STUDIES IN SPORT, PHYSICAL EDUCATION AND HEALTH
124

Kirsti Kasila

Schoolchildren's Oral Health Counselling within the Organisational Context of Public Oral Health Care

Applying and Developing Theoretical and Empirical Perspectives

JYVÄSKYLÄN YLIOPISTO

STUDIES IN SPORT, PHYSICAL EDUCATION AND HEALTH 124

Kirsti Kasila

Schoolchildren's Oral Health Counselling within the Organisational Context of Public Oral Health Care

Applying and Developing Theoretical and Empirical Perspectives

Esitetään Jyväskylän yliopiston liikunta- ja terveystieteiden tiedekunnan suostumuksella
julkisesti tarkastettavaksi yliopiston Agora-rakennuksessa (Ag Aud. 3)
elokuun 31. päivänä 2007 kello 12.

Academic dissertation to be publicly discussed, by permission of
the Faculty of Sport and Health Sciences of the University of Jyväskylä,
in the Building Agora, (Ag Aud. 3), on August 31, 2007 at 12 o'clock noon.

UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2007

Schoolchildren's Oral Health Counselling within the Organisational Context of Public Oral Health Care

Applying and Developing Theoretical and Empirical Perspectives

STUDIES IN SPORT, PHYSICAL EDUCATION AND HEALTH 124

Kirsti Kasila

Schoolchildren's Oral Health Counselling within the Organisational Context of Public Oral Health Care

Applying and Developing Theoretical and Empirical Perspectives

UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2007

Editors
Harri Suominen
Department of Health Sciences, University of Jyväskylä
Irene Ylönen, Marja-Leena Tynkkynen
Publishing Unit, University Library of Jyväskylä

URN:ISBN:9789513929107
ISBN 978-951-39-2910-7 (PDF)

ISBN 978-951-39-2891-9 (nid.)
ISSN 0356-1070

Jyväskylä University Printing House, Jyväskylä 2007

ABSTRACT

Kasila, Kirsti
Schoolchildren`s oral health counselling within the organisational context of public oral health care: Applying and developing theoretical and empirical perspectives
Jyväskylä: University of Jyväskylä, 2007, 96 p.
(Studies in Sport, Physical Education and Health,
ISSN 0356-1070; 124)
ISBN 978-951-39-291-7 (PDF), 978-951-39-2891-9 (nid.)
Finnish summary
Diss.

The purpose of the present series of studies was to examine the counselling communication activities in schoolchildren`s oral health counselling and the organisational context of public oral health care. Four studies based on two datasets were carried out. The counselling follow-up audiotaped data (2002–2003) comprised 97 counselling encounters. Thirty-one 11–13-year-old schoolchildren (n = 31, 15 girls and 16 boys) were included in the counselling sessions that were conducted by four dental hygienists. The organisation data collection (n = 58) was carried out by using a semi-structured questionnaire in 2002. Methods of qualitative content analysis and statistical analysis were applied for the analysis of the data.

The results revealed that the schoolchildren's oral health counselling was dominantly constructed dental hygienist-centred information and advice giving. The dental hygienists were experienced in gathering information on the schoolchildren's oral health habits. Determination of need for change of the schoolchildren's oral hygiene habits was normatively and explicitly manifested. Whereas, regarding snacking habits, the dental hygienists often determined the schoolchildren's need for change implicitly through the speech practices of assessment, advice giving and change-inducing questions. In these cases the schoolchildren's need for change fairly often remained ambiguous. Counselling strategies regarding discussion about change processes and goal setting occurred fairly rarely. The studied organisation was observed to be role-dependent, goal-oriented and task-centred. Unidirectional chain of communication and responsibility for interaction were observed as the descriptive attributes of communication. The employees experienced that their position in the organisation was fairly secure. A good sense of one's position in the organisation was positively associated with several essential experiences regarding organisational factors. The communication satisfaction in the organisation had a moderating effect between the individual level and the organisational level. According to this study, the emphasis should be placed on reciprocal communication; giving and receiving feedback in leadership relations as well as opportunities to exert influence in the organisation. Furthermore, steps should be taken to develop communication activities that encourage schoolchildren to participate in counselling conversation, and to create structures that allow schoolchildren to have a voice in counselling. To improve the current counselling practice, qualitative studies of counselling processes are needed.

Keywords: Schoolchildren, Oral health-related habits, Counselling, Theoretical framework, Communication, Organisational culture, Oral health care

Author's address Kirsti Kasila
Department of Health Sciences and Research Center for Health Promotion
P.O. Box 35
FIN-40014 University of Jyväskylä, Finland
kirsti.kasila@sport.jyu.fi

Supervisors Docent Marita Poskiparta
Department of Health Sciences
University of Jyväskylä
marita.poskiparta@sport.jyu.fi

Professor Emeritus Jaakko Lehtonen
Department of Communication
University of Jyväskylä
jaakko.lehtonen@jyu.fi

Reviewers Professor Helvi Kyngäs
Department of Nursing Science and Health Administration
University of Oulu, Finland

Professor Pekka Aula
Department of Communication
University of Helsinki, Finland

Opponent Professor Eino Honkala
Institute of Dentistry
University of Turku, Finland

ACKNOWLEDGEMENTS

This study was carried out at the Research Center for Health Promotion, Faculty of Sport and Health Sciences, University of Jyväskylä, Finland. This study appertained to the Study Programme of Evaluation and Development in Health Promoting Communication. I wish to express sincere thanks to my first supervisor, Docent Marita Poskiparta for her guidance during the research process. Inspiring discussions with her outlined the study and gave me ideas to continue it but also gave me an opportunity to learn and think independently and to make my own decisions. To my second supervisor, Professor Jaakko Lehtonen, I direct my gratitude for his constructive comments on the organisation study. I warmly thank Professor Lasse Kannas for making this work possible.

I wish to cordially thank Professor Helvi Kyngäs and Professor Pekka Aula for the time they dedicated to reviewing and commenting on my thesis, Professor Hannu Hausen and Chief Dentist Ilpo Pietilä for their constructive cooperation within the different contexts, MSc Jari Villberg for his statistical support, and BA Markku Tuomi for proofreading the language of my work. I owe warm thanks to the whole research group of health promoting communication. Special thanks are due to PhD Tarja Kettunen for her professional and encouraging support during this study. I learned vitally important skills for working as a researcher while I had the pleasure of sharing a workroom with her.

I am deeply grateful to the studied organisation, the dental hygienists and the personnel and all schoolchildren who participated in this research. This research could not have been completed without their input. The Ministry of Social Affairs and Health, the Finnish Cultural Foundation and the Juho Vainio Foundation provided financial support for this study, which I most gratefully acknowledge.

My dear friends and family deserve my earnest thanks for their solid support. I especially wish to express my heartfelt thanks to my mother, Mrs Mirjami Kasila, for her endless encouragement and great love.

Kirsti Kasila

LIST OF ORIGINAL PUBLICATIONS

The thesis is based on the following papers which will be referred to in the text as Studies I–IV:

I Kasila K, Poskiparta M, Kettunen T, Pietilä I. 2006. Oral health counselling in changing schoolchildren's oral hygiene habits: a qualitative study. Community Dentistry and Oral Epidemiology 34, 419–428.

II Kasila K, Poskiparta M, Kettunen T, Pietilä I. Variation in assessing the need for change of snacking habits in schoolchildren's oral health counselling. International Journal of Paediatric Dentistry. In print.

III Kasila K, Poskiparta M. 2004. Organisational culture: pursuing a theoretical foundation within the Finnish public oral health-care context. International Journal of Health Care Quality Assurance 17, 258–267.

IV Kasila K, Poskiparta M, Villberg J. 2006. Cultural and communicational traits of oral health care: Results of a Finnish case study. Journal of Health Organization and Management 20, 537–550.

CONTENTS

1 INTRODUCTION

This research is about the neglected issue of formation of communication activities in schoolchild-dental hygienist oral health counselling within the organisational context of public oral health care. School-aged children have until recently been neglected in qualitative health counselling research. There is an extensive literature on relationships in professional-adult customer communications, yet no similar studies have been published regarding schoolchildren (cf. Hedberg et al. 1998; Tates & Meeuwesen 2001; Berry et al. 2005). Furthermore, little attention has been paid to issues of organisational culture and communication in Finnish oral health care. In recent years many structural and functional changes have taken place in Finnish public oral health care (Nordblad et al. 2001; 2002; Widström et al. 2002). The development and consolidation needs of the oral health care system have required prioritisation and proper allocation of existing limited resources and formulation of new modes of action (Saltman et al. 1998; Widström et al. 2002; Widström et al. 2004; Terveyden edistämisen laatusuositus 2006).

