outcome dental avoidance. The other 14 studies were from different parts of the world, with different dental care systems, and investigated dental non-attendance (Table 2).
Table 2. Overview of manifestations classified as dental avoidance or dental non-attendance. Extractions made from the 21 articles included in the integrative review

<table>
<thead>
<tr>
<th>Author, year</th>
<th>Country</th>
<th>Type of manifestations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental avoidance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skaret et al. 1998&lt;sup&gt;84&lt;/sup&gt;, 1999&lt;sup&gt;148&lt;/sup&gt;, 2000&lt;sup&gt;87&lt;/sup&gt;</td>
<td>Norway</td>
<td>Missed and cancelled dental appointments</td>
</tr>
<tr>
<td>Vika et al. 2006&lt;sup&gt;91&lt;/sup&gt;</td>
<td>Norway</td>
<td>&lt;40% probability of being willing to proceed with treatment if an injection was needed</td>
</tr>
<tr>
<td>Skaret et al. 2007&lt;sup&gt;90&lt;/sup&gt;</td>
<td>Norway</td>
<td>No likelihood of going to the dentist in a situation with toothache</td>
</tr>
<tr>
<td>Gustafsson et al. 2010&lt;sup&gt;44&lt;/sup&gt;</td>
<td>Sweden</td>
<td>Missed and cancelled dental appointments</td>
</tr>
<tr>
<td>Ostberg et al. 2010&lt;sup&gt;51&lt;/sup&gt;</td>
<td>Sweden</td>
<td>Missed dental appointments</td>
</tr>
<tr>
<td>Dental non-attendance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honkala et al. 1997&lt;sup&gt;138&lt;/sup&gt;</td>
<td>Finland</td>
<td>No dental visits during the last 2 years</td>
</tr>
<tr>
<td>Macgregor et al. 1997&lt;sup&gt;152&lt;/sup&gt;</td>
<td>United Kingdom</td>
<td>No dental visits</td>
</tr>
<tr>
<td>Vignarajah 1997&lt;sup&gt;151&lt;/sup&gt;</td>
<td>Antigua, West Indies</td>
<td>Occasional visits, only visits where there is a dental problem, never been to a dentist</td>
</tr>
<tr>
<td>Zimmer-Gembeck et al. 1997&lt;sup&gt;143&lt;/sup&gt;</td>
<td>US</td>
<td>No visits to the dentist in the past 2 years</td>
</tr>
<tr>
<td>Freire et al. 2001&lt;sup&gt;147&lt;/sup&gt;</td>
<td>Brazil</td>
<td>Going to the dentist mainly when having a problem</td>
</tr>
<tr>
<td>Yu et al. 2001&lt;sup&gt;142&lt;/sup&gt;</td>
<td>US</td>
<td>Last dental examination more than 2 years ago, never had a dental examination</td>
</tr>
<tr>
<td>Scott et al. 2002&lt;sup&gt;150&lt;/sup&gt;</td>
<td>Canada</td>
<td>No visits in the last year</td>
</tr>
<tr>
<td>Okullo et al. 2004&lt;sup&gt;41&lt;/sup&gt;</td>
<td>Uganda</td>
<td>Not receiving dental care in the past 2 years</td>
</tr>
<tr>
<td>Levin et al. 2007&lt;sup&gt;89&lt;/sup&gt;</td>
<td>Israel</td>
<td>Only occasional visits, do not visit a dental clinic at all</td>
</tr>
<tr>
<td>Lopez &amp; Baelum 2007&lt;sup&gt;29&lt;/sup&gt;</td>
<td>Chile</td>
<td>Never seen a dentist</td>
</tr>
<tr>
<td>Vinglis et al. 2007&lt;sup&gt;145&lt;/sup&gt;</td>
<td>Canada</td>
<td>No dental visits over the past 12 months</td>
</tr>
<tr>
<td>Lu et al. 2011&lt;sup&gt;148&lt;/sup&gt;</td>
<td>China</td>
<td>Not having a dental visit at the age of 12-15 years, not having a dental visit at the age of 15-18 years</td>
</tr>
<tr>
<td>Mak &amp; Day 2011&lt;sup&gt;140&lt;/sup&gt;</td>
<td>China</td>
<td>Not visiting the dentist in more than 12 months</td>
</tr>
<tr>
<td>Davoglio et al. 2013&lt;sup&gt;146&lt;/sup&gt;</td>
<td>Brazil</td>
<td>Not going to dental services</td>
</tr>
</tbody>
</table>
Background and concomitant factors associated with dental avoidance or non-attendance (Paper I)

Factors associated with the outcomes dental avoidance or non-attendance were categorized into three common themes: Environmental factors (socio-demographic status, SES, cultural background, and societal factors); Individual factors covering four categories (psychosocial factors, personal characteristics, attitudes, and lifestyle factors); and Situational factors formed by dental and medical experiences and history of attendance (Table 3).

Table 3. Overview of themes, categories and factor codes related to factors identified in the reviewed articles as associated with the outcomes dental avoidance or dental non-attendance

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Factor code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental factors</td>
<td>Sociodemographic status</td>
<td>Gender</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Age</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Language</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily living</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>Family socioeconomic status</td>
<td>Insurance status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Education expenses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Individual occupation</td>
</tr>
<tr>
<td>Cultural background</td>
<td>Ethnicity</td>
<td>Community</td>
</tr>
<tr>
<td></td>
<td>Religion</td>
<td>Access to and availability of dental care</td>
</tr>
<tr>
<td>Societal factors</td>
<td>Community</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to and availability of dental care</td>
<td></td>
</tr>
<tr>
<td>Individual factors</td>
<td>Psychosocial factors</td>
<td>Social interaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-efficacy, sense of coherence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal professional support</td>
</tr>
<tr>
<td>Personal characteristics</td>
<td>Fear/anxiety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Temperament</td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>Negative attitudes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Priorities</td>
<td></td>
</tr>
<tr>
<td>Lifestyle factors</td>
<td>Oral health habits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tobacco use</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alcohol use</td>
<td>BMI</td>
</tr>
<tr>
<td>Situational factors</td>
<td>Dental and medical experiences</td>
<td>Oral health status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pain</td>
</tr>
<tr>
<td>History of attendance</td>
<td>Family dental attendance patterns</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Individual dental attendance patterns</td>
<td></td>
</tr>
</tbody>
</table>

BMI=body mass index.
Gender, age and DF emerged as three main factors associated with the outcomes dental avoidance and non-attendance. Gender was evaluated in nine studies, four of which investigated dental avoidance while five investigated non-attendance. Age, a second factor associated with both outcomes, was investigated in nine studies, six in relation to missed and cancelled dental appointments (avoidance). Dental fear was investigated in six studies showing that high dental anxiety was associated with dental avoidance (three studies) as well as non-attendance.

The following presentation of the results will be structured based on themes and, within the themes, factors associated with both outcomes, avoidance specifically and non-attendance exclusively.

**Environmental factors**

Being a boy was repeatedly associated with dental avoidance as well as non-attendance. Moreover, both missed or cancelled dental appointments (avoidance) and non-regular dental visits (non-attendance) were found to increase with increasing age.

Further, daily living (i.e. living in a single-parent family, living with unmarried parents, having siblings), low family SES, low parental education, unemployed parents and individual occupation (i.e. occupation not specified, working, school involvement) were factors associated with both outcomes.

Missed/cancelled dental appointments (avoidance) in Norwegian studies as well as non-regular dental visits (non-attendance) in the US were more common among adolescents in rural areas; by contrast, a Swedish and an Ugandan study reported that no plan for future regular dental visits (avoidance) and non-regular dental visits (non-attendance), respectively, were more common among adolescents in urban areas.

Factors such as language spoken at home (not speaking English in the US), insurance status (being uninsured), education expenses, ethnicity (being non-White, being foreign-born) and religion were investigated only in studies concerning the outcome dental non-attendance.

**Individual factors**

Within individual factors, DF/dental anxiety was found to contribute to dental avoidance and less frequent dental visits (non-attendance). Poor oral health habits and tobacco use were
also associated with both outcomes. Other lifestyle factors, i.e. alcohol consumption and body mass index (BMI)\textsuperscript{145}, were only investigated in association with non-attendance.

Dental avoidance was found to be more common among adolescents with negative attitudes to dentists\textsuperscript{87, 90} and those who did not prioritize going for dental care\textsuperscript{51, 87}. Furthermore, adolescents with dental avoidance had experiences of personal professional support (i.e. from a school psychologist, social worker or other psychosocial professional)\textsuperscript{144} and higher scores on two temperamental dimensions, namely self-rated sociability and parent-rated impulsivity\textsuperscript{144}.

Psychosocial factors such as low sense of coherence\textsuperscript{147}, and poor self-esteem\textsuperscript{146, 152} and social interaction (high level of social support, involvement in fights)\textsuperscript{145} were found to be associated with non-attendance.

**Situational factors**

Poor oral health status was more frequent among adolescents with dental avoidance behaviour and those with lower rates of dental utilization (non-attendance)\textsuperscript{87, 94, 139, 145, 149}.

A higher frequency of missed or cancelled dental appointments (avoidance) was found among those with unfinished dental treatment at age 18 years\textsuperscript{87, 94, 149} and among those who experienced dental pain\textsuperscript{91, 149}.

Studies investigating non-attendance reported positive associations with a history of a non-regularly attending family\textsuperscript{150} and individual non-regular attendance pattern\textsuperscript{148}.

**Dental fear among children and adolescents with a Swedish vs. non-Swedish background (Paper II)**

Among children and adolescents who participated in the study in Paper II, 187 (62\%) had a non-Swedish background and 114 (38\%) had a Swedish background, according to the SCB definition\textsuperscript{153}. The group with a non-Swedish background consisted of 102 foreign-born individuals and 85 Swedish-born individuals with foreign-born parents. The Swedish background group included 101 Swedish-born children/adolescents with Swedish-born parents and 13 Swedish-born children or adolescents with one foreign-born parent. A total of 172 boys (108 with a non-Swedish and 64 with a Swedish background) and 129 girls (79 with a non-Swedish and 50 with a Swedish background) participated in the study.
Socio-economic status scores were significantly lower in the group with a non-Swedish background compared with those with a Swedish background (23.9 vs. 33.6; p<0.001). Applying the SES categories, 64.5% (n=191) had “low” SES while 16.9% (n=50) had “average” and 18.6% (n=55) had “high” SES. The distributions across SES categories differed significantly between the group with a non-Swedish background (76.5%, 13.1%, and 10.4%, respectively; p<0.001) and the group with a Swedish background (45.1%, 23.0%, and 31.9%, respectively; p<0.001), with the majority of participants reporting low SES belonging to the non-Swedish background group.

Regarding DF, the overall mean (SD) CFSS–DS score was 23.8 (7.5), median 22 (interquartile range (IQR) 18–38, total range 15–53), for the whole study group of children and adolescents (Table 4). The mean scores were similar between the two groups (23.9 and 23.7, respectively, for children and adolescents with a non-Swedish vs. Swedish background) (Table 4).

Overall, girls had significantly higher CFSS–DS scores compared with boys (p=0.001) (Table 4). The gender differences were clear and statistically significant (p-values 0.013–0.028) also when separated by group (non-Swedish and Swedish) (Table 4). Differences between the age groups were not significant.