During the last few decades, preventive care of children and adolescents has been successfully emphasised in Finnish oral health care (Mattelmäki 2001; Widström & Erkinantti 2002). However, despite a decreasing trend, schoolchildren's dental caries has not been eradicated (Seppä et al. 2000; The world oral health report 2003; Nordblad et al. 2004). Professional-oriented and often curatively-oriented passive-client methods may in practice produce no additional benefit (Hausen et al. 2000; Tsakos 2005). Further efforts are required to improve schoolchildren's oral health. The causes of dental diseases are known; poor hygiene and diet are two major factors. The behaviourally oriented nature of dental diseases emphasises the need for behavioural change whereby the schoolchildren would be able to assume the responsibility for promoting their oral health. Although dental diseases are potentially preventable, influencing the behavioural origins of these problems is complicated and challenging.

Health counselling can be viewed as a combination of learning opportunities designed to enhance adaptations of behaviour that are conducive

to health. Recent systematic reviews and studies of oral health education have exposed its limitations (Kay & Locker 1996; 1998; Hugoson et al. 2003). One of the aims of the WHO Global Oral Health Programme is to improve oral health counselling (Diet, nutrition and the prevention of chronic diseases 2003). The current particular problem is the lack of well-defined, theory-based and behaviourally oriented models and tools for counselling schoolchildren, for initiating conversation and for addressing the habitual factors that influence individual health (Hedberg et al. 1998; Berg-Smith et al. 1999). However, current studies on the frequency and content of oral health instructions (cf. Laiho 1995; Nylander et al. 2001; Honkala et al. 2002) do not give evidence of the actual and interactive processes of oral health counselling. We do not know how the communication of oral health counselling is constructed in the practice. To improve the current counselling practice, qualitative studies of counselling processes are needed.

Organisational communication and organisational culture of are two of the main concepts of this thesis. Human communication within the context of organisational culture is difficult to grasp clearly and unambiguously. Therefore, understanding both concepts as a union of resemblances with a plurality of definitions may be more important than seeking to define them as a unified discipline (cf. Deetz 2001; Eisenberg & Riley 2001). Generally speaking, communication refers to products and processes of sharing information and creating meanings. Communication may be described along three major dimensions: content, form and destination. Furthermore, the key terms also include people, acting together, meaning and context (Conrad 1994). Communication is related to patterns of organisational relations. The creation and maintenance of organisational relations is materialized in organisational communication. The two means of organisational communication are providing information and to creating a community spirit within the organisation. (Lazega 1992; Conrad 1994; Åberg 2000; Van Vuuren et al. 2007.)

Communication is the basis of interaction. Within the context of institutionalised counselling, communication is sequentially organised interaction, in which a professional and an individual accomplish their task by using various communication acts (cf. Vehviläinen 1999; Pyörälä 2000; Poskiparta et al. 2001; Kettunen et al. 2006). Sequences in interaction can be determined as courses of communication activities that the participants initiate, develop and conclude together. The form and structure of talk are framed by roles, identity and occupational constraints. Interactivity is analogous with the degree of responsiveness and taciturnity. In interpersonal communication, interaction can be described as a turn-by-turn construction of an activity. (Vehviläinen 1999; Pyörälä 2000; Kettunen 2001.) In the organisational context, interactivity can be examined as cyclical and iterative processes of communication in which the messages and meanings that are related to previous messages are constructed and exchanged (cf. Conrad 1994; Deetz 2001).

In the theoretical literature, there is no clear consensus on the content of the concept of organisational culture. Culture covers a broad range of phenomena, extending from social structures to individual meanings and from core assumptions to visible artefacts. Culture refers to artefacts, norms and rules, including discourses, narratives, beliefs, assumptions, rituals, myths and values, within the range of shared learning, socialization or communicative processes and contexts of an organisation. (e.g., Schein 1990; Conrad 1994; Denison & Mishra 1995; Parker 2000; Hofstede & Hofstede 2005.) In this study, organisational culture was defined as a locally produced entity of organisation members and an expression of collective ownership that involves the employees' own concept systems (cf. Smircich 1983; Aula 1999; Frank & Fahrbach 1999; Juholin 1999; Parker 2000; Allen 2005). The relationship between culture and communication in the organisation was seen as symbolic and structural, and the culture of an organisation was understood to be maintained and mediated through this relationship (Conrad 1994; Aula 1999; Parker 2000; Deetz 2001; Eisenberg & Riley 2001).

The major aims of this study were to examine the counselling communication activities in schoolchildren-dental hygienist health counselling and the organisational context of public oral health care, in which the studied counselling encounters were conducted. Furthermore, by using logical analysis, the results of the organisation study and the counselling study were interlinked and used to construct the model of counselling communication within the organisational context of oral health care. This thesis is based on four papers, for each of which the doctoral candidate was the corresponding author. This research was carried out at the Research Center for Health Promotion of the Jyväskylä University. The research appertained to the study programme of Evaluation and Development in Health Promoting Communication. This research also was an element of the research project Controlling Caries in the Present Conditions of the Institute of Dentistry of the Oulu University.

2 REVIEW OF THE LITERATURE

2.1 Schoolchildren's oral health-related behaviour

The improvement in the oral health of schoolchildren in Finland and also throughout most European countries has been reported on during the last few decades (The world oral health report 2003; Nordblad et al. 2004). Despite an improving trend, dental diseases still are highly prevalent. The impact of dental diseases on both the individual and the society is significant. Globally, oral diseases restrict schoolchildren's activities in their life contexts and markedly diminished their quality of life (The world oral health report 2003). In Finland, recent studies have indicated that the positive development of schoolchildren's oral health has come to an end (Seppä et al. 2000; Nordblad et al. 2004). Furthermore, a polarisation in caries occurrence and in questionable knowledge, attitudes, beliefs and behaviour concerning oral health has been observed among schoolchildren (Vehkalahti et al. 1997; Poutanen et al. 2005).

Oral diseases are largely preventable. The causes of oral diseases are known; poor hygiene and diet are two major factors. Maintaining good oral hygiene and using fluoride toothpaste for regular tooth brushing and healthy food habits are essential for promoting oral health. (Sheiham 2001; Petersen & Lennon 2004.) Many studies have shown that a majority of schoolchildren in developed countries brush their teeth as a daily routine (Maes et al. 2004). In Finland, schoolchildren's oral hygiene habits have not improved as could have been expected (Honkala & Honkala 2004). In an international comparison, Finnish schoolchildren were classified as below average in tooth-brushing frequency (Maes et al. 2004). Furthermore, the use of dental floss is rare among them (Honkala & Honkala 2004).

In recent years, there have been changes in the eating patterns of schoolchildren, from structured meals to less structured snacking. High consumption of sweets and soft drinks is common among schoolchildren in many European countries and other Western countries (Vereecken et al. 2004). In Finland, the consumption has been, so far, moderate compared to many

other countries (Honkala & Honkala 2004; Vereecken et al. 2004; Vereecken et al. 2005). What needs to be recognised is that the consumption of such products has also increased in Finland during the past few decades (Vikat et al. 1998; Domestic sales of Finnish food products 2007). The frequency and the total amount of calorific snacks and drinks consumption are the significant aetiological factors for schoolchildren's dental diseases (Sheiham 2001; Petersen 2003; Karjalainen et al. 2004; Ruottinen et al. 2004). The consumption has risen and, consequently, the prevalence of dental caries has increased (Petersen 2003). Besides this, schoolchildren's eating behaviour is also related to many other lifestyle-related disorders such as obesity, elevated risk of non-insulin-dependent diabetes and cardiovascular diseases (Ludvig et al. 2001; Kautiainen et al. 2002; Diet, nutrition and the prevention of chronic diseases 2003).

The behaviourally oriented nature of schoolchildren's dental diseases emphasises the need for behavioural change whereby the schoolchildren would be able to assume the responsibility for promoting their oral health. However, influencing the behavioural origins of oral health problems is a complicated and demanding process. Schoolchildren are surrounded by multiple sets of interrelated factors in individual, family and school settings and at broader environmental levels, which influence their behaviour (Freeman & Sheiham 1997; Kuusela 1997; MacGregor et al. 1997; Story et al. 2002; Brown & Ogden 2004; Karvonen et al. 2005; Kwan et al. 2005). Further efforts and additional methods are required in order to ensure a favourable development of schoolchildren's oral health (Diet, nutrition and the prevention of chronic diseases 2003, Hugoson et al. 2003; Petersen 2003).

2.2 Oral health counselling: pursuing a theoretical framework

Health counselling can be determined as an activity of health education. Generally speaking, health education can be viewed as a combination of learning opportunities designed to enhance adaptations of behaviour that are conducive to health. Health education does not only concern giving instructions but is an all-inclusive process, in which the subjective perceptions of individuals are emphasised. Consequently, health is viewed as a resource of everyday life that comprises several determinants that are physical, emotional, social, spiritual and intellectual. Oral health is an element of health in general and is essential for quality of life. On the basis of this viewpoint, besides epidemiological and behavioural changes, active participation, improved decision-making skills and self-esteem are also considered to be aims and outcomes of health education. (Ottawa Charter 1986; Tones & Tilford 2001; The World Oral Health Report 2003; Kasila et al. 2002; Jakonen et al. 2005; Locker & Gibson 2006; Terveyden edistämisen laatusuositus 2006.)

In Finland, oral health counselling is included in schoolchildren's free dental care. However, little time is devoted to oral health promotion by the staff

of oral health care (Läärä et al. 2000). According to the study findings of Honkala et al. (2002), oral health instructions were only given to a minority of adolescents. Furthermore, previous international systematic reviews of oral health education have exposed its limitations (Kay & Locker 1996; 1998). Previous studies on the frequency and content of oral health instruction (Laiho 1995; Nylander et al. 2001; Honkala et al. 2002) have not illustrated the actual and interactive processes of oral health counselling. In addition, school-aged children have until recently been neglected in qualitative health counselling research. There is an extensive literature on relationships in professional-adult customer communications, yet no similar studies have been published regarding schoolchildren (cf. Hedberg et al. 1998; Tates & Meeuwesen 2001; Berry et al. 2005).

Normative, or professional-dominated, approaches that fail to consider the subjective perceptions of individuals are the established practice in oral health care (Tsakos 2005; Gherunpong et al. 2006). Advances in clinical operative techniques have made dental treatment more effective and acceptable. Nevertheless, professional-oriented and often curatively-oriented passive-client methods may in practice produce no additional benefit (Hausen et al. 2000; Tsakos 2005). Furthermore, oral health education programmes have often been knowledge-based (cf. Tsakos 2005), even though previous reviews have noted that, for instance, behavioural theory-based nutritional education programmes have achieved more dietary behaviour change than knowledge-based programmes (Contento 1995; Stone et al. 1995; Steptoe et al. 2003).

The current particular problem is the lack of well-defined, theory-based and behaviourally oriented models and tools for counselling schoolchildren, for initiating conversation and for addressing the habitual factors that influence individual health (Hedberg et al. 1998; Berg-Smith et al. 1999). Theories on health behaviour have been developed in order to explain the complicated relationships of different factors (Glanz et al. 1997). Recently, behavioural theories have also begun to be applied to oral health behaviour in research, but such an approach has not been systematically used in practical oral health care (Kallio 2000; Gherunpong et al. 2006).

The counselling premises of this study are founded on the application of the transtheoretical model of behavioural change (Prochaska & DiClemente 1983; Prochaska & Norcross 2003) and the motivational interview (Rollnick & Heather 1992; Miller & Rollnick 2002). In the next chapter, the foundations of the theoretical models will be described and applied to schoolchildren's oral health behaviour. After that, schoolchildren's oral health change counselling will be considered within the context of the theoretical framework.

2.2.1 Transtheoretical model of behavioural change

The transtheoretical model, which was originally developed by Prochaska and DiClemente (Prochaska & DiClemente 1983), has been presented as a comprehensive and an integrative model of behavioural change. At first, the model was aimed to describe the process of behavioural change for addictive

behaviours (smoking, alcohol abuse). Later, the model has been applied to a wide variety of health-problem behaviours and to different target groups. (Prochaska & DiClemente 1983; Prochaska et al. 1994; Nigg & Courneya 1998; Van Duyn et al. 1998; Povey et al. 1999; Frame et al. 2001; Berry et al. 2005; Bourdeaudhuiji et al. 2005.)

The transtheoretical model integrates a number of theoretical constructs focused on change. The model construes changes as a process involving progress through a series of five core stages; precontemplation, contemplation, preparation, action and maintenance (Prochaska & DiClemente 1983). Each of the stages conceptualises a state of readiness for change, which can be understood as an individual's current thoughts, feelings and attitudes regarding his or her intention to institute changes in health behaviour, which is also influenced by external factors (Prochaska & DiClemente 1983; Miller & Rollnick 2002; Prochaska & Norcross 2003). Staging algorithms are based on time periods in the model (Prochaska et al. 1992). This temporal dimension of stages, which has been criticised as arbitrary (Sutton 2001), was not essential for the qualitative application of this study and was thus omitted.

The second central organising construct of the transtheoretical model is that of processes of change. According to the model, the progress through stages of change is driven by a series of ten fundamental change processes, which are uniquely employed at each stage. (Prochaska & DiClemente 1983; DiClemente et al. 1991.) These processes describe covert and overt activities that individuals use to alter thinking, emotions, behaviour or interpersonal relationships (Prochaska et al. 1992; Prochaska & Norcross 2003). A principal construct of the processes of change is that of decisional balance, derived from the work of Janis and Mann (1977). The construct of decisional balance consists of two scales, the pros of change and the cons of change (Velicer et al. 1985).

Besides the above, the transtheoretical model recognises levels of changes, which acknowledge that an individual's multiple problems occur in the context of complex, interrelated levels of human functioning (Prochaska & Norcross 2003). These notions are usually included in various approaches to psychotherapy (Prochaska & Norcross 2003), but were not considered for this study. Despite that, generally speaking, contextual factors of an individual's real life are essential issues in the counselling conversation. In the following, the current understanding of the integration of stages and processes of changes will be presented (DiClemente et al. 1991; Prochaska et al. 1992; Nigg & Courneya 1998; Prochaska & Norcross 2003) and applied to the schoolchildren's oral health behaviour and intentional behavioural change (See Figure 1, p 21).

Precontemplation is a period during which a schoolchild's oral health habits are unhealthy but he or she does not consider nor has decided to effect changes in oral health behaviour. The schoolchild may be unaware of any problems or unwilling to admit them. In the stage of contemplation, the schoolchild is aware of problems but he or she is ambivalent regarding change. The schoolchild may have a high perceived barrier to taking action and low self-esteem. During this stage, the schoolchild begins to consider susceptibility

to diseases and disorders, barriers to change and benefits of changes. (Prochaska & DiClemente 1983; Prochaska et al. 1992; Prochaska & Norcross 2003.) Movement through these stages involves increased use of cognitive, affective and evaluative processes of change. Consciousness-raising processes, such as observation, confrontation and interpretation, can help the schoolchild to become aware of the negative consequences of current behaviours and the positive effects of change. (DiClemente et al. 1991; Prochaska et al. 1992; Nigg & Courneya 1998; Prochaska & Norcross 2003.) According to the findings of an integrative study across 12 different behaviours, the balance of pros and cons was systematically related to the stage of change. The cons of changing outweighed the pros during the precontemplation stage and the pros outweighed the cons during the stage of action. (Prochaska 1994; Prochaska et al. 1994.) During the process of dramatic relief, the schoolchild can consider emotional experiences related the problem behaviour and release them. For instance, peer experiences and stories related to the problem issue can affect the precontemplator emotionally. Emotional and cognitive reappraisal of values with respect to the problem behaviour (self-re-evaluation) can help the schoolchild through the contemplation stage. Furthermore, contemplators employ environmental re-evaluation, that is, they consider and assess how the problem behaviour affects their environment. (DiClemente et al. 1991; Prochaska et al. 1992; Nigg & Couneya 1998; Prochaska & Norcross 2003.) Regarding the emotional processes of change, schoolchildren may differ from adult people. Schoolchildren may have fewer emotional experiences related to health behaviour than adults do (Nigg & Courneya 1998; Källestål et al. 2006). Issues of concrete barriers are essential focuses in the schoolchildren's change processes (Åström & Rise 1996; Berry et al. 2005) but the motives for oral health behaviour tend to shift from cognitive to emotional ones during adolescence (Källestål et al. 2006).

The stage of preparation indicates readiness for change in the near future. During this stage, the schoolchild declares his or her intention to make a decision on change or begin a new behaviour in the near future. The schoolchild may reflect on previous experiences, effect tentative changes, decide on changes and consider a plan for a new health behaviour. As the schoolchild prepares for the action stage, it is important that he or she acts from a sense of self-liberation. The schoolchild needs to believe that his or her intention and effort play an important role in effecting change and overcoming difficult situations (self-efficacy) (DiClemente et al. 1991; Prochaska et al. 1992; Prochaska & Norcross 2003.) The concept of self-efficacy represents the situation-specific confidence that an individual has the ability to cope with a high-risk situation without relapsing to his or her unhealthy or high-risk habits. Many studies have disclosed a relationship between the stages-of-change dimension and self-efficacy (e.g., DiClemente et al. 1991; Prochaska et al. 1991; Nigg & Courneya 1998; Berry et al. 2005), which Bandura (1977) considers to be the most significant element in social learning theory.