Table 4. Dental fear given as Children’s Fear Survey Schedule – Dental Subscale (CFSS-DS) sum score means and medians and frequency distributions, with cut-off scores ≥32 and ≥38, by background and gender and age

<table>
<thead>
<tr>
<th>CFSS–DS sum score</th>
<th>All</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Swedish background</td>
<td>187</td>
<td>23.9</td>
<td>6.9</td>
<td>23.0</td>
<td></td>
</tr>
<tr>
<td>Swedish background</td>
<td>114</td>
<td>23.7</td>
<td>8.4</td>
<td>21.0</td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>172</td>
<td>22.5</td>
<td>7.0</td>
<td>21.0</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>129</td>
<td>25.5</td>
<td>7.7</td>
<td>24.0</td>
<td></td>
</tr>
<tr>
<td>8–12 yrs</td>
<td>98</td>
<td>24.8</td>
<td>7.1</td>
<td>24.0</td>
<td></td>
</tr>
<tr>
<td>13–16 yrs</td>
<td>106</td>
<td>24.3</td>
<td>8.5</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>17–19 yrs</td>
<td>107</td>
<td>22.5</td>
<td>6.7</td>
<td>21.0</td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>301</td>
<td>23.8</td>
<td>7.5</td>
<td>22.0</td>
<td></td>
</tr>
</tbody>
</table>

CFSS-DS=Children’s Fear Survey Schedule – Dental Subscale; SD=standard deviation
Logistic regression analyses in four steps were performed using a separate model per step. The first two models including background group (non-Swedish vs. Swedish) and the addition of gender revealed no impact on DF from those variables. In the third step, age was added, showing increased DF with younger age. The fourth step included SES, and showed an association, although non-significant, between SES and DF. Socio-economic status turned out to be the only variable causing a change in the odds ratio (OR) estimate for background (decreased from 0.96 in Model 1 to 0.71 in Model 4), further strengthening the picture of no increased risk for DF in the group with a non-Swedish background. With both background group (non-Swedish vs. Swedish) and background variables (gender, age, SES) taken into account, the only consistent “predictor” of DF was younger age.

**Missed dental appointments among adolescents (Paper III)**

In 2012, a total of 23,522 dental appointments were booked for 10,158 adolescents (16–19-year-olds) at 23 PDCs in the county. Of these booked dental appointments, 13.1% were missed, with a significantly higher proportion of missed appointments among boys than among girls (14.6% vs. 11.4%; \(p<0.001\)). Missed appointments varied by age, between 12.7% and 13.5% (not significant), and ranged from 9.6% to 19.1% for the 23 PDCs. The mean number of booked appointments per individual was 2.3 (range 1–24). Among those with at least one missed appointment, the mean number of missed appointments was 1.4 (range 1–11). Altogether 21.3% (n=2162) of the adolescents (23.4% of the boys and 18.9% of the girls; \(p<0.001\)) had missed at least one dental appointment during 2012. When divided by age, the proportions of adolescents with missed appointments were similar. The proportions of adolescents with missed dental appointments per clinic varied between 5.3% and 11.7%.

**Differences between cases and controls – findings from the dental records**

In this part of the study reported in Paper III, 522 case–control pairs were included, 215 (41.2%) pairs of girls and 307 (58.8%) pairs of boys. Altogether, 219 (42.0%) case–control pairs were born in 1993, 112 (21.5%) in 1994, 92 (17.6%) in 1995, and 99 (19.0%) in 1996. In total, 262 (50.2%) case–control pairs came from PDCs located in the urban area, 167 (32.0%) came from PDCs located in small towns, and 93 (17.8%) came from clinics located in rural areas of the county. Based on the sociodemographic areas the PDCs were located in, in 2012 a total of 201 (38.5%) case–control pairs
had their bookings at clinics located in areas with low SES, while 321 (61.5%) pairs had bookings at clinics in areas with average/high SES.

Adolescents identified as cases had a significantly higher number of dental visits, as well as cancelled dental appointments, than adolescents identified as controls, during 2012. The mean number of missed dental appointments in 2012 among cases was 1.5 (SD 0.94).

The dental records revealed that the proportion of adolescents with a record of sociodemographic load was almost five times higher among cases than among controls (7.1% vs. 1.5%; p<0.001) (Table 5). Dental fear and/or DBMPs were recorded significantly more often for cases, as was use of tobacco. Cases also had more oral health problems (i.e. more caries disease and gingivitis) and more emergency visits, tooth extractions, and operative treatments compared with controls.

As in 2012, the mean number of dental visits during the period 2009–2011 was higher for the cases and the cases also had a higher mean number of previous missed and cancelled appointments compared with controls.

In the case group, serious avoiders had a significantly higher number of dental visits, as well as missed and cancelled dental appointments, compared with adolescents identified as moderate avoiders (Table 5).

Comparisons between the subgroups of serious and moderate avoiders revealed that a recorded history of DF/DBMPs, tobacco use, caries disease, emergency visits and operative treatment was significantly higher for the group of serious avoiders than for moderate avoiders (Table 5).
Table 5. Findings from the dental records, grouped into environmental/medical, individual/lifestyle, and situational factors and reported by group (cases vs. controls) and case subgroups (serious vs. moderate avoiders).

<table>
<thead>
<tr>
<th></th>
<th>Controls (valid N=517–522)</th>
<th>Cases (valid N=517–522)</th>
<th>Cases vs. controls</th>
<th>Serious avoiders (valid N=230–232)</th>
<th>Moderate avoiders (valid N=282–290)</th>
<th>Serious vs. moderate avoiders</th>
<th>Serious vs. moderate avoiders vs. controls</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental/medical factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociodemographic load</td>
<td>8</td>
<td>1.5</td>
<td>37</td>
<td>7.1</td>
<td>21</td>
<td>9.1</td>
<td>16</td>
</tr>
<tr>
<td>Medical load</td>
<td>155</td>
<td>29.7</td>
<td>166</td>
<td>31.9</td>
<td>82</td>
<td>35.3</td>
<td>84</td>
</tr>
<tr>
<td><strong>Individual/lifestyle factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DF/DBMPs</td>
<td>34</td>
<td>6.5</td>
<td>75</td>
<td>14.4</td>
<td>48</td>
<td>20.7</td>
<td>27</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>85</td>
<td>16.3</td>
<td>138</td>
<td>26.5</td>
<td>73</td>
<td>31.5</td>
<td>65</td>
</tr>
<tr>
<td><strong>Situational factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caries disease</td>
<td>245</td>
<td>46.9</td>
<td>327</td>
<td>63.0</td>
<td>161</td>
<td>69.4</td>
<td>166</td>
</tr>
<tr>
<td>Gingivitis</td>
<td>142</td>
<td>27.2</td>
<td>249</td>
<td>48.1</td>
<td>116</td>
<td>50.2</td>
<td>133</td>
</tr>
<tr>
<td>Treatments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency visits</td>
<td>130</td>
<td>25.1</td>
<td>159</td>
<td>31.1</td>
<td>83</td>
<td>36.1</td>
<td>76</td>
</tr>
<tr>
<td>Extractions</td>
<td>46</td>
<td>8.8</td>
<td>70</td>
<td>13.5</td>
<td>37</td>
<td>16.0</td>
<td>33</td>
</tr>
<tr>
<td>Operative treatment</td>
<td>239</td>
<td>45.9</td>
<td>307</td>
<td>59.4</td>
<td>151</td>
<td>65.4</td>
<td>156</td>
</tr>
<tr>
<td><strong>Dental avoidance</strong></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Number of previous dental visits</td>
<td>7.2</td>
<td>7.21</td>
<td>9.0</td>
<td>7.79</td>
<td>11.4</td>
<td>8.77</td>
<td>7.2</td>
</tr>
<tr>
<td>Number of previous missed dental appointments</td>
<td>0.4</td>
<td>0.88</td>
<td>1.8</td>
<td>2.47</td>
<td>2.3</td>
<td>2.86</td>
<td>1.3</td>
</tr>
<tr>
<td>Number of previous cancelled dental appointments</td>
<td>1.7</td>
<td>2.34</td>
<td>2.9</td>
<td>3.66</td>
<td>4.2</td>
<td>4.38</td>
<td>1.9</td>
</tr>
</tbody>
</table>

DF=dental fear; DBMP=dental behavior management problem; SD=standard deviation
Variables with significant differences between cases and controls in the bivariate analyses were included in logistic regression analyses. In the first step with separate models per each of five variable groups, the only included variables without discriminatory capacity between the cases and controls were emergency visits and previous dental visits. When sequentially adding groups of variables to each other, starting with environmental/medical factors and individual/lifestyle factors (DF/DBMPs, tobacco use) (Model 2) and then situational factors (oral health) (Model 3), all of the variables were stable as discriminators between the cases and controls. In the fourth step, the treatment variables were added, showing no impact on dental avoidance (i.e. for the cases); all other variables remained as stable discriminators. In the fifth step, when the history of dental visits and missed and cancelled appointments was entered into the model, the impact of DF/DBMPs, tobacco use, caries disease, treatment variables, and previous dental visits was no longer significant. The final (forward stepwise) analysis showed that sociodemographic load, poor oral health, and previous signs of dental avoidance were stable discriminators between the cases and controls, all other available aspects taken into account.

**Triggers for deciding to meet or miss dental appointments (Paper IV)**

The participants in this study, adolescent girls, described their experiences of and views about dental care. They expressed several conditions that could hinder or facilitate their dental visits. They pointed out the importance of dental care as well as the importance of knowing what will happen at the dental clinic. Yet they expressed ambivalent feelings about their responsibility to go to the dental visits. All these experiences could be formulated into the theme “Triggers for adolescent girls to take on or not take on adult responsibility for dental care”. The theme included five categories consisting of 15 subcategories (Table 6).
“Pain and discomfort” emerged as one category. The participants stated that they were not afraid of the dentist. Yet being at the dental clinic was often described as an unpleasant experience. They also described feelings of pain when having X-rays or being treated by a dentist who is rough. Negative dental experiences such as getting local anaesthesia and having had operative dental treatment in the past made them unsure whether or not they would go for dental care in the future. Negative peer influences such as frightening each other and talking negatively about dental personnel could sometimes make the participants more afraid than they were before talking to their peers.

Another category, named “Attractive and healthy teeth”, described an awareness that oral health could have an effect on health in general and that good oral health was a prerequisite to feeling good. Going to the dental clinic was a way for the participants to get an update about their oral health status. They wanted to keep their teeth healthy even in the distant future, when they got old. Moreover, the appearance of healthy, white and clean teeth was of highest concern when participating in social interaction.

A third category was labelled “Feeling safe and secure”. The participants frequently expressed the importance of knowing what would happen during the dental visit, both during the present visit and during the next visit, in
order to feel safe and secure. They also preferred to be treated by the same dental personnel so that they would know what to expect. Being treated by dental personnel who were friendly and who would let the participants be involved in their dental treatment was described as important. Other aspects such as having a parent or a friend who could accompany the participants to the dental clinic were appreciated as this made them feel more safe and relaxed. Sometimes the participants cancelled their dental appointments because they were afraid of being criticized by dental personnel for not taking care of their oral health. They also felt exposed and vulnerable when having dental personnel, sometimes “total strangers”, hanging over their faces.

“Taking on the responsibility” for making and attending appointments was a category under which varying degrees of independence and maturity of the participants were summarized. Sometimes the participants described themselves as responsible for their dental visits and contacts with dental care. Others stated that their parents should still be responsible for their dental care and that the dental clinic should always contact their parents. The participants also described difficulties remembering the appointment time. Usually their parents reminded them of their dental visits, and they also got short message service (SMS) text reminders from the dental clinic. Despite these reminders, the participants did not always prioritize their dental visits. Working, going to school, going to the doctor, or being with friends sometimes had higher priority than going to the dental clinic. For those who did tend to go to their dental visits, difficulties with transportation to the dental clinic were sometimes seen as a barrier to accessing dental care. Another difficulty was getting in contact with the dental clinic to reschedule a dental appointment.

Finally, a category described as “Free of charge” showed that the participants appreciated the fact that dental care for all children and adolescents in Sweden is free. They believed that because dental care is free more adolescents attend their booked dental appointments than would be the case if they had to pay for the visit. Moreover, free dental care also made it possible for the participants to maintain regular dental visits and seek help when they had problems with their teeth. However, the participants were doubtful whether they would go to their dental appointments once the visits were no longer free of charge.
DISCUSSION

Main findings and reflections

The overall aim of this doctoral thesis was to explore potential explanatory factors associated with non-regular dental care and to seek a deeper understanding of why some adolescents fail to attend their dental appointments. Four studies were carried out.