During the action stage the schoolchild is actively involved in making changes. The schoolchild may reflect on his or her competence and control over the processes of change. Behavioural processes, such as contingency management, counter conditioning and stimulus control, have a significant role in coping with the conditions that can cause schoolchildren to relapse. The schoolchild may try to change the contingencies that control or maintain the problem behaviour. Counter conditioning involves learning to substitute healthier alternatives in conditions that normally elicit unhealthy habits. In addition, in the process of stimulus control the schoolchild becomes aware of and managing situations and reducing cues that can lead to problem behaviour. In addition, seeking and using of social support (helping relationships) are important processes for facilitating change. (DiClemente et al. 1991; Prochaska et al. 1992; Nigg & Courneya 1998; Prochaska & Norcross 2003.)

The successful maintenance stage is constructed of each of the processes that were completed before. In this stage the schoolchild has overcome barriers and integrated a new behaviour into his or her everyday life and attempts not to relapse to his or her former behaviour. The schoolchild may quite thoroughly reflect on his or her commitment to self-management. (Prochaska et al. 1992; Prochaska & Norcross 2003.) Self-rewarding goal attainment is also included in the core processes of maintaining change (reinforcement management) (Prochaska et al. 1992; Strecher et al. 1995; Cullen et al. 2001). In summary, change implies phenomena occurring over time. Therefore, an individual's health behavioural change is not linear action and, consequently, undergoing stages of change implies iteration and a cyclical pattern: readiness for change may fluctuate over time or from a situation to another. Behavioural change is, by its nature, a process, rather than a singular event. Furthermore, relapse is common and occasionally plays an important role in increasing schoolchild's self-awareness. (Prochaska et al. 1992; Prochaska & Norcross 2003; Berry et al. 2005.)

The transtheoretical model has been subjected to critical evaluation. Research has provided strong support for the reliability of the core constructs of the transtheoretical model, such as the stages and processes of change (e.g., Norcross et al. 1985; Prochaska et al. 1988; Prochaska et al. 1994). On the other hand, previous studies have also criticised the fact that the model's stages of change are difficult to apply to, for instance, dietary behaviour (cf. Povey et al. 1999; Whitelaw et al. 2000). In addition, recent critical reviews (Whitelaw et al. 2000; Sutton 2001; Adams & White 2003; Van Sluijs et al. 2004; Vähäsarja et al. 2004) have disclosed that the evidence of the effectiveness of the model's stages of change is limited and currently disappointing.

2.2.2 Motivational interviewing: individual-centred counselling style

Motivational interviewing is a goal-directed, individual-centred counselling style for helping individuals to consider and resolve ambivalence regarding behavioural change. The intended focus of motivational interviewing is issues of change for which a person is not ready and willing, or is ambivalent about.

Within the context of motivational interviewing, the examination and resolution of ambivalence is the core purpose of counselling and the counsellor's task is to give deliberate direction in pursuit of this goal. (Rollnick & Miller 1995; Miller & Rollnick 2002.) The first determination of the concept of motivational interviewing evolved from experience in the treatment of problem drinkers (Miller 1983). Later, fundamental concepts and approaches were elaborated as a more detailed description of clinical procedures (Miller & Rollnick 1991; 2002). The counselling style of motivational interviewing has been mainly applied to adult counselling (Miller & Rollnick 2002). However, there have also been some applications to target groups of adolescents in the research literature (e.g. Berg-Smith et al. 1999; Baer & Peterson 2002; Colby et al. 2005; Resnicow et al. 2006). Motivational interviewing has been explicitly tested in a number of clinical trials among adults (Rollnick & Miller 1995; Miller & Rollnick 2002; Rubak et al. 2005) but further research is needed on the efficacy of the approach and on conducting motivational interviewing with adolescents (Baer & Peterson 2002). A recent systematic review (Rubak et al. 2005) indicated that, in a scientific setting, motivational interviewing effectively helps individuals to change their behaviour and is superior to traditional advice giving.

Motivational interviewing pertains both to a style of relationship with others and to a set of techniques and strategies to facilitate that process (See Figure 1, p 21). The spirit of motivational interviewing entails three key approaches: collaboration, evocation and autonomy. Based on these approaches, the counselling involves a partner relationship and a positive atmosphere that is conducive to change rather than coercive. In such autonomous atmosphere, a schoolchild has a right and the capacity for self-direction. During counselling, the schoolchild's intrinsic motivation for chance is enhanced by drawing on his or her perceptions, goals and values. According to motivational interviewing, motivation for change and, consequently, resistance to change are not personality traits but fluctuating products of interpersonal counselling interaction. (Rollnick & Heather 1992; Miller & Rollnick 1995; 2002.)

There are specific counselling strategies that are characteristic of motivational interviewing. Reflective listening and a non-judgemental attitude demonstrate employing an empathetic approach. Developing discrepancy can be achieved, for example, by asking questions, by using open-ended questions, by having the schoolchild describe the pros and cons of his or her oral health habits, by giving normative feedback regarding recommendations and by facilitating the schoolchild to describe an alternative situation. Rolling with resistance is seen when the schoolchild is actively involved in the process of problem solving and the counsellor avoids argumentation. Resistance is a signal that the counsellor should change the approach to conversation. In this way the counsellor and the schoolchild will not approach the issue from opposing viewpoints but, rather, are collaborating for the schoolchild. According to motivational interviewing, the schoolchild's belief in the possibility of change is

an important motivator. Supporting self-efficacy is manifested through affirmation and statements that facilitate the schoolchild's own statements about behavioural change. According to motivational interviewing, it is the schoolchild rather than the counsellor who presents the arguments for behavioural change. On the whole, eliciting change talk, for instance, by exploring the decisional balance, goals and values, exploring extreme options, looking back and forward, etc., is a key part of change counselling. (Rollnick & Heather 1992; Rollnick & Miller 1995; Miller & Rollnick 2002.)

2.3 Schoolchildren's oral health change counselling

Until now, schoolchildren's oral health behaviour and counselling have not been extensively investigated within the context of the transtheoretical model and motivational interviewing. In the following, the applications of the theoretical foundations are summarised within the context of schoolchildren's oral health counselling (see Figure 1). The integration of the stages and processes of change can serve as an important guide and structure for the counsellor (Prochaska & Norcross 2003). When the counsellor is aware of the signs of readiness for change and the processes of change, then it is possible to use the most suitable counselling strategies at each stage of change (Baer & Peterson 2002; DiClemente & Velasquez 2002) (see Figure 1). According to Rollnick et al. (2002), a successful counselling session requires that the professional provides some structure and has some ability to listen to and monitor the individual's responses carefully. However, further evidence for interventions designed on the basis of stages of change is required (Ashworth 1997; Steptoe et al. 2001).

The aim of oral health change counselling, according to the theoretical models presented above, is to increase and enhance the schoolchild's reflection on his or her oral health behaviour and his or her awareness of attitudes, values and problems, by providing knowledge and skills and by encouraging, by way of using varied counselling strategies, the schoolchild to become involved in negotiations about needs assessment, decision making and goal setting (Contento 1995; Berg-Smith et al. 1999; Baer & Peterson 2002; Cullen et al. 2004; Franklin & Sloper 2005). During counselling the schoolchild will be encouraged to take responsibility for intentionally promoting oral health and to engage in self-care in his or her real-life contexts (Åström 1998; Kettunen et al. 2001; Cullen et al. 2001; Miller & Rollnick 2002; Resnicow et al. 2002). (See Figure 1.)

More accurately, in the beginning of the counselling, it is important to mutually determine the goals for the counselling and the schoolchild's self-care that are based on the schoolchild's oral health status, recalls of oral health habits and his or her experienced need for knowledge concerning, for instance, recommendations on oral health habits (cf. Miller & Rollnick 2002; Gherunpong et al. 2006). Offering information that corresponds to the schoolchild's

experienced need for knowledge is intended to help the schoolchild to raise his or her consciousness of oral health behaviour. (Miller & Rollnick 2002; Prochaska & Norcross 2003.) (See Figure 1.) Oral health knowledge is considered to be an important prerequisite for the needs assessment and the entire change process of health-related habits, although the relationship between these issues is complex and influenced by many factors (Kay & Locker 1996; Seasam et al. 1997; Kinirons & Stewart 1998; Pirouznia 2001; Poutanen et al. 2005; Watt 2005).

Two central starting points for change counselling are the constructs of needs assessment and assessment of readiness for change (see Figure 1). Needs assessment is a complex and demanding process of recalling, assessing and determining. Recent studies have showed that open, receptive and conversational style of needs assessment is effective and acceptable for identifying individually relevant needs and for enabling the schoolchild to participate in the process (Borup 1998; Shier 2001; Story et al. 2002; Cowley & Houston 2003; Mitcheson & Cowley 2003; Watt 2005). Preparing the schoolchild for changes requires understanding how he or she thinks and feels about his or her behaviour and how the schoolchild assesses his or her unhealthy oral health habits (Prochaska & Norcross 2003) (see Figure 1). Traditionally, the normative needs assessment, which does not consider the subjective perceptions and behaviours of individuals, is the established practice in oral health care (Tsakos 2005; Gherunpong et al. 2006). A recent study by Gherungpong et al. (2006) demonstrated that three crucial aspects of the needs assessment process should be observed, i.e., the normative, the behaviour-related and the quality-of-life aspects. After determining the need for change, the schoolchild's readiness for change is supported by, among other things, facilitating the schoolchild's reflection on changes and helping him or her with decision-making, goal-setting and drawing up a concrete action plan. Furthermore, discussing the change process seeks to promote the schoolchild's reflection on maintenance and commitment to change. (See Figure 1.) In summary, the theoretical framework or model provides an opportunity to describe the entire phenomenon, including the various structures and factors and the relationships between these (cf. Kyngäs 1995).

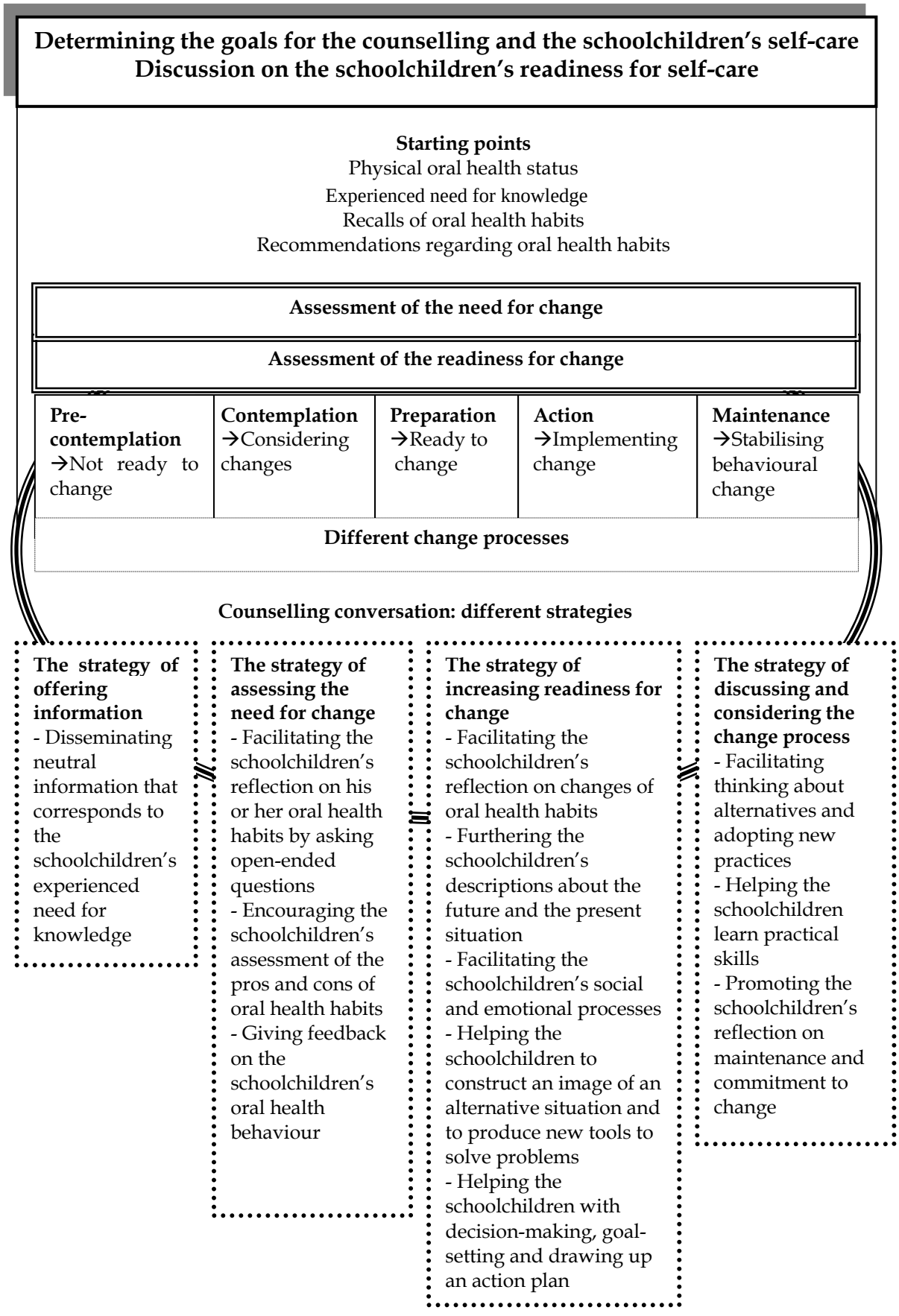

FIGURE 1 The construction of schoolchildren's oral health change counselling in the area of oral health habits (cf. Miller & Rollnick 2002; Prochaska & Norcross 2003).

2.4 Organisational context of public oral health care: pursuing a theoretical framework

2.4.1 Public oral health care

Finnish public health services are founded on citizens' right for adequate health care, which is recorded in the national constitution (Memorandum of the national project 2002). The Primary Health Act (Laki 66/1972) emphasises universal promotion in all fields of health, including oral health education (Kansanterveyslaki 1972). Municipal oral health care is an element of the public health care system, which is tax-funded and state-controlled (Memorandum of the national project 2002). At the national level, the Ministry of Social Affairs and Health supervises the provision of oral health care together with other civil service departments in the appropriate administrative domains. The five provincial governments are responsible for supervising local health care administration (From the Finnish health policy 1999). Public oral health care services are provided mainly in dental clinics that are organised by one or more municipalities (Widström & Eaton 1999; Widström & Erkinantti 2002). In addition, municipalities must belong to a regional health care district because of the system of referral in oral health care (From the Finnish health policy 1999).

During the last few decades, preventive care of children and adolescents has been successfully emphasised in Finnish oral health care (Mattelmäki 2001; Widström & Erkinantti 2002). In 2000, approximately one third of the entire population used public oral health services; the majority of them were children and adolescents (Report on social affairs and health 2002; Widström & Erkinantti 2002). Besides the preventive emphasis, the situation has been partly caused by the access limitation in oral health care that was in force until 2000 and also by the fact that persons below 18 years of age are entitled to free treatment. The public oral health care services in Finland also involve subsidies for several age and population groups (Mattelmäki 2000; Report on social affairs and health 2002.)

In recent years many structural and functional changes, including legislative changes in 2005 regarding guaranteed access to dental care for adults, have taken place in Finnish public oral health care (Nordblad et al. 2001; 2002; Widström et al. 2002; Hiiri & Oikarinen 2005). Earlier in Finland, access to public oral health care was restricted on the basis of age. Since a legislative change in 2000, more age groups have been included in the circle of care, which has increased the demands on oral health care (Widström & Erkinantti 2002). Furthermore, issues of division of labour are being discussed and evaluated in public oral health care (Nordblad et al. 2001; Läärä et al. 2000). The development and consolidation needs of the oral health care system have required prioritisation and proper allocation of existing limited resources and formulation of new modes of action (Saltman et al. 1998; Widström et al. 2002; Widström et al. 2004; Terveyden edistämisen laatusuositus 2006). The cost of

oral health care is high. In a number of European countries the estimated total oral health expenditure varies from 3 % to 13 % of the total health expenditure (Widström & Eaton 2004).

2.4.2 Multidimensional area of organisational culture and communication

The focus of the definition of organisational culture and communication has changed with time. A multitude of different perspectives and several models have been developed to describe the relationships of the phenomena and variables of organisational culture and communication in the literature on organisational theory. The models of organisational communication are related to predominant organisational theories. In the course of time, a perspective replaces another, but each perspective leaves traces for the next one. The relationship between any two approaches is often expressed as a dichotomy. However, one does not exclude the other; they exist in a mutually constitutive relationship. (Kreps 1990; Schein 1990; Wiio 1992; Mumby 1997; Conrad & Haynes 2001; Deetz 2001; Taylor 2005.)

The culture of an organisation covers a broad range of phenomena. Organisational culture affects the way in which employees consciously and unconsciously perceive, think, feel, act, make decisions, etc. (e.g., Schein 1990; Denison & Mishra 1995; Parker 2000; Hofstede & Hofstede 2005). In conceptualising a culture, the principal division is seen between interpretive discourses that view culture as a setting for the human practices of expression and sense making (something that an organisation 'is') and functionalist discourses that conceptualise culture as a variable (something that an organisation 'has') (Smircich 1983; Kreps 1990; Conrad 1994).