The main findings are listed below:

• Partly different sets of factors were found for the different outcomes, with focus on individual and situational factors for the outcome dental avoidance, and environmental and individual factors for the outcome dental non-attendance (Paper I).
• There were no differences in self-rated dental fear between children/adolescents with a non-Swedish and a Swedish background (Paper II).
• Missed dental appointments were found to be more common among boys than among girls (Papers I, III).
• The relationship between age and dental avoidance reported in the integrative review (Paper I) could not be confirmed in the case-control study (Paper III).
• Sociodemographic factors (Papers I, III), dental fear and dental behaviour management problems (Papers I, III, IV), poor oral health status (Papers I, III), dental treatment experiences (Papers I, III) and a history of missed and cancelled appointments (Papers I, III) were found to be associated with dental avoidance.
• A history of missed and cancelled dental appointments predicted future missed and cancelled appointments (Paper III).
• The adolescent girls described potential barriers or facilitators to accessing dental care that were summarized in five categories: Pain and discomfort; Attractive and healthy teeth; Feeling safe and secure; Taking on the responsibility; and Free of charge (Paper IV).
• Knowing what would happen at the dental clinic determined whether or not the interviewed girls attended their dental appointments (Paper IV).
Even though the main focus of this thesis was on dental avoidance, all four studies had different expressions of fear in common. For instance, in a multicultural population investigated in Paper II, no differences in DF were found between children and adolescents with a non-Swedish background and children and adolescents with a Swedish background. In Paper I, DF/dental anxiety was found to be associated with both outcomes defined as dental avoidance or non-attendance. Based on the dental records reported in Paper III, DF or DBMPs were shown to be more documented in adolescents with avoidance behaviours. Dental fear was not directly expressed in Paper IV, but the participating girls expressed different kinds of fear. These expressions could be described as fear based on not knowing what will happen at the dental clinic, fear of not meeting the same dental personnel, fear of pain, and fear of not having attractive and white teeth.

Partly different sets of factors associated with dental avoidance or non-attendance (Paper I)

Although this integrative review contributed to an overview of factors associated with the outcomes dental avoidance or non-attendance, we also found that studies conducted in a context of free dental care for children and adolescents are rare.

We also found partly different sets of factors for the different outcomes, with focus on individual (psychosocial and psychological factors, personal characteristics, attitudes, and lifestyle factors) and situational (dental and medical experiences, history of attendance) factors for the outcome dental avoidance. For the outcome dental non-attendance, the focus was on environmental (sociodemographic status, SES, cultural background, and societal factors) and individual factors. It can be assumed that financial barriers may prevent individuals from attending their dental appointments, which may be one possible explanation why environmental factors were more investigated in countries where dental care for children and adolescents is not free of charge. The studies conducted in the Scandinavian countries, where adolescents do not need to be concerned about the costs for their dental visits, revealed low prioritizing of dental care visits and negative attitudes towards dental personnel as barriers to accessing dental care51, 90. One possible explanation for why some adolescents do not prioritize going to their dental visits may be a short perspective on future oral health as many adolescents in Scandinavia have low caries experience154 and they perceive their oral health as good8.
In this review, some of the factors (language spoken at home, ethnicity, and religion) were investigated only in relation to the outcome non-attendance, and in countries and cultures where the dental care system is different from the Swedish system where care is easily available and free of charge for children and adolescents. Against the backdrop of Sweden today being a multicultural country with a growing proportion of inhabitants from non-Swedish backgrounds who may be unfamiliar with the Swedish dental care system, the question emerges whether these factors may have an impact on dental avoidance also in Swedish dental care.

No differences in dental fear among children and adolescents with a Swedish vs. a non-Swedish background (Paper II)

In this study, the mean overall sum scores for the CFSS–DS were well in agreement with normal values reported in a Swedish population and previous studies. During the work on this thesis, two studies were published regarding occurrence and severity of DF and changes in DF over a 2-year period in children with a non-Swedish background compared with children with a Swedish background. The results from the first study showed higher DF among 7-year-olds with a non-Swedish background compared with their Swedish peers, which was inconsistent with our findings. However, our results, revealing no differences in DF between these two groups, were similar to the results of Dahlander et al.’s longitudinal study. Unfortunately, due to differences in study populations regarding age and birth country of the participants (and their parents), and measures (parental ratings vs. self-ratings), these two studies may not be fully comparable to each other.

Previous studies have reported differences in DF between children with a foreign background and children with a native background. In an earlier Swedish study, Mejàre & Mjönes found that DF was more common in Turkish children born in Sweden than in either Swedish children born in Sweden or Turkish children born in Turkey. Findings from the Netherlands revealed that DF was more pronounced in a subgroup of children with a non-Western European background compared with Western European children. Further, Fuks et al. reported that children of Arabic origin were more dentally anxious than children of American or European origin.
The importance of a history of missed and cancelled appointments (Paper III)

The study reported in Paper III revealed that 21.3% of all adolescents (23.4% of boys and 18.9% of girls) had missed at least one dental appointment during 2012.

The finding that boys were more likely to miss their dental appointments is in concordance with other studies. Poor oral health has been shown to be more common among boys and is also a factor associated with dental avoidance.

No association between age and dental avoidance was found in the present study, contradicting the results of a Norwegian study by Skaret et al. This may be explained by the fact that our study included a narrower age span and that the assessments were based on 1 year, 2012, while the Norwegian study investigated missed/cancelled dental appointments across the age span of 12–18 years.

Dental avoidance was shown to be more common among adolescents with a record of sociodemographic load, which is consistent with previous findings. For example, one Swedish study revealed that dental avoidance among adolescents referred to specialized paediatric dentistry because of DBMPs was more common when living with a single parent. Further, studies from Norway reported that missed/cancelled dental appointments were more common among adolescents who had no specified occupation.

The impact of DF on missed dental appointments has also been shown in a recent Norwegian study which revealed that missed dental appointments due to DF were 3.4 times higher among adolescents with high levels of DF than among non-anxious adolescents. However, in our study, the effect of DF/DBMPs as discriminator for avoidance behaviour in cases became clear during the first four steps of the logistic regression analysis, although a decrease in OR was observed when other groups of factors with potential impact were sequentially entered. An interesting finding was made in the fifth step, when the history of dental visits and missed and cancelled appointments was entered into the model and the impact of DF/DBMPs was no longer significant. In fact, signs of previous dental avoidance, by itself accounting for 21% of the explained variance (first model), and being a significant part of the final model, explaining 3 additional percentage points of the variance, emerged as the most prominent discriminator. Consequently, although the model appears to offer only modest explanatory
value, we consider it an important finding that a history of missed and cancelled dental appointments predicted future missed and cancelled appointments.

The ambiguous will to take on adult responsibility for dental care (Paper IV)

The results from Paper III indicate a need for further research on barriers and, at least as importantly, facilitators to adolescents’ use of dental care in Sweden, which question is presented in Paper IV.

The findings of this study give an insight into some of the barriers and facilitators to regular dental care. Despite the fact that participants had missed dental appointments in the past, they still expressed the importance of dental care. Yet they prioritized going to doctor, going to school, working, and being with friends over attending their dental appointments, which was also found in other studies conducted in Scandinavian countries51, 87.

During the interviews, the adolescent girls expressed that negative dental experiences (e.g. being treated roughly by the dentist and having sharp dental instruments put in the mouth) made them unsure whether they would go to their dental visits in the future. It is well known that negative dental experiences during childhood can affect dental visits later in life since painful and unpleasant dental experiences can develop into DF87, 89, 90 and, in turn, lead to non-regular dental attendance14, 91. Other aspects described as barriers to dental visits were seeing dental personnel as strangers, as well as having to keep the mouth open for a long time because it made the participants feel vulnerable and exposed.

For the girls in our study, the appearance of healthy, white and clean teeth was of highest concern when participating in social interaction. Similar findings were reported in a Swedish study by Östberg et al.8 showing that the appearance of the teeth was the highest concern for boys and girls and the greatest motivation for taking care of the teeth. These results are not surprising because adolescents are constantly exposed to media images of ideal beauty160.

The ambiguity surrounding who is responsible for the adolescents’ dental visits was an interesting finding. Some participants stated that their parents were responsible for taking them to the dentist while others said that going to the dentist was their own responsibility. No matter whose responsibility the dental visits were, the study participants still wanted their parents to
have contact with the dental clinic on their behalf. The degree of responsibility for their own dental care may depend on adolescents’ developmental stage during the transition period between adolescence and adulthood. What we need to keep in mind is that adolescents’ autonomy is not the same as their independence from their parents. The ability of individuals to make their own decisions and manage on their own improves greatly during adolescence. Additionally, when children enter adolescence, their parents are still largely responsible for all aspects of their health. By the time these individuals reach the end of adolescence, they have sole responsibility for their health.

During the interviews, the participants frequently stated that knowing what will happen at the dental clinic was the most important aspect affecting whether they would go to the dental clinic. A feeling of safety when visiting the dental clinic could be facilitated in several ways. For instance, according to the girls, continuity in seeing the same dental personnel was important in helping them develop trust and feel secure during the visit to the dentist. The participants also described that having a parent or friend accompany them to the dental clinic had a positive impact on their dental visits.

What facilitated or hindered participants in Paper IV from attending their dental appointments may be illustrated by aspects of Self-Determination Theory (SDT). According to SDT, we have innate psychological needs that are the basis for self-motivation, and we tend to seek situations that satisfy our needs. One of these innate needs is the need to feel competent and several participants in the present study expressed that it was important for them to feel prepared and competent about what would happen at the dental clinic. Dental personnel who allow their patients to be involved in their own dental treatment may contribute to increased perceived competence and feelings of capability to handle a potentially unpleasant dental visit.

In the study reported in Paper IV, another factor that facilitated regular dental attendance was having continuity of care, which helped many of the participants go back to the dental clinic. This aspect could be seen as an example of relatedness, which is another of the needs described by SDT. The third need identified by SDT is autonomy and, as described above, the need to feel agency and to do things that are coherent with one’s own values is a theme that emerged in the interviews. The wish to take on increasing responsibility for one’s own dental health can be understood as a need for autonomy.
Although we cannot validate SDT as we are not testing this theory in this thesis, it may help us to create an SDT-based intervention that can help adolescents to attend their dental appointments by focusing on their psychological as well as dental needs.

**Methodological considerations**

Most knowledge on non-regular dental care among both children and adolescents relies on quantitative research methods. The studies included in this thesis had different designs, and included both quantitative and qualitative approaches. The combination of these research methods may be considered a strength of this thesis. Both quantitative and qualitative research methods have their strengths and limitations. However, a combination of the research methods\textsuperscript{163, 164} may give a broader picture of adolescents’ barriers to accessing dental care.

**Paper I**

The integrative review method was used in Paper I, allowing us to identify factors associated with the outcomes of dental avoidance and non-attendance.

A possible limitation could be the difficulty that emerged when separating the outcomes dental avoidance, dental non-attendance and dental non-utilization in the literature. The distinctions between the outcomes were not always clear. However, the decision was made that dental avoidance should be defined as an individual’s choice to not attend dental care in a context where this care is available free of charge. In the literature, dental non-attendance and non-utilization were inseparable and were therefore combined to describe all forms of non-regular dental care. For a clearer picture, an overview of manifestations classified as dental avoidance or dental non-attendance is presented in Table 2.

Another possible limitation was the inclusion only of studies of 13–19-year-olds. However, when analysing and evaluating the data the decision was made to encompass a wider age span if the information on the chosen 13–19 age range was identified and reported in the articles. Differences in lifestyles, maturity and priorities between younger and older adolescents within the 13–19 age group may well have an impact, resulting in different factors associated with dental avoidance at different ages.

One strength of the integrative review is that it allowed us to combine studies with different designs, which may have contributed to a broader
knowledge of the phenomenon we wanted to study. A second strength is that, despite the differences regarding organization, accessibility, availability and costs of dental health care, as well as classifications of SES and parental educational level, this approach allowed us to identify factors associated with dental avoidance or non-attendance/non-utilization. A further strength was the way in which the critical appraisal of the articles was carried out, since all three authors independently reviewed, evaluated and discussed the articles until consensus was reached, which increased the trustworthiness of the study.

Paper II
The CFSS-DS was used in Paper II to measure DF among children and adolescents. Previous studies have shown that the CFSS–DS, although regarded as mainly one-dimensional, may cover subscales to allow fear of highly invasive procedures to be separated from other, more non-specific fears\(^77, 82, 165\). Consequently, using only the sum score, i.e. using the CFSS–DS as a one-dimensional construct, may underestimate specific fears of injections, for example, or of other invasive treatment steps.

The use of self-ratings instead of parental ratings of the CFSS–DS can be seen as a strength. A previous study by Luoto et al.\(^166\) showed that parents had poor knowledge of, and could not evaluate, their children’s DF. Parental ratings have also been questioned by Gustafsson et al.\(^124\), who showed poor agreement between parental ratings and children’s self-ratings.

Low SES was common in the whole sample and particularly in the non-Swedish group, where >75% of participants were characterized by low SES. This relatively limited variation may be a shortcoming. Therefore, evaluation of the possible impact of SES on DF should benefit from including a wider range of SES.

Paper III
One strength of Paper III was the use of lists of booked and missed appointments that were extracted from the database and reported to the first author (A.F.) by a controller, since most previous studies are based on self-reports on dental visits.

The study was based on dental records, which routinely document factors such as oral health status, emergency visits, invasive dental treatments (extractions and operative treatment) and previous dental visits, as well as history of missed and cancelled dental appointments. However, despite the fact that we used the data from the dental records, possible incompleteness of,
and uncertainty in, this type of routine dental records may hamper the validity of the data. Potential discriminatory variables may be underreported, in particular for adolescents with an uncomplicated attendance pattern. There is a risk that dental personnel may not be consistent in registering conditions such as sociodemographic load or DF/DBMPs, and may in fact be unaware of them unless patients openly show DF or some other kind of problem during dental visits.

All data from the dental records were extracted only once, and anonymously. A note was made in each of the reviewed dental records to avoid double documentation. None of the extracted data could be tracked to specific individuals included in the study because no lists were kept of the dental records that had been examined. For this reason, no intra-examiner reliability assessments were conducted.

The large sample size and the randomization of cases and controls may also be seen as a strength since this resulted in a representative sample distribution across all 23 PDCs in the county. The 23 PDCs represent different living areas, i.e. urban, small town, and rural, and areas with low and moderate/high SES, which further strengthens the study.

**Paper IV**

The trustworthiness of the study reported in Paper IV has been outlined in the article, and will therefore be discussed only briefly in the following. To ensure trustworthiness of this study, trustworthiness criteria such as transferability, credibility, dependability and confirmability were used. One aspect of credibility is to include participants who have experienced the phenomenon under study and who can talk about it. Purposive sampling was conducted to achieve diversity of participant age and gender and PDC location in areas with different sociodemographic profiles, and thus obtain broad data. Further, we have explained and described the selection of the participants, data collection and analysis in detail, allowing readers to determine whether our results are transferable to other contexts. To ensure the dependability of the study, we used semi-structured interviews and described the questions in the interview guide. What may be worth mentioning is that the first author (A.F.) carried out the interviews. Thus, her background as a registered dental hygienist with a pre-understanding of free dental care for children and adolescents may have had an impact on the interviews and data analysis. However, the first author (A.F.) tried to put the pre-understanding aside by being as objective as possible in order to analyse and interpret the results as transparently as possible. To increase the study’s
dependability, the analysis was performed together with one of the co-authors (E.C.), who is a registered nurse. The other co-authors, K.A., who is a dentist and specialist in paediatric dentistry, and J.L., who is a psychologist, had a validating role throughout the analysis process by discussing each category and subcategory, as well as the main theme, to reach consensus. Further, two independent researchers reviewed the study design, analysis and findings, which is important in terms of confirmability.

The study findings in Paper IV have provided some insight into how adolescent girls with low rates of missed dental appointments experience dental care. Our intention was to interview girls and boys aged 16–19 who repeatedly missed their dental appointments. This objective proved to be challenging. We failed to get in contact with boys in general and with adolescents who had missed their dental appointment repeatedly over a long period. The lack of information regarding treatment experiences and the history of missed dental appointments among this group could be considered as a limitation, especially with respect to the results of Paper III. Therefore, we may have missed some aspects of the phenomenon under study. Considering the fact that missed dental appointments are more common among boys than among girls\textsuperscript{51, 87, 90, 94}, it would probably have given a wider perspective regarding experiences of dental care if we had managed to include boys in the study. However, although only girls agreed to participate and the heterogeneity of the group of participants was therefore limited, the present study can be considered to increase the knowledge about adolescent girls’ experiences of dental care in a Swedish context.

Four of the included girls preferred to participate in a telephone interview since they could not find time for a face-to-face interview. Interviewing adolescent girls by phone was experienced as challenging, as we could not observe their body language and the interaction between the participants and the interviewer was therefore limited to their statements and voices. However, the telephone interview has been reported to be an effective method of data collection\textsuperscript{168}. This method may have affected the length of these interviews, which were shorter than face-to-face interviews.
CONCLUSIONS

There is a wide range of potential explanatory factors associated with dental avoidance or non-attendance. Regarding dental avoidance among adolescents in a context of free dental care, the main factors we found are individual and situational, pointing to the importance of individualized approaches and treatments.

Dental fear emerges as one important potential causal factor, and, importantly, a history of missed and cancelled appointments turns out to be the strongest predictor of future attendance behaviour. Therefore, early signs of fear or avoidance should never be ignored.

A problematic everyday situation may contribute to a higher risk of avoidance behaviour, as will poor oral health and high treatment needs.

Fears in the context of dental care include not only fear of dental treatments, pain or discomfort. Feelings of insecurity, related to not knowing who will be treating them, whether they will be blamed or reprimanded, and what will happen may be important triggers for no-shows, at least among adolescent girls. Although the adolescent girls expressed a will to take on an adult responsibility regarding booking and attending their dental appointments so as to keep their teeth healthy and attractive, they may need, and appreciate, support from their parents to keep to regular dental attendance.

It is hoped that the results of this thesis add some pieces to the puzzle of no-shows among adolescents in dental care. However, the question of what really causes some of them, more boys than girls, to repeatedly miss their appointments, risking their oral health, still remains a challenge for dental care.
CLINICAL IMPLICATIONS

Adolescence is a transition period when health risk behaviours may be established. Dental personnel need to be aware of why some adolescents fail to attend their dental appointments and of factors that may be associated with the phenomenon, bearing in mind that adolescents are unique individuals with different needs and preferences. Relevant and proactive clinical approaches in dental health care may lead to individual benefits among children and adolescents, in the form of reduced fear, and prevent negative oral health behaviours. They may also give socio-economic benefits, such as better and more efficient use of the dental health care resources.

There is a need to provide adolescent dental patients with information and involvement already when planning for their dental visits and treatments, to ensure that they understand what will happen during their visits. Some information can be included in the appointment letter. However, to be able to individualize the information and involve the adolescent in planning their dental visit, it is important to be aware of the adolescent’s everyday life and situation (e.g. living in a single-parent family, low SES, and individual occupation), needs, expectations and previous experiences of dental visits/care and personnel. This information can be obtained in different ways, one of which is to develop a web or mobile application (app) with focus on the individual’s informational needs and expectations. Depending on how the adolescent responds, there is also the possibility within the app to connect the answers given to different ways of describing and explaining the planned dental examination with pedagogical images, video clips, and so on. This may contribute to increased feelings of involvement, preparation and ability to handle a potentially unpleasant dental visit.

Furthermore, it is, as far as possible, important to try to achieve continuity in dental personnel, as this may facilitate regular dental care. Continuity can contribute to adolescents’ feelings of safety and security when visiting the dental clinic and thus we may establish a good relationship with these patients.

What also remains important is to be observant to an early pattern of missed and cancelled dental appointments as they might predict future missed and cancelled dental appointments. These early signs of avoidance should never be accepted or ignored as continuous dental avoidance can jeopardize adolescents’ oral health. Bearing in mind adolescents’ insecurity regarding the responsibility for dental visits and contacts with dental care,
it is important to implement a clinical routine where dental personnel always try to get in contact with non-regular adolescent attenders in close proximity to a missed appointment. Routine SMS text reminders are already being sent, but we may need to consider other alternatives. These clinical efforts may help not only to prevent missed dental appointments, but they may also help in planning for dental personnel resources.
IMPLICATIONS FOR FUTURE RESEARCH

This thesis has shown factors that facilitate dental care attendance in adolescents, and it describes factors that prevent adolescents from attending their dental appointments. The thesis further emphasizes the importance of DF and of paying attention to early signs of non-regular dental attendance. However, there are still some knowledge gaps that call for further research, which are suggested below.

Although a wide variety of environmental, individual and situational factors associated with dental avoidance among adolescents have been identified, preconditions specifically associated with the present outcome of dental avoidance still need to be investigated. In the Swedish context of growing proportions of individuals from a non-Swedish background, the possible impact of cultural background (i.e. language, ethnicity, religion) deserves further research.

As the results of this thesis are based on an adolescent population, it would be interesting to investigate no-shows among young adults once they need to pay for their dental care. Does the frequency of missed appointments increase when individuals need to pay for their dental care? Furthermore, since missed dental appointments have a negative financial effect on dental clinics, future research should also include financial aspects.

This thesis provides an insight into how adolescent girls with low rates of missed dental appointments experience dental care in Sweden. Future research should focus on both genders and on adolescents’ experiences of Swedish dental care to get a broader picture of the studied phenomenon. It would also be desirable to include adolescents with a consistent pattern of missed or cancelled appointments, as we did not manage to get in touch with them. One possible way of getting in contact with these individuals may be to recruit them in school. Another alternative for recruiting adolescent participants would be to advertise future research via the social media. Further, using online focus groups among adolescents may be a preferable way of data collection from participants that are hard to reach using the traditional methods.

Since the girls in our study frequently expressed the need to feel safe and secure, it would also be interesting to examine dental personnel’s perceptions regarding meeting and communicating with adolescent dental patients. In this context, we need to consider whether SDT-based interventions developed for dental attendance may be suitable.
ACKNOWLEDGMENTS

My journey as a doctoral student now comes to an end and it is time for me to express my sincere gratitude to those who supported me through this thesis:

Kristina Arnrup, Associate Professor, my main supervisor, who encouraged me to continue with this thesis. Thank you for taking me under your wings and for teaching me what research is about. It was a privilege having you as my mentor and having access to your knowledge and expertise. Thank you for your patience and your time, for listening and for supporting me in my decisions, both in research and in private life. I will always be grateful for these years and mostly for you believing in me.

Jesper Lundgren, Associate Professor, my co-supervisor, who supported me through this thesis. Thank you for your feedback and for all the discussions we had over the telephone.

My co-supervisor Jenny Windahl, PhD, for your feedback and support through all these years. Thank you for being there for me, especially at the end of writing the framework for this thesis. Your advice and your support have meant a lot to me.

Eva Carlsson, PhD, who introduced me to qualitative research. Thank you for accepting to be a part of my research (Paper IV) and for standing by me when I was confused.

All my former co-workers at PDC Wivallius, for helping me with the data collection for Paper II: you know who you are.

Dental nurse Kristina Ekman, for helping me with Excel. You did a great job, and I do not know how I would have managed without you.