Organisational communication refers to products and processes of sharing information and creating meanings (Lazega 1992; Conrad 1994; Åberg 2000). The key distinctions, with respect to organisational communication, involve internal versus external focus, formal versus informal and direction (vertical, horizontal and diagonal). Furthermore, communication spans on different levels: micro (interpersonal communication), meso (group, organisational and interorganisational communication) and macro (higher order communication) levels (Kreps 1990; 1992; Juholin 2001). The bases of the different definitions of communication are derived from different views on process and meaning. The action-structure pair of communication, or dualism ('problem of order'), emerges as the central tension in organisational communication literature (Conrad & Haynes 2001).

In previous studies, different perspectives, forms, or orientations, of organisational cultures have been proposed (e.g. Denison 1990; Martin 1992; Denison & Mishra 1995; Goffee & Jones 1998). Analysing and summing up the different perspectives, Deetz (2001) has identified normative, interpretive, critical and postmodernist discourses (cf. Holtzhausen 2000; Conrad & Haynes 2001). He reveals that such different orientations can be largely seen as a result of the influence of Burrell and Morgan's (1979) discussion of sociological

paradigms (i.e., functionalist, interpretive, radical humanist and radical structuralist) (Burrel & Morgan 1994; Deetz 2001).

Overall, considering the different perspectives, commensurability, reification or dimension of contrast are themselves useful views for evaluation. Some critics have focused on different perspectives of culture. For instance, they have been criticised as idealistic, predetermined perspectives that fail to account for how cultural phenomena are constituted in and through communication (e.g. Taylor et al. 2006). Thus, limited theoretical perspectives may simplify and restrict the empirical description of organisational culture. In the next chapter, the multidimensional area of organisational culture and communication will be discussed according to four theoretical discourses (Holtzhausen 2000; Conrad & Haynes 2001; Deetz 2001). The discussion constitutes the foundation for the construction of the theoretical framework of this study.

2.4.3 Different discourses of organisational culture and communication

The normative discourse refers to the centrality of codification, the search for regularity and normalisation (Deetz 2001). From this point of view, the technical and logistical perspective of communication persists as a common basis for discussions about organisational communication. This perspective has traditionally been associated with information theory (Shannon & Weaver 1963) and other communication process and systems theories (Wiio 1992; Conrad 1994). Later, human and interpersonal feedback elements were introduced into the communication system. Thus, it was recognised that both formal/structural and personal/interpersonal threads are essential to organisation (Conrad 1994). Furthermore, different contingencies, social and organisational contexts are seen to affect the encoding and decoding processes of messages, yet the larger social context remains unspecified (Fiske 1990; White & Chapman 1996). Traditional perspectives of information processing have been grounded primarily in objectivist or perceptual approaches (Aula 1999; Åberg 2000; Salminen 2001; Sutcliffe 2001). Communication is seen as a process of message exchange that takes place through an organisation's formal communication channels and its bureaucratic mode. The formal communication system of an organisation consists of the formal communication channels and systems, the information content, the rules of communication and the relationships between these issues (Aula 1999; Kelly 2000; Tukiainen 2001). The aims of communication are to create consistency, continuity, shared meaning, directions and stability for an organisation. (Kreps 1992; Martin 1992; Deetz 2001).

All in all, the normative perspective views an organisation as an economy-administration rationality and, thus, culture and subcultures are determined as functional parts of the organisation (Deetz 2001). The goals of the organisation determine the content of the communication. The culture and communication of an organisation are often seen as management tools for achieving predetermined functional goals of the organisation. (Åberg 1989; Taylor 1993.) Culture needs control and co-ordination (Conrad 1994), but criticism has been

directed at the superficial view of management of culture and the treatment of culture as merely a form of normative glue that can be applied or removed as the executive desires (e.g., Parker 2000). Furthermore, Parker (2000) views subcultures as unintended consequences of structural mechanisms. Hofstede & Hofstede (2005) express, based on the cultural relativism approach, that there are no scientific standards for considering the ways of thinking, feeling and acting of one employee group as intrinsically superior or inferior to those of another.

The interpretive discourse constructs the discourse complementing or corresponding to the above. The two major concepts of the interpretive view (Putnam & Pacanowsky 1983; Taylor 1993; Deetz 2001) are the concept of account and indexicality. Accounting is the means by which employees create and sustain their sense of organisational reality and structure. Indexicality refers the contextual elements of objects. The external environment of an organisation is viewed through the inherent entity and identity of the organisation. The goals of communication are much more open than in the normative perspective and much less connected to issues of efficiency and productivity. (Taylor 1993; Deetz 2001.)

The semiotic or meaning perspective of communication is analogous with the social constructivist view of organisation, in which employees are thought to construct their reality in its relationship to the organisation and the larger society (Taylor 1993; Anderson 1996; Parker 2000; Allen 2005; Talja et al. 2005). The realisation and acceptance of various manifestations and constructions are essential. Organisational reality is formulated through the process of collective negotiation of giving meanings. Through communication, the organisation enacts itself and shapes, defines and marks the boundaries of its own identity. Thus, the categories of sameness and difference become central to describing organisational culture (Parker 2000). Open, reciprocal and symmetrical communication within an organisation constructs and maintains the community spirit of the organisation (Grunig et al. 1995; Juholin 1999). In the interpretive discourse, the culture of the organisation viewed as an entity of the organisation. Therefore, culture and communication of the organisation do not constitute separate parts of the organisation (Deetz 2001).

The negotiated view of communication and meanings (Lazega 1992) expands the perspective. This view focuses not only on the question of how communication processes create, maintain and give meaning to social relations and collective processes but, also, on the question of how the communication and organisational context themselves are negotiated (Lazega 1992). However, besides constructive knowledge, there are also many structural factors and information that are not evaluated or questioned in an organisation. For instance, such information may include demographic and epidemiological information in a health care organisation (Nordblad et al. 2001). Furthermore, in the theoretical literature, the logic of displaying a consensual spirit and unified culture has been questioned and more attention has been given to its

fragmentation, tensions and concealed thrust for domination (e.g., Martin 1992; Aula 1999; Deetz 2001; Ogbor 2001; Taylor 2005).

Communication in an organisation involves paradoxical characteristics and conflicts because, as individuals interact, their different values and contexts inevitably create tensions (Conrad 1994; Choo 2000; Holtzhausen 2000). Critical discourse, especially, focuses on power in an organisation, ethical issues and value commitments. The aim of critical discourse is to reveal, among other things, the invisible constraints to mutual decision making in an organisation. (Deetz 2001; Ogbor 2001.) For instance, triplicate thinking in health care organisations, in which physicians, nurses and administrative personnel are separated and their order of precedence is self-evident and rigid, focuses on the tendency of integrity (Enckell 1998). However, in reality, action is constructed on the basis of the views and needs of the professionals with the highest status (Denison 1990; Martin 1992; Denison & Mishra 1995; Ogbor 2001). In triplicate thinking, power is based on institutional views in which high-status individuals have the right to dominate and control the work of others (Enckell 1998).

After organisational studies adopted interpretism, discussion on the multidisciplinary field of postmodernism began to flower during the 1980s (Taylor 2005). Postmodernism is committed to exploring the complex relationship of multiple and competing discourses, narratives, knowledge and power in the struggle and infinite intercourse (Taylor 2005; Yolles 2007). The postmodernist view is analogous with the constructionist view in seeing organisational reality as dependent on language and, thus, in seeing that all experiences and comprehension of organisational reality are products of linguistic and organisational discourses. This view suggests that employees, who have unique personality and free will, are simultaneously oriented to and by multiple discourses (Allen 2005; Talja et al. 2005; Taylor 2005; Yolles 2007). Furthermore, postmodernism views meanings as fragmented and situated, not fixed and universal (Putnam & Fairhurst 2001).

The postmodernist view of organisational communication offers a critical perspective to consistency-centred communication theory and practice of organisation (Holtzhausen 2000; Conrad & Haynes 2001; Deetz 2001; Taylor 2005). This perspective proposes that dissymmetry and dissensus offer more appropriate approaches to current organisational communication practices than only seeking to implement symmetrical communication and consensus (cf. Grunig et al. 1995; Holtzhausen 2000). The view focuses on asymmetry and domination in organisational decision making and, especially, on dynamic interaction processes of power and resistance (Conrad & Haynes 2001; Taylor 2005). The postmodernist view does not seek to replace the focus of consistency of communication but merely to displace its centrism as the dominant orientation. An organisation accommodates many diverse ideas and orientations, including symmetrical communication. Discourse pluralism looks for patterns of relationships that occur across the plurality of associated discourses. The justification for the loss of a single reality is based on the realisation that individuals with different frames of reference have very

different realities. (Mumby 1997; Holtzhausen 2000; Ogbor 2001; Taylor 2005; Yolles 2007.)