Daniel Pichler and Ulf Johansson at the University Health Care Research Centre, Örebro, who helped me with the transcripts of the interviews for Paper IV.

PKatri Ståhlnacke, PhD, for your interest in this thesis, for your advice and for all the conversations we had through the years. Thank you for being one of the experts at my introductory chapter seminar.
All my co-workers at Specialist Paediatric Dentistry in Örebro who were supportive and who told me to take it easy and to remember that there are other things in life than studies.

Lillemor Dimberg, PhD, Jir Barzangi, PhD, Jacob Jonsson Sjögren, PhD Student and Anna Bäck, Secretary, for support and interesting discussions.

Jessica Eriksson, controller at Public Dental Health Services, for supplying me with the lists for Papers III and IV.

My close friends from the 90s, Tinka and Daca, for your interest in my work and for your endless support. Thank you for being there through all these years and thank you for your unconditional love and friendship.

All my other friends, colleagues and relatives who have been showing an interest in this thesis. Thank you all. You know who you are.

My father Meho and his partner Sabiha. Thank you for all your endless support. Special thanks go to my father, who has always been there for me, coming all the way from Malmö to help me with the kids and with the house.

Benny and Carina Fägerstad, my father-in-law and his wife, who were there to help us drive our kids to their many spare time activities.

And finally, to my beloved family who stood by me all these years and especially at the end of writing this thesis. My husband Johan and our daughters Emma, Hanna and Filippa. Thank you for your unconditional love even during these hectic times. Sorry for my bad mood sometimes, but I promise you that it will be better now. You are my whole world and I love you so much.

I also wish to express my appreciation to all children and adolescents who participated in the studies. You made this thesis possible.

This thesis would not have been possible without grants from: the Public Dental Health Service, Region Örebro County, Sweden; ALF-founded research, Region Örebro County, Sweden; Örebro University, Sweden; and the Swedish Dental Hygienist Association (SDHA).
REFERENCES


130. Dahlín K, Vilhelmsson K. Socio-economic status and psychological well-being- a cross sectional study of Swedish children and


156. Dahlander A, Jansson L, Liden A, Tanase M, Grindefjord M. Dental fear among children of foreign background in a


Search history PubMed

<table>
<thead>
<tr>
<th>Search</th>
<th>Add to builder</th>
<th>Query</th>
<th>Items found</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>#39 Add</td>
<td>Select 229 document(s)</td>
<td>((((((dental&gt;Title/Abstract) AND avoidance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND non-attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND utilization&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND no-show&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND appointments&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND missed appointments&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND visit&gt;Title/Abstract)) AND ( &quot;1994/01/01&quot;[PDat] : &quot;2015/01/31&quot;[PDat] ) AND English[lang] AND ( young adult[MeSH] OR adolescent[MeSH] ))) OR ((((((dental&gt;Title/Abstract) AND avoidance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND non-attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND utilization&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND no-show&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND appointments&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND missed appointments&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND visit&gt;Title/Abstract)) AND ( &quot;1994/01/01&quot;[PDat] : &quot;2015/01/31&quot;[PDat] ) AND English[lang] AND ( young adult[MeSH] OR adolescent[MeSH] ))) OR ((((((dental&gt;Title/Abstract) AND avoidance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND non-attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND utilization&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND no-show&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND appointments&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND missed appointments&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND visit&gt;Title/Abstract)) AND ( &quot;1994/01/01&quot;[PDat] : &quot;2015/01/31&quot;[PDat] ) AND English[lang] AND ( young adult[MeSH] OR adolescent[MeSH] ))) OR ((((((dental&gt;Title/Abstract) AND avoidance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND non-attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND utilization&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND no-show&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND appointments&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND missed appointments&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND visit&gt;Title/Abstract)) AND ( &quot;1994/01/01&quot;[PDat] : &quot;2015/01/31&quot;[PDat] ) AND English[lang] AND ( young adult[MeSH] OR adolescent[MeSH] ))) OR ((((((dental&gt;Title/Abstract) AND avoidance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND non-attendance&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND utilization&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND no-show&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND appointments&gt;Title/Abstract)) OR ((dental&gt;Title/Abstract) AND missed appointments&gt;Title/Abstract)) OR (dental&gt;Title/Abstract) AND visit&gt;Title/Abstract)) AND ( &quot;1994/01/01&quot;[PDat] : &quot;2015/01/31&quot;[PDat] ) AND English[lang] AND ( young adult[MeSH] OR adolescent[MeSH] )))</td>
<td>229</td>
<td>03:35:10</td>
</tr>
<tr>
<td>#37 Add</td>
<td>1229</td>
<td>03:34:56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#36 Add</td>
<td>1000</td>
<td>03:33:43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#35 Add</td>
<td>29</td>
<td>03:26:17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#34 Add</td>
<td>9</td>
<td>03:24:05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#33 Add</td>
<td>65</td>
<td>03:22:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#32 Add</td>
<td>34</td>
<td>03:21:44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
No shows in dental care

<table>
<thead>
<tr>
<th>Search Add to builder</th>
<th>Query</th>
<th>Items found</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>#32 Add Search (health care utilization[Title/Abstract] AND ( &quot;1994/01/01&quot;[PDat] : &quot;2015/01/31&quot;[PDat] ) AND English[lang] AND ( young adult[MeSH] OR adolescent[MeSH] )) AND dent Filters: Publication date from 1994/01/01 to 2015/01/31; English; Young Adult: 19-24 years; Adolescent 13-18 years</td>
<td>0</td>
<td>03:20:47</td>
<td></td>
</tr>
<tr>
<td>#30 Add Search adolescents[Title/Abstract] Filters: Publication date from 1994/01/01 to 2015/01/31; English; Young Adult: 19-24 years; Adolescent: 13-18 years</td>
<td>74894</td>
<td>03:18:30</td>
<td></td>
</tr>
<tr>
<td>#29 Add Search health care utilization[Title/Abstract] Filters: Publication date from 1994/01/01 to 2015/01/31; English; Young Adult: 19-24 years; Adolescent: 13-18 years</td>
<td>1119</td>
<td>03:18:19</td>
<td></td>
</tr>
<tr>
<td>#28 Add Search dental health services[Title/Abstract] Filters: Publication date from 1994/01/01 to 2015/01/31; English; Young Adult: 19-24 years; Adolescent: 13-18 years</td>
<td>31</td>
<td>03:17:58</td>
<td></td>
</tr>
<tr>
<td>#27 Add Search (((dental[Title/Abstract]) AND avoidance[Title/Abstract]) OR (dental[Title/Abstract]) AND attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND non-attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND utilization[Title/Abstract]) OR (dental[Title/Abstract]) AND appointment[Title/Abstract]) OR (dental[Title/Abstract]) AND missed appointments[Title/Abstract]) OR (dental[Title/Abstract]) AND visit[Title/Abstract]) Filters: Publication date from 1994/01/01 to 2015/01/31; English; Young Adult: 19-24 years; Adolescent: 13-18 years</td>
<td>1204</td>
<td>03:13:16</td>
<td></td>
</tr>
<tr>
<td>#26 Add Search (((dental[Title/Abstract]) AND avoidance[Title/Abstract]) OR (dental[Title/Abstract]) AND attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND non-attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND utilization[Title/Abstract]) OR (dental[Title/Abstract]) AND appointment[Title/Abstract]) OR (dental[Title/Abstract]) AND missed appointments[Title/Abstract]) OR (dental[Title/Abstract]) AND visit[Title/Abstract]) Filters: Publication date from 1994/01/01 to 2015/01/31; English; Young Adult: 19-24 years</td>
<td>402</td>
<td>03:13:13</td>
<td></td>
</tr>
<tr>
<td>#25 Add Search (((dental[Title/Abstract]) AND avoidance[Title/Abstract]) OR (dental[Title/Abstract]) AND attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND non-attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND utilization[Title/Abstract]) OR (dental[Title/Abstract]) AND appointment[Title/Abstract]) OR (dental[Title/Abstract]) AND missed appointments[Title/Abstract]) OR (dental[Title/Abstract]) AND visit[Title/Abstract]) Filters: Publication date from 1994/01/01 to 2015/01/31; English</td>
<td>3967</td>
<td>03:07:35</td>
<td></td>
</tr>
<tr>
<td>#24 Add Search (((dental[Title/Abstract]) AND avoidance[Title/Abstract]) OR (dental[Title/Abstract]) AND attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND non-attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND utilization[Title/Abstract]) OR (dental[Title/Abstract]) AND appointment[Title/Abstract]) OR (dental[Title/Abstract]) AND missed appointments[Title/Abstract]) OR (dental[Title/Abstract]) AND visit[Title/Abstract]) Filters: Publication date from 1994/01/01 to 2015/01/31</td>
<td>4205</td>
<td>03:06:27</td>
<td></td>
</tr>
<tr>
<td>#23 Add Search (((dental[Title/Abstract]) AND avoidance[Title/Abstract]) OR (dental[Title/Abstract]) AND attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND non-attendance[Title/Abstract]) OR (dental[Title/Abstract]) AND utilization[Title/Abstract]) OR (dental[Title/Abstract]) AND appointment[Title/Abstract]) OR (dental[Title/Abstract]) AND missed appointments[Title/Abstract]) OR (dental[Title/Abstract]) AND visit[Title/Abstract]) Filters: Publication date from 1994/01/01 to 2015/01/31</td>
<td>5563</td>
<td>03:04:15</td>
<td></td>
</tr>
<tr>
<td>Search</td>
<td>Add to builder</td>
<td>Query</td>
<td>Items found</td>
</tr>
<tr>
<td>----------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>#22</td>
<td>Add</td>
<td>Search (((((dental visit) AND missed dental appointments) AND dental appointments) AND dental utilization) AND dental no-show) AND dental non-attendance) AND dental attendance) AND dental avoidance</td>
<td>0</td>
</tr>
<tr>
<td>#21</td>
<td>Add</td>
<td>Search dental visit</td>
<td>3548</td>
</tr>
<tr>
<td>#20</td>
<td>Add</td>
<td>Search missed dental appointments</td>
<td>59</td>
</tr>
<tr>
<td>#19</td>
<td>Add</td>
<td>Search dental appointments</td>
<td>2152</td>
</tr>
<tr>
<td>#18</td>
<td>Add</td>
<td>Search dental utilization</td>
<td>8866</td>
</tr>
<tr>
<td>#17</td>
<td>Add</td>
<td>Search dental no-show</td>
<td>14</td>
</tr>
<tr>
<td>#16</td>
<td>Add</td>
<td>Search dental non-attendance</td>
<td>46</td>
</tr>
<tr>
<td>#15</td>
<td>Add</td>
<td>Search dental attendance</td>
<td>943</td>
</tr>
<tr>
<td>#14</td>
<td>Add</td>
<td>Search dental avoidance</td>
<td>644</td>
</tr>
<tr>
<td>#13</td>
<td>Add</td>
<td>Search (((dental[Title/Abstract]) AND attendance[Title/Abstract])) AND ((dental[Title/Abstract]) AND avoidance[Title/Abstract])</td>
<td>25</td>
</tr>
<tr>
<td>#12</td>
<td>Add</td>
<td>Search (((dental[Title/Abstract]) AND utilization[Title/Abstract])) AND ((dental[Title/Abstract]) AND non-attendance[Title/Abstract])</td>
<td>2</td>
</tr>
<tr>
<td>#11</td>
<td>Add</td>
<td>Search (((dental[Title/Abstract]) AND appointments[Title/Abstract]) AND ((dental[Title/Abstract]) AND no-show[Title/Abstract]))</td>
<td>5</td>
</tr>
<tr>
<td>#10</td>
<td>Add</td>
<td>Search (((dental[Title/Abstract]) AND visit[Title/Abstract]) AND ((dental[Title/Abstract]) AND missed appointments[Title/Abstract]))</td>
<td>1</td>
</tr>
<tr>
<td>#9</td>
<td>Add</td>
<td>Search (((((((dental[Title/Abstract]) AND visit[Title/Abstract]) AND ((dental[Title/Abstract]) AND missed appointments[Title/Abstract])) AND ((dental[Title/Abstract]) AND appointments[Title/Abstract]) AND (dental[Title/Abstract]) AND utilization[Title/Abstract]) AND ((dental[Title/Abstract]) AND non-attendance[Title/Abstract]) AND (dental[Title/Abstract]) AND attendance[Title/Abstract])) AND ((dental[Title/Abstract]) AND avoidance[Title/Abstract])</td>
<td>0</td>
</tr>
<tr>
<td>#8</td>
<td>Add</td>
<td>Search (dental[Title/Abstract]) AND visit[Title/Abstract]</td>
<td>2395</td>
</tr>
<tr>
<td>#7</td>
<td>Add</td>
<td>Search (dental[Title/Abstract]) AND missed appointments[Title/Abstract]</td>
<td>31</td>
</tr>
<tr>
<td>#6</td>
<td>Add</td>
<td>Search (dental[Title/Abstract]) AND appointments[Title/Abstract]</td>
<td>659</td>
</tr>
<tr>
<td>#5</td>
<td>Add</td>
<td>Search (dental[Title/Abstract]) AND no-show[Title/Abstract]</td>
<td>10</td>
</tr>
<tr>
<td>#4</td>
<td>Add</td>
<td>Search (dental[Title/Abstract]) AND utilization[Title/Abstract]</td>
<td>1781</td>
</tr>
<tr>
<td>#3</td>
<td>Add</td>
<td>Search (dental[Title/Abstract]) AND non-attendance[Title/Abstract]</td>
<td>37</td>
</tr>
<tr>
<td>#2</td>
<td>Add</td>
<td>Search (dental[Title/Abstract]) AND attendance[Title/Abstract]</td>
<td>859</td>
</tr>
<tr>
<td>#1</td>
<td>Add</td>
<td>Search (dental[Title/Abstract]) AND avoidance[Title/Abstract]</td>
<td>434</td>
</tr>
<tr>
<td>Search ID#</td>
<td>Search Terms</td>
<td>Search Options</td>
<td>Last Run Via</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------</td>
<td>---------------</td>
<td>--------------</td>
</tr>
<tr>
<td>S17</td>
<td>S2 OR S4 OR S9 OR S12 OR S14 OR S16</td>
<td>Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO</td>
</tr>
<tr>
<td>S16</td>
<td>dental AND visit</td>
<td>Limiters - Peer Reviewed; References Available; Published Date: 19940101-20150131 Search modes - Find any of my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO</td>
</tr>
<tr>
<td>S15</td>
<td>dental AND visit</td>
<td>Limiters - Peer Reviewed; References Available; Published Date: 19940101-20150131 Search modes - Find any of my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO</td>
</tr>
<tr>
<td>S14</td>
<td>dental AND missed appointments</td>
<td>Limiters - Peer Reviewed; References Available; Published Date: 19940101-20150131 Search modes - Find any of my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO</td>
</tr>
<tr>
<td>S13</td>
<td>dental AND missed appointments</td>
<td>Limiters - Peer Reviewed; References Available; Published Date: 19940101-20150131 Search modes - Find any of my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO</td>
</tr>
<tr>
<td>S12</td>
<td>dental AND appointments</td>
<td>Limiters - Peer Reviewed; References Available; Published Date: 19940101-20150131 Search modes - Find any of my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - PsycINFO</td>
</tr>
<tr>
<td>#</td>
<td>Search Term</td>
<td>Limiters</td>
<td>Search Date</td>
</tr>
<tr>
<td>----</td>
<td>-------------</td>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>S11</td>
<td>dental AND appointments</td>
<td>Peer Reviewed; References Available; Published Date: 19940101-20150131</td>
<td>Find any of my search terms</td>
</tr>
<tr>
<td>S10</td>
<td>dental AND no-show</td>
<td>Peer Reviewed; References Available; Published Date: 19940101-20150131</td>
<td>Find any of my search terms</td>
</tr>
<tr>
<td>S9</td>
<td>dental AND utilization</td>
<td>Peer Reviewed; References Available; Published Date: 19940101-20150131</td>
<td>Find any of my search terms</td>
</tr>
<tr>
<td>S8</td>
<td>dental AND utilization</td>
<td>Peer Reviewed; References Available; Published Date: 19940101-20150131</td>
<td>Find any of my search terms</td>
</tr>
<tr>
<td>S7</td>
<td>dental AND utilization</td>
<td>Peer Reviewed; English Language; Published Date: 19940101-20150131</td>
<td>Find all my search terms</td>
</tr>
<tr>
<td>S6</td>
<td>dental AND non-attendance</td>
<td>Peer Reviewed; English Language; Published Date: 19940101-20150131</td>
<td>Find all my search terms</td>
</tr>
<tr>
<td>S5</td>
<td>dental AND non-attendance</td>
<td>Peer Reviewed; English Language; Published Date: 19940101-20150131</td>
<td>Find all my search terms</td>
</tr>
<tr>
<td></td>
<td>Search Term</td>
<td>Limiters</td>
<td>Search Screen</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------</td>
<td>-----------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>S4</td>
<td>dental AND attendance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131</td>
<td>Search modes - Find all my search terms</td>
</tr>
<tr>
<td>S3</td>
<td>dental AND attendance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131</td>
<td>Search modes - Find all my search terms</td>
</tr>
<tr>
<td>S2</td>
<td>dental AND avoidance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131</td>
<td>Search modes - Find all my search terms</td>
</tr>
<tr>
<td>S1</td>
<td>dental AND avoidance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131</td>
<td>Search modes - Find all my search terms</td>
</tr>
<tr>
<td>Search ID#</td>
<td>Search Terms</td>
<td>Search Options</td>
<td>Last Run Via</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>S22</td>
<td>((dental AND visit) AND (S6 OR S9 OR S11 OR S13 OR S14 OR S16 OR S18 OR S20)) OR (S20)</td>
<td>Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases</td>
</tr>
<tr>
<td>S21</td>
<td>(dental AND visit) AND (S6 OR S9 OR S11 OR S13 OR S14 OR S16 OR S18 OR S20)</td>
<td>Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases</td>
</tr>
<tr>
<td>S20</td>
<td>dental AND visit</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases</td>
</tr>
<tr>
<td>S19</td>
<td>dental AND visit</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases</td>
</tr>
<tr>
<td>S18</td>
<td>dental AND missed appointments</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases</td>
</tr>
<tr>
<td>S17</td>
<td>dental AND missed appointments</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>S16</td>
<td>dental AND appointments</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S15</td>
<td>dental AND appointments</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S14</td>
<td>dental AND no-show</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S13</td>
<td>dental AND utilization</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S12</td>
<td>dental AND utilization</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131 Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S11</td>
<td>dental AND non-attendance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases; Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S10</td>
<td>dental AND non-attendance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases; Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S9</td>
<td>dental AND attendance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases; Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S8</td>
<td>dental AND attendance</td>
<td>Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases; Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S7</td>
<td>dental AND attendance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases; Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S6</td>
<td>dental AND avoidance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Language: English; Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases; Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S5</td>
<td>dental AND attendance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Language: English Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S4</td>
<td>dental AND avoidance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Language: English Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S3</td>
<td>dental AND avoidance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Language: English Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S2</td>
<td>dental AND avoidance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Language: English Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
<tr>
<td>S1</td>
<td>dental AND avoidance</td>
<td>Limiters - Peer Reviewed; English Language; Published Date: 19940101-20150131; Language: English Search modes - Find all my search terms</td>
<td>Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text</td>
</tr>
</tbody>
</table>
Informationsbrev till dig som är 16-19 år angående studien om hur ungdomar i Örebro län uppfattar tandvården

Hej,

Jag heter Anida Fägerstad och arbetar som tandhygienist på barntandvården i Örebro. Förutom mitt jobb som tandhygienist är jag också forskarstudent vid Örebro universitet där jag bland annat undersöker vad det är som gör att en del ungdomar inte kommer till tandvården.


Jag kommer att ta kontakt med dig via telefon för att berätta mer om studien och fråga om du skulle vilja delta i den. Då har du också möjlighet att ställa frågor till mig om det är något du undrar över.

Hälsningar

Anida Fägerstad
Doktorand, Örebro universitet
Leg. tandhygienist, Folk tandvården Region Örebro län, Centrum för specialisttandvård
Tel. 019-602 40 37
e-post: anida.fagerstad@regionorebolan.se

Projektansvarig och handledare:
Kristina Arnrup
Forskningshandledare, docent, övertandläkare
Centrum för specialisttandvård
Odontologiska forskningsenheten
Tel. 019-602 40 36
e-post: kristina.arnrup@regionorebrolan.se
Appendix III

Protokoll för artikelgranskning

Artikel nr:………… Granskare:…………………………………………………………

Författare:………………………………………………………………………………………

……………………………………………………………………………………………………

Titel:……………………………………………………………………………………………

……………………………………………………………………………………………………

År:……….. Tidskrift:……………………………………………………………………

Land där studien är genomförd:

……………………………………………………………………………………………………

<table>
<thead>
<tr>
<th>Inklusionskriterier</th>
<th>Exklusionskriterier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative or qualitative research □</td>
<td>Intervention studies □</td>
</tr>
<tr>
<td>Published between 1994-2014 □</td>
<td>The perceptions of dental health personnel □</td>
</tr>
<tr>
<td>Peer-reviewed primary research reports □</td>
<td>Reporting of a study in duplicate papers □</td>
</tr>
<tr>
<td>Factors influencing dental avoidance or non-attendance/non-utilization □</td>
<td>Audit/review/analysis of case notes □</td>
</tr>
<tr>
<td>Adolescents 13-19 yrs □</td>
<td></td>
</tr>
</tbody>
</table>

Syftet med studien

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

Är frågeställningarna tydligt beskrivna?

Ja □ Nej □

Dental attendance/utilization-visits eller non-attendance/non-utilization/non-visits

inkluderas i huvudsyte □ inkluderas i bisyfte □ utgör enbart bifynd i studien □
### Studiedesign

<table>
<thead>
<tr>
<th>Kvalitativ □</th>
<th>Kvantitativ □</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCT □</td>
<td>Fall-kontroll □</td>
</tr>
<tr>
<td>Prospektiv □</td>
<td>Retrospektiv □</td>
</tr>
<tr>
<td>Kohort □</td>
<td>Longitudinell □</td>
</tr>
<tr>
<td></td>
<td>Tvärsnitt □</td>
</tr>
</tbody>
</table>

### Undersökningsgruppen

**Typ av studiegrupp:**

**Kommentar:**

**Vilka är inklusionskriterierna?**

**Vilka är exklusionskriterierna?**

### Person karakteristika

**Antal:**

**Ålder:**

**Flickor:**

**Pojkar:**

**Informant:**

### Urvalsmetod

<table>
<thead>
<tr>
<th>Randomiserat □</th>
<th>Snöbollsurval □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kvoturval □</td>
<td>Strategiskt urval □</td>
</tr>
<tr>
<td>Klusterurval □</td>
<td>Teoretiskt urval □</td>
</tr>
<tr>
<td>Konsekutivt □</td>
<td>Övrigt □</td>
</tr>
</tbody>
</table>

**Är urvalet tydligt beskrivet?**

<table>
<thead>
<tr>
<th>Ja □</th>
<th>Nej □</th>
<th>Urvalet ej alls beskrivet □</th>
</tr>
</thead>
</table>

**Är powerberäkning gjord?**

<table>
<thead>
<tr>
<th>Ja □</th>
<th>Nej □</th>
<th>Ingen uppgift □</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ej relevant □</td>
</tr>
</tbody>
</table>
Mätmetoder

Vilka mätmetoder användes?