In the postmodernist view, the symbolic action of communication merges with organisational structure but the action-structure nexus is replete with tensions and contradictions (Conrad & Haynes 2001, Taylor 2005). However, the problem of action-structure still exists (Conrad & Haynes 2001). Social constructions are linguistic but also constituted through embodied interactions with the organisation and its structure (Talja et al. 2005).

2.4.4 Dynamic reality of organisation

With the variation of different discourses, the reality of an organisation becomes a dynamic process that is continuously changing yet controlled by the fundamental order of the organisation, on which it depends (Conrad 1994; Stacey 1996; Anderson 1999; Aula 1999; Parker 2000; Deetz 2001). Different cultural discourses and orientations are maintained as latent features in organisational memory. The orientations may be explicitly and implicitly manifested in certain environments and situations in the organisation, for example, as standpoints on goals and tasks, decision-making, leadership and management (Enckell 1998; Helms & Stern 2001; Kasila & Poskiparta 2004). Furthermore, cultural orientations may form a partly overlapping set.

Co-operation invariably requires that foundations and principles of an organisation are at least partly shared by producing common meanings. However, unidirectional formal communication in the organisation may favour a stable, unchanging state of functional balance, in which its practices are rarely questioned and the capacity to change and be creative is limited. The opposite, extreme point on the stability continuum implies irregular confusion of communication and instability of functioning, which prevent the implementation of goal-oriented action. The resulting conflicts over communication and formulation may favour increasing functional disorder and chaos. (Conrad 1994; Stacey 1996; Aula 1999.) In any case, an organisation may seek a dynamic balance of diverse orientations balanced between rigid order and complete disorder and aim to construct it (Kreps 1992; Stacey 1995; Mayrhofer 1997; Aula 1999; Hofstede & Hofstede 2005; Taylor 2005).

2.5 The conceptual framework of the culture and communication of public oral health care

The literature agrees that organisational culture is a concept of primary importance for describing organisational reality, the performance context and change processes within the organisational context of health care. However, there is no clear consensus either on the content of the concept of culture or on the views of constructive and change processes of organisational culture or the

role of communication in these processes (Denison 1990; Denison & Mishra 1995; Vuori 1995; Bechtold 1997; Enckell 1998; Johnson & McIntye 1998; Rondeau & Wagar 1999; Ogbonna & Harris 2000; Helms & Stern 2001; Mallak et al. 2003). Organisational culture is related to job satisfaction (Johnson & McIntye 1998) and customer orientation and, consequently, also to customer satisfaction (Darby & Daniel 1999). Previous studies clarify the important contribution of organisational culture and communication to organisational efficiency, including reorganisation, adaptability and employee self-direction (Denison & Mishra 1995; Juholin 1999; Lakomski 2001; Thorne et al. 2001).

In this study, the organisational culture of public oral health care is defined as the entity of organisation members and an expression of collective ownership that involves employees' own concept systems (attitudes, values, beliefs, attributes, affections) (cf. Aula 1999; Frank & Fahrbach 1999; Juholin 1999; Tukiainen 2001). The culture of oral health care is viewed as a complex and dynamic phenomenon (cf. Seigfried 1998; Frank & Fahrbach 1999) and is described using the theoretical typology of different cultural orientations or traits: consistency, mission, community spirit and adaptability and monitoring (Figure 2). The cultural orientations were derivatively produced by two dimensions: internal integration versus external orientation and stability versus change. (cf. Denison 1990; Denison & Mishra 1995; Goffee & Jones 1998; Parker 2000; Deetz 2001; Kasila & Poskiparta 2004.) Furthermore, attention was focused on meaningful differences and similarities among organisational communication activities (Figure 2). The named cultural orientations are not paradigms because their boundaries were not demarcated. This paper suggests that cultural orientations may be partially overlapping and are maintained as latent features in organisational memory and that such orientations may be explicitly and implicitly manifested in certain working environments and situations in an organisation. Various functions, meanings and communicative needs are differently emphasised in such cultural orientations (Enckell 1998; Deetz 2001; Helms & Stern 2001; Nenonen & Nylander 2001; Hofstede & Hofstede 2005).

More precisely, organisational culture is formulated when employees in different functional contexts observe, interpret and assign meanings, on the one hand, to both official messages and the administrative structure of an organisation and, on the other hand, to unofficial messages that are produced and transmitted in the organisation and its environment and mediated through formal and informal communication channels (Kreps 1992; Brown & Starkey 1994; Johnson et al. 1994). Using these meanings, employees construct their own concept system and, through this system, classify themselves and their positions in the organisation, other members of the organisation and different relationships in their organisation (Anderson 1999; Frank & Fahrbach 1999; Juholin 1999; Parker 2000; Tukiainen 2001). The employees' internal processes of giving meanings are transformed through the medium of interaction and the communication system of the organisation (Brown & Starkey 1994; Gustavsson 2001). For instance, the views on organisational identity are constructed

through employees' internal processes of giving meanings and collective processes of interaction and may account for leadership relations and modes of action, employees' opportunities to influence decisions, horizontal communication and the function of the communication process in general (Trethewey 1997; Juholin 1999; Rondeau & Wagar 1999; Parker 2000; Tukiainen 2001). Changes in collective interaction iteratively determine the employees' concept system and classifications as well as the evaluations that occur through them (Frank & Fahrbach 1999). This approach invokes commitments of social constructionism that maintains that employees prolifically generate symbolic constructs. Through their engagement with the organisational reality, they subsequently reify those constructs and continuously use and modify them as recourses for co-orienting understanding and co-ordinating interaction. (Anderson 1996; Allen 2005.)

Various communication functions are core factors of organisational reality and may become explicitly and implicitly manifested in a specific environment and situation in an organisation (Johnson et al. 1994; Shaw 1997, Claver et al. 1998; Enckell 1998; Choo 2000; Helms & Stern 2001). The culture and communication of oral health care have a symbolic and structural relationship, and the culture of an organisation is maintained and mediated through this relationship. The communication functions (e.g., instructional, interactive, strategic and personal) that are deeply associated with the cultural orientations can be described by using the theoretical typology of communicational traits or orientations (see Figure 2). The symbolic processes that flow within the organisation are partially manifested implicitly and difficult to reach. There are also interwoven relations between the concepts of organisational identity and culture. Organisational identity can be viewed as a self-reflexive product which is formed by the symbolic context of organisational culture (Hatch & Schultz 1997). In this study ten attributes were chosen on the basis of the constructed theoretical framework to describe how employees would reflect on the identity of their organisation. These attributes can be interpreted as the states of outcomes derived form individual and collective attribution processes regarding the organisation. (See Figure 2.)

Organisational communication is deeply associated with leadership communication that is essential for the functioning and formulation of an organisation (Spinks & Wells 1995; Juholin 1999; Salminen 2001; Tukiainen 2001; Åberg 2000; Mastrangelo 2004; Robson & Tourish 2005; Van Vuuren et al. 2007). There are many different definitions of and approaches to leadership in the research literature (Grint 1997; Campbell 2007). Leadership is often conceptualised as a process with both interpersonal traits and styles and organisational elements (Spinks & Wells 1995; Northouse 2001). The approach of this study focuses on the view that leadership is a feature of relationships rather than individuals (cf. Van Vuuren et al. 2007) (see Figure 2). Effective leaders engage in both professional and personal leadership behaviours (Mastrangelo et al. 2004). At a general level, leadership can be defined as a process whereby a leader influences employees to achieve organisational goals

(Northouse 2001; Salminen 2001; Mastrangelo et al. 2004). Communicating vision, which can be seen as an outlook of a credible, attractive and better future for an organisation, is a central part of organisational leadership (Kelly 2000). Quality communication is the means by which leaders clarify the vision of their organisation. Communicating and expressing the vision increases awareness of what is expected of employees and enhances their sense of security. Also, quality communication plays an important role in initiating and maintaining trust between leaders and employees (Allert & Chatterjee 1997). Leaders would not be able to implement their vision without employees' trust (Kelly 2000; Mastrangelo et al. 2004; Van Vuuren et al. 2007). Furthermore, for instance, providing information early and maintaining open lines of communication are key factors in increasing employees' sense of security and commitment in their organisation (Van Vuuren et al. 2007). Organisational communication has an effect on feelings of certainty. Furthermore, feelings of belonging to a community, commitment and trust are linked to organisational culture. (Allert & Chatterjee 1997; Salminen 2001; Mastrangelo et al. 2004; Elving 2005.)