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………

Analys och redovisning (utifrån review frågeställning)

Faktorer…………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………

Outcomes
Dental attendance □
Non-attendance □
Avoidance □
Utilization □
Non-utilization □
Dental visits/appointments □

Vilken typ av statistisk metod har använts?

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………

Hur stort var bortfallet?

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
Resultat (attendance/utilization/visits eller non-attendance/non-utilization/non-visits)
…………………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………………

Confounders (utöver vad som betraktas som faktorer) beaktade
Ja □ Nej □
Tandvårdsrädsla □
Socioekonomisk status □
Kulturella faktorer □
Personliga faktorer □
Familjefaktorer □
Icke-relevant □
Annan □……………………………………………………………………………………………………
…………………………………………………………………………………………………………………………

Preliminär kvalitetsbedömning:

<table>
<thead>
<tr>
<th>Metod</th>
<th>Hög □</th>
<th>Medel □</th>
<th>Låg □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevans</td>
<td>Hög □</td>
<td>Medel □</td>
<td>Låg □</td>
</tr>
</tbody>
</table>

Kommentar:……………………………………………………………………………………………………
…………………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………………
### Appendix IV

Barnets/ungdomens personnummer

<table>
<thead>
<tr>
<th>Din signatur</th>
</tr>
</thead>
</table>

#### CFSS-DS Ungdomars tandvårdsrädsla

För att få reda på hur orolig eller rädd Du känner dig när Du ska gå till tandläkaren ber vi dig svara på de här frågorna.

Hur rädd är Du i följande situationer? Sätt kryss i den ruta som stämmer bäst från “1= inte alls rädd” till “5= livrädd”.

<table>
<thead>
<tr>
<th>inte alls rädd</th>
<th>bara lite rädd</th>
<th>ganska rädd</th>
<th>mycket rädd</th>
<th>livrädd</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. när du är hos tandläkaren
2. när du är hos doktorn
3. för att få spruta eller bedövning
4. när någon undersöker dina tänder eller mun
5. när Du gapar hos tandläkaren
6. när någon Du inte känner kommer för nära inpå Dig eller tar i Dig
7. när någon Du inte känner tittar på Dig
8. när tandläkaren borrar i Din tand
9. när Du ser tandläkaren borra i någon annans tand
10. för att höra tandläkarborren
11. när någon håller instrument i Din mun
12. för att kväljas, sätta i halsen
13. för att behöva åka till sjukhus
14. för personer i vita sjukhus- eller tandläkarkläder
15. när någon gör rent eller fluorlackar Dina tänder

TACK för att du har besvarat dessa frågor!
### Intervjuprotokoll

Datum: ……………………

Patientens personnummer: …………………

<table>
<thead>
<tr>
<th>Typ av undersökning</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Tdl</td>
<td>☐ Thyg</td>
</tr>
</tbody>
</table>

Patientens födelseland: …………………………………………………………………………

Skola och klass patienten går i: …………………………………………………………………

Moderns födelseland: ……………………………………………………………………………

Faderns födelseland ……………………………………………………………………………

<table>
<thead>
<tr>
<th>Moderns skolgång</th>
<th>Faderns skolgång</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Mindre än 9 år</td>
<td>☐ Mindre än 9 år</td>
</tr>
<tr>
<td>☐ Grundskolan</td>
<td>☐ Grundskolan</td>
</tr>
<tr>
<td>☐ Gymnasieutbildning</td>
<td>☐ Gymnasieutbildning</td>
</tr>
<tr>
<td>☐ Universitetsutbildning</td>
<td>☐ Universitetsutbildning</td>
</tr>
</tbody>
</table>

Moderns yrke/ sysselsättning: ……………………………………………………………

Faderns yrke/sysselsättning: ……………………………………………………………

Signatur uppgiftslämnare: ……………………………………………………………
## Appendix VI

<table>
<thead>
<tr>
<th>Studie ID</th>
<th>Datum reg</th>
<th>F-år-mån</th>
<th>Kön</th>
<th>Klinik</th>
<th>Klinikbyte</th>
<th>Övrigt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>O Pojke</td>
<td></td>
<td>O JA</td>
<td>O NEJ</td>
</tr>
</tbody>
</table>

### 2009

<table>
<thead>
<tr>
<th>Antal besök</th>
<th>Antal besök</th>
<th>Antal besök</th>
<th>Antal besök</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATV=</td>
<td>ATV=</td>
<td>ATV=</td>
<td>ATV=</td>
</tr>
<tr>
<td>Tdl-2klin=</td>
<td>Tdl-2klin=</td>
<td>Tdl-2klin=</td>
<td>Tdl-2klin=</td>
</tr>
<tr>
<td>Thyg-2klin=</td>
<td>Thyg-2klin=</td>
<td>Thyg-2klin=</td>
<td>Thyg-2klin=</td>
</tr>
<tr>
<td>Tsk-2klin=</td>
<td>Tsk-2klin=</td>
<td>Tsk-2klin=</td>
<td>Tsk-2klin=</td>
</tr>
<tr>
<td>Sampass=</td>
<td>Sampass=</td>
<td>Sampass=</td>
<td>Sampass=</td>
</tr>
<tr>
<td>STV=</td>
<td>STV=</td>
<td>STV=</td>
<td>STV=</td>
</tr>
</tbody>
</table>

### 2010

<table>
<thead>
<tr>
<th>Kallelse/bokning (n)</th>
<th>Kallelse/bokning (n)</th>
<th>Kallelse/bokning (n)</th>
<th>Kallelse/bokning (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11=</td>
<td>11=</td>
<td>11=</td>
<td>11=</td>
</tr>
<tr>
<td>12=</td>
<td>12=</td>
<td>12=</td>
<td>12=</td>
</tr>
<tr>
<td>13=</td>
<td>13=</td>
<td>13=</td>
<td>13=</td>
</tr>
<tr>
<td>21=</td>
<td>21=</td>
<td>21=</td>
<td>21=</td>
</tr>
<tr>
<td>22=</td>
<td>22=</td>
<td>22=</td>
<td>22=</td>
</tr>
<tr>
<td>23=</td>
<td>23=</td>
<td>23=</td>
<td>23=</td>
</tr>
<tr>
<td>24=</td>
<td>24=</td>
<td>24=</td>
<td>24=</td>
</tr>
<tr>
<td>31=</td>
<td>31=</td>
<td>31=</td>
<td>31=</td>
</tr>
<tr>
<td>32=</td>
<td>32=</td>
<td>32=</td>
<td>32=</td>
</tr>
<tr>
<td>33=</td>
<td>33=</td>
<td>33=</td>
<td>33=</td>
</tr>
</tbody>
</table>

### 2011

<table>
<thead>
<tr>
<th>Ub/åb (n); orsak</th>
<th>Ub/åb (n); orsak</th>
<th>Ub/åb (n); orsak</th>
<th>Ub/åb (n); orsak</th>
</tr>
</thead>
<tbody>
<tr>
<td>11=</td>
<td>11=</td>
<td>11=</td>
<td>11=</td>
</tr>
<tr>
<td>21=</td>
<td>21=</td>
<td>21=</td>
<td>21=</td>
</tr>
<tr>
<td>22=</td>
<td>22=</td>
<td>22=</td>
<td>22=</td>
</tr>
<tr>
<td>23=</td>
<td>23=</td>
<td>23=</td>
<td>23=</td>
</tr>
<tr>
<td>24=</td>
<td>24=</td>
<td>24=</td>
<td>24=</td>
</tr>
<tr>
<td>31=</td>
<td>31=</td>
<td>31=</td>
<td>31=</td>
</tr>
<tr>
<td>32=</td>
<td>32=</td>
<td>32=</td>
<td>32=</td>
</tr>
<tr>
<td>33=</td>
<td>33=</td>
<td>33=</td>
<td>33=</td>
</tr>
</tbody>
</table>

### 2012

<table>
<thead>
<tr>
<th>Beh yrke, personer (n)</th>
<th>Beh yrke, personer (n)</th>
<th>Beh yrke, personer (n)</th>
<th>Beh yrke, personer (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tdl=</td>
<td>Tdl=</td>
<td>Tdl=</td>
<td>Tdl=</td>
</tr>
<tr>
<td>Thyg=</td>
<td>Thyg=</td>
<td>Thyg=</td>
<td>Thyg=</td>
</tr>
<tr>
<td>Tsk=</td>
<td>Tsk=</td>
<td>Tsk=</td>
<td>Tsk=</td>
</tr>
<tr>
<td>Ötdl=</td>
<td>Ötdl=</td>
<td>Ötdl=</td>
<td>Ötdl=</td>
</tr>
<tr>
<td>Ort ass=</td>
<td>Ort ass=</td>
<td>Ort ass=</td>
<td>Ort ass=</td>
</tr>
</tbody>
</table>

### Us/ktr* (n)

<table>
<thead>
<tr>
<th>Us/ktr* (n)</th>
<th>Us/ktr* (n)</th>
<th>Us/ktr* (n)</th>
<th>Us/ktr* (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11=</td>
<td>11=</td>
<td>11=</td>
<td>11=</td>
</tr>
<tr>
<td>12=</td>
<td>12=</td>
<td>12=</td>
<td>12=</td>
</tr>
<tr>
<td>13=</td>
<td>13=</td>
<td>13=</td>
<td>13=</td>
</tr>
</tbody>
</table>

### Prof/dep/utr* (n)

<table>
<thead>
<tr>
<th>Prof/dep/utr* (n)</th>
<th>Prof/dep/utr* (n)</th>
<th>Prof/dep/utr* (n)</th>
<th>Prof/dep/utr* (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21=</td>
<td>21=</td>
<td>21=</td>
<td>21=</td>
</tr>
<tr>
<td>22=</td>
<td>22=</td>
<td>22=</td>
<td>22=</td>
</tr>
<tr>
<td>23=</td>
<td>23=</td>
<td>23=</td>
<td>23=</td>
</tr>
<tr>
<td>24=</td>
<td>24=</td>
<td>24=</td>
<td>24=</td>
</tr>
<tr>
<td>25=</td>
<td>25=</td>
<td>25=</td>
<td>25=</td>
</tr>
<tr>
<td>26=</td>
<td>26=</td>
<td>26=</td>
<td>26=</td>
</tr>
<tr>
<td>Lagn/ex* (n)</td>
<td>Lagn/ex* (n)</td>
<td>Lagn/ex* (n)</td>
<td>Lagn/ex* (n)</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>31=</td>
<td>31=</td>
<td>31=</td>
<td>31=</td>
</tr>
<tr>
<td>32=</td>
<td>32=</td>
<td>32=</td>
<td>32=</td>
</tr>
<tr>
<td>33=</td>
<td>33=</td>
<td>33=</td>
<td>33=</td>
</tr>
<tr>
<td>34=</td>
<td>34=</td>
<td>34=</td>
<td>34=</td>
</tr>
<tr>
<td>35=</td>
<td>35=</td>
<td>35=</td>
<td>35=</td>
</tr>
<tr>
<td>Övriga åtg* (n)</td>
<td>Övriga åtg* (n)</td>
<td>Övriga åtg* (n)</td>
<td>Övriga åtg* (n)</td>
</tr>
<tr>
<td>41=</td>
<td>41=</td>
<td>41=</td>
<td>41=</td>
</tr>
<tr>
<td>42=</td>
<td>42=</td>
<td>42=</td>
<td>42=</td>
</tr>
<tr>
<td>43=</td>
<td>43=</td>
<td>43=</td>
<td>43=</td>
</tr>
<tr>
<td>51=</td>
<td>51=</td>
<td>51=</td>
<td>51=</td>
</tr>
<tr>
<td>52=</td>
<td>52=</td>
<td>52=</td>
<td>52=</td>
</tr>
<tr>
<td>61=</td>
<td>61=</td>
<td>61=</td>
<td>61=</td>
</tr>
<tr>
<td>71=</td>
<td>71=</td>
<td>71=</td>
<td>71=</td>
</tr>
<tr>
<td>81=</td>
<td>81=</td>
<td>81=</td>
<td>81=</td>
</tr>
<tr>
<td>82=</td>
<td>82=</td>
<td>82=</td>
<td>82=</td>
</tr>
<tr>
<td>91=</td>
<td>91=</td>
<td>91=</td>
<td>91=</td>
</tr>
<tr>
<td>Akut besök (n), orsak/kod</td>
<td>Akut besök (n), orsak/kod</td>
<td>Akut besök (n), orsak/kod</td>
<td>Akut besök (n), orsak/kod</td>
</tr>
<tr>
<td>O NEJ</td>
<td>O NEJ</td>
<td>O NEJ</td>
<td>O NEJ</td>
</tr>
<tr>
<td>O JA, beskriv</td>
<td>O JA, beskriv</td>
<td>O JA, beskriv</td>
<td>O JA, beskriv</td>
</tr>
<tr>
<td>...........................................</td>
<td>...........................................</td>
<td>...........................................</td>
<td>...........................................</td>
</tr>
<tr>
<td>Tdvrädsla/ DBMP</td>
<td>Tdvrädsla/ DBMP</td>
<td>Tdvrädsla/ DBMP</td>
<td>Tdvrädsla/ DBMP</td>
</tr>
<tr>
<td>O NEJ</td>
<td>O NEJ</td>
<td>O NEJ</td>
<td>O NEJ</td>
</tr>
<tr>
<td>O JA, beskriv</td>
<td>O JA, beskriv</td>
<td>O JA, beskriv</td>
<td>O JA, beskriv</td>
</tr>
<tr>
<td>...........................................</td>
<td>...........................................</td>
<td>...........................................</td>
<td>...........................................</td>
</tr>
<tr>
<td>Övrigt</td>
<td>Övrigt</td>
<td>Övrigt</td>
<td>Övrigt</td>
</tr>
<tr>
<td>Följeslagare</td>
<td>Följeslagare</td>
<td>Följeslagare</td>
<td>Följeslagare</td>
</tr>
<tr>
<td>O NEJ</td>
<td>O NEJ</td>
<td>O NEJ</td>
<td>O NEJ</td>
</tr>
<tr>
<td>O JA, .........................</td>
<td>O JA, .........................</td>
<td>O JA, .........................</td>
<td>O JA, .........................</td>
</tr>
<tr>
<td>O Ingen uppgift</td>
<td>O Ingen uppgift</td>
<td>O Ingen uppgift</td>
<td>O Ingen uppgift</td>
</tr>
<tr>
<td>Tolk</td>
<td>Tolk</td>
<td>Tolk</td>
<td>Tolk</td>
</tr>
<tr>
<td>O NEJ</td>
<td>O NEJ</td>
<td>O NEJ</td>
<td>O NEJ</td>
</tr>
<tr>
<td>O JA, beställd</td>
<td>O JA, beställd</td>
<td>O JA, beställd</td>
<td>O JA, beställd</td>
</tr>
<tr>
<td>O JA, annan ...............</td>
<td>O JA, annan ...............</td>
<td>O JA, annan ...............</td>
<td>O JA, annan ...............</td>
</tr>
<tr>
<td>Studie ID</td>
<td>Boende 2009</td>
<td>Boende 2010</td>
<td>Boende 2011</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>O Eget boende</td>
<td>O Eget boende</td>
<td>O Eget boende</td>
</tr>
<tr>
<td></td>
<td>O Båda föräldrar</td>
<td>O Båda föräldrar</td>
<td>O Båda föräldrar</td>
</tr>
<tr>
<td></td>
<td>O En förälder</td>
<td>O En förälder</td>
<td>O En förälder</td>
</tr>
<tr>
<td></td>
<td>O Växelvis</td>
<td>O Växelvis</td>
<td>O Växelvis</td>
</tr>
<tr>
<td></td>
<td>O Annat</td>
<td>O Annat</td>
<td>O Annat</td>
</tr>
<tr>
<td></td>
<td>O Okänt</td>
<td>O Okänt</td>
<td>O Okänt</td>
</tr>
<tr>
<td>Dagsyssla 2009</td>
<td>Dagsyssla 2010</td>
<td>Dagsyssla 2011</td>
<td>Dagsyssla 2012</td>
</tr>
<tr>
<td></td>
<td>O Studerar</td>
<td>O Studerar</td>
<td>O Studerar</td>
</tr>
<tr>
<td></td>
<td>O Arbetar</td>
<td>O Arbetar</td>
<td>O Arbetar</td>
</tr>
<tr>
<td></td>
<td>O Arbetslös</td>
<td>O Arbetslös</td>
<td>O Arbetslös</td>
</tr>
<tr>
<td></td>
<td>O Annat</td>
<td>O Annat</td>
<td>O Annat</td>
</tr>
<tr>
<td></td>
<td>O Okänt</td>
<td>O Okänt</td>
<td>O Okänt</td>
</tr>
<tr>
<td>Medicinsk anamnes 2009</td>
<td>Medicinsk anamnes 2010</td>
<td>Medicinsk anamnes 2011</td>
<td>Medicinsk anamnes 2012</td>
</tr>
<tr>
<td></td>
<td>O Allergi</td>
<td>O Allergi</td>
<td>O Allergi</td>
</tr>
<tr>
<td></td>
<td>O Kronisk/alvarlig sjukdom</td>
<td>O Kronisk/alvarlig sjukdom</td>
<td>O Kronisk/alvarlig sjukdom</td>
</tr>
<tr>
<td></td>
<td>O Funktionshinder</td>
<td>O Funktionshinder</td>
<td>O Funktionshinder</td>
</tr>
<tr>
<td></td>
<td>O Röking/snus</td>
<td>O Röking/snus</td>
<td>O Röking/snus</td>
</tr>
<tr>
<td>Odont anamnes 2009</td>
<td>Odont anamnes 2010</td>
<td>Odont anamnes 2011</td>
<td>Odont anamnes 2012</td>
</tr>
<tr>
<td></td>
<td>O Besvär**</td>
<td>O Besvär**</td>
<td>O Besvär**</td>
</tr>
<tr>
<td>Odont status 2009</td>
<td>Odont status 2010</td>
<td>Odont status 2011</td>
<td>Odont status 2012</td>
</tr>
<tr>
<td></td>
<td>O Initial karies</td>
<td>O Initial karies</td>
<td>O Initial karies</td>
</tr>
<tr>
<td></td>
<td>O Manifest karies</td>
<td>O Manifest karies</td>
<td>O Manifest karies</td>
</tr>
<tr>
<td></td>
<td>O Antal fyllda tänder</td>
<td>O Antal fyllda tänder</td>
<td>O Antal fyllda tänder</td>
</tr>
<tr>
<td></td>
<td>O Antal tänder totalt</td>
<td>O Antal tänder totalt</td>
<td>O Antal tänder totalt</td>
</tr>
<tr>
<td></td>
<td>O Gingivit/Parod</td>
<td>O Gingivit/Parod</td>
<td>O Gingivit/Parod</td>
</tr>
<tr>
<td></td>
<td>O Riskgrupp rb.... rk.... rp....</td>
<td>O Riskgrupp rb.... rk.... rp....</td>
<td>O Riskgrupp rb.... rk.... rp....</td>
</tr>
<tr>
<td></td>
<td>O Övrig</td>
<td>O Övrig</td>
<td>O Övrig</td>
</tr>
</tbody>
</table>

** Se separat lista över exempel på anamnestiska uppgifter att registrera
Appendix VII

**Intervjuguide**

Syftet med studien är att beskriva hur ungdomar 16-19 år som bor i en mellansvensk region uppfattar tandvården. De övergripande frågeställningarna är:

- Vad hindrar ungdomarna från att gå på sina tandvårdsbesök?
- Vad får ungdomarna att gå på/prioritera sina tandvårdsbesök?

**Berätta om den senaste gången du besökte tandvården.**

- Berätta vad du kommer ihåg av besöket?
- Hur tog du dig dit?
- Vad gällde det?
- Hur var det?
- Vad tyckte du om besöket?
- Hur kännas det i allmänhet när du går till tandvården?

**Berätta om den senaste gången du hade missat att gå till tandvården.**

- Vad gällde det besöket? Vad hände då? Varför gick du inte?

**Har du missat tandvårdsbesök förut? Varför?**

Berätta vad, om det är något mer/annat, som kan få dig att inte gå på dina bokade tandvårdsbesök?

Vad tror du skulle få andra ungdomar att inte gå till tandvården trots att de har en bokad tid?

Berätta vad det är som fär dig, eller skulle få dig, att gå till tandvården? Vad är viktigt? Hur viktigt?

Vad betyder det för dig att ha bra tänder?

Hur pratar ni kompisar emellan om era tänder, hur ni sköter tänderna eller själva tandvårdsbesöken och behandlingarna?

**Hur ser du i allmänhet på föräldrarnas roll när det gäller ungdomarna och tandvården?**

**Hur tänker du om att tandvården för ungdomar är kostnadsfri?**

- Hur viktigt är det för dig att tandvården är kostnadsfri? Varför då/På vilket sätt?

Avslutningsfråga:

Berätta gärna om det är något som jag inte har frågat och som du vill prata om.
Publications in the series

Örebro Studies in Medicine


35. Söderqvist, Fredrik (2009). Health symptoms and potential effects on the blood-brain and blood-cerebrospinal fluid barriers associated with use of wireless telephones.


41. Gustafsson, Sanna Aila (2010). The importance of being thin – Perceived expectations from self and others and the effect on self-evaluation in girls with disordered eating.

42. Johansson, Bengt (2010). Long-term outcome research on PDR brachytherapy with focus on breast, base of tongue and lip cancer.

43. Tina, Elisabet (2010). Biological markers in breast cancer and acute leukaemia with focus on drug resistance.


46. de Leon, Alex (2010). *Effects of Anesthesia on Esophageal Sphincters in Obese Patients.*


52. Loiske, Karin (2011). *Echocardiographic measurements of the heart. With focus on the right ventricle.*


64. Nordin Olsson, Inger (2012). *Rational drug treatment in the elderly: "To treat or not to treat".*


67. Thuresson, Marie (2012). *The Initial Phase of an Acute Coronary Syndrome. Symptoms, patients’ response to symptoms and opportunity to reduce time to seek care and to increase ambulance use.*


75. Gustavsson, Anders (2012): *Therapy in Inflammatory Bowel Disease.*


96. Sundh, Josefin (2013): Quality of life, mortality and exacerbations in COPD.


98. Palmetun Ekbäck, Maria (2013): Hirsutism and Quality of Life with Aspects on Social Support, Anxiety and Depression.


102. Söderström, Ulf (2014): Type 1 diabetes in children with non-Swedish background – epidemiology and clinical outcome

103. Wilhelmsson Göstas, Mona (2014): Psychotherapy patients in mental health care: Attachment styles, interpersonal problems and therapy experiences


109. Törös, Bianca (2014): *Genome-based characterization of Neisseria meningitidis with focus on the emergent serogroup Y disease*

110. von Beckerath, Mathias (2014): *Photodynamic therapy in the Head and Neck*


120. Pelto-Piri, Veikko (2015): *Ethical considerations in psychiatric inpatient care. The ethical landscape in everyday practice as described by staff.*


140. Östlund Lagerström, Lina (2016): "The gut matters" - an interdisciplinary approach to health and gut function in older adults.


157. Olsson, Emma (2017): *Promoting Health in Premature Infants – with special focus on skin-to-skin contact and development of valid pain assessment.*


177. Christos Karefylakis (2018): Vitamin D and its role in obesity and other associated conditions.