In this study, an attempt was made, by applying Antonovsky's salutogenic model (1987) to organisational reality, to describe the construction of employees' concept system of their organisation. The main concept of Antonovsky's model is a sense of coherence (SOC), which can be viewed as a social concept, evolving in a socio-economical environment with defined norms and values (Antonovsky 1987; 1993). In this study, the concept of the sense of one's position in an organisation was used (see Figure 2). This is analogous with SOC in that it can be manifested in an environment of action, in which different roles, communicational methods and structure and leadership patterns of an organisation shape the reality and culture of the organisation. When an employee has a strong, positive sense of his/her position, he/she experiences a pervasive, enduring and dynamic sensation of confidence in the fact that his or her internal and external environments in organisational life are structured, predictable and explicable (Antonovsky 1987; 1993). Organisational communication can be considered as an important antecedent of the self-categorisation process. Organisational identification refers to how employees define the self with respect to their organisation. The concept of one's position combines elements of occupational identity and personal need for structure (Elovainio & Kivimäki 2001; Salminen 2001).

The complex interaction between different elements and levels (the sense of one's position in an organisation, communication systems and relationships, organisational identity) can be defined as the organisational coherence that describes the dynamic processes of the manifestation of the reality of the organisation. In this study, the concept of organisational coherence, which is an element of organisational culture, was employed because of its focused and dynamic view of organisational reality and the crucial role of individual experiences and communicational relationship in an organisation. Organisational coherence comprises the interaction of its component parts (cf. Antonovsky 1993; Mayrhofer 1997; Aula 1999).

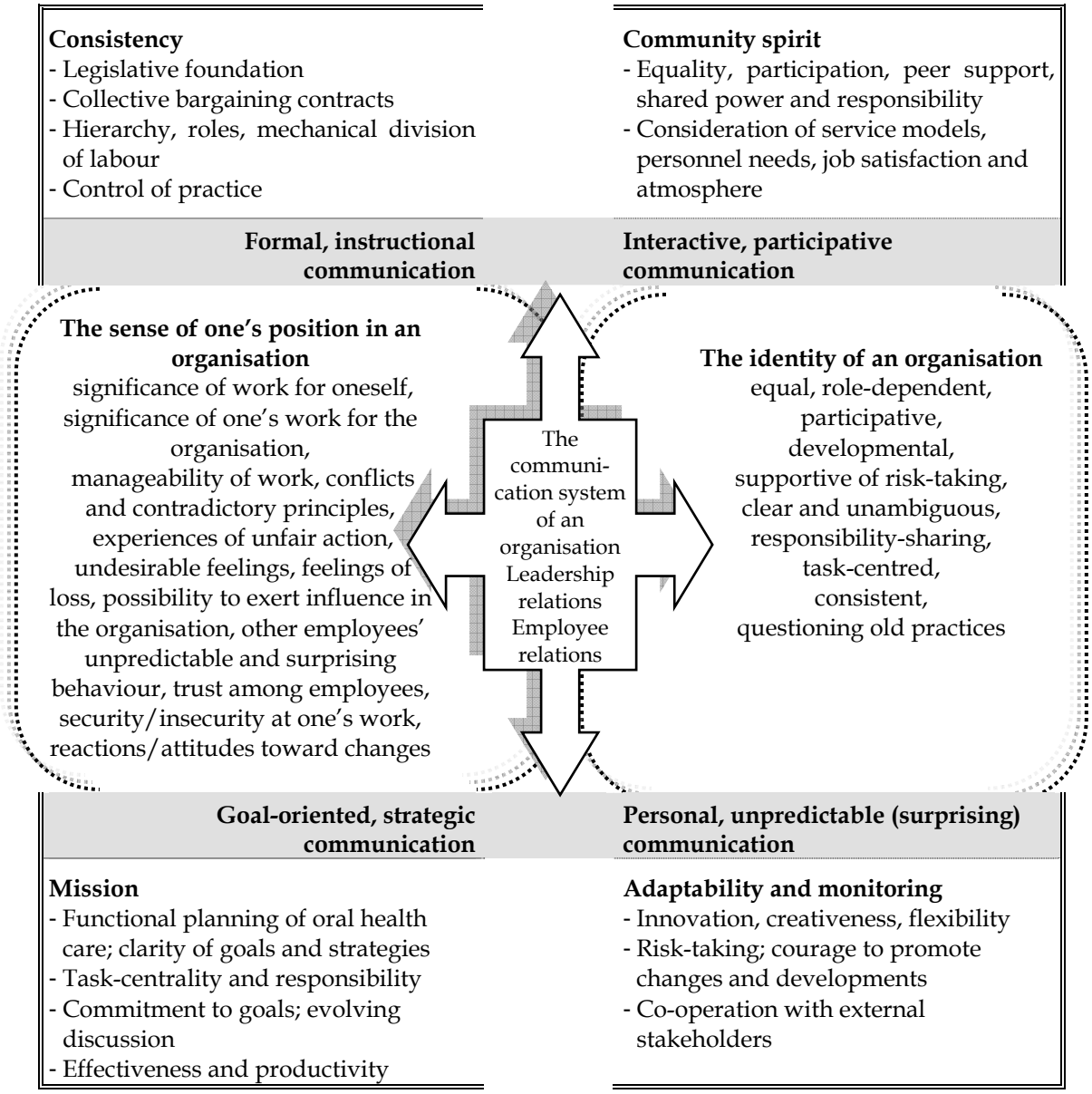

FIGURE 2 The theoretical framework of organisational context within the public oral health care

3 THE AIMS OF THE RESEARCH

The aims of this research were to investigate the formation of counselling practices and processes in schoolchildren-dental hygienist health counselling communication and the organisational context of public oral health care, in which the studied counselling encounters were conducted. The constructed theoretical framework formed the foundation for the empirical and analytical research components. The specific empirical research questions were as follows:

1) How was the structure of the processes of schoolchild-dental hygienist communication concerning changes of oral hygiene habits constructed in oral health counselling?
2) What kinds of counselling communication activities were employed in assessing schoolchildren's need for change of snacking habits?
3) What kinds of changes concerning oral health habits did schoolchildren make during a follow-up year, 2002–2003?
4) How did the employees describe their organisation and experience their position within it?
5) What differences, if any, existed in organisational identity, communication satisfaction and leadership according to occupation, career length and the sense of one's position in the organisation?
6) What were the relationships between different individual and organisational factors in the studied oral health care organisation?

Furthermore, by using logical analysis, the following questions were discussed: what kinds of cultural orientations and communication were manifested in the studied organisation and how the results of the organisation study and the counselling study were interlinked.

4 METHODS

4.1 Design of the counselling study

This study was a part of a larger follow-up counselling interaction research project (2002-2005). Furthermore, the counselling study was an element of the research project Controlling Caries in the Present Conditions. The aim of the counselling study was to describe naturally-occurring counselling interaction phenomena within the context of public oral health care. The schoolchildren, diagnosed with at least one active initial caries lesion, consented to participate in the study. The diagnostic criteria for caries differentiated between active and inactive caries lesions at both the cavitated and the non-cavitated level. This distinction was based on a combination of visual and tactile criteria (Nyvad et al. 1999). The protocol of whole research project (Appendix 1) was constructed in collaboration between all participants of the organisation and the co-researchers. This protocol was strongly dental knowledge-based; the protocol included detailed and normative guidance regarding the aetiology of dental caries, the use of xylitol and fluoride and the issues of brushing and flossing. According to the evidence-based research protocol, maintaining good oral hygiene and using fluoride toothpaste for regular tooth brushing (twice a day) are essential in preventing dental caries and periodontal diseases (Sheiham 2001; Petersen & Lennon 2004).

According to the protocol, dietary counselling comprised information about dietary recommendations and examples of recommended and unhealthy diets. Many national reports, including the Finnish Nutrition Recommendation, set target levels for free sugars, the average being 10 percent or less of calories, which is equivalent to a daily intake of 40–55 grams per person (Cannon 1992; Finnish nutrition recommendations 1999; Sheiham 2001). According to WHO recommendations, the frequency of consumption of foods and/or drinks containing free sugars should be limited to a maximum of four times per day (Diet, nutrition and the prevention of chronic diseases 2003). The recommendation commonly used in Finnish oral health education advises

snacking sweets no more frequently than once per week and drinking soft drinks no more frequently than two to three times per week (Karjalainen et al. 2001). In this study, snacking habits were defined as less structured eating patterns of schoolchildren that comprised the consumption of sweets, chips, soft drinks, juice, biscuits and buns or cakes. Detailed criteria for snacking habits regarding the frequency and the amount of sugar intake were not determined in this study. The counselling protocol also included streptococcus mutans and lactobacilli tests (see the letter of instruction for the dental hygienists, Appendix 2), the results of which the dental hygienists often presented during the sessions. The function of the tests in counselling conversation was determined to be a tool for addressing habitual factors that influenced bacterial levels. Thus, the salivary tests were classified as a content issue of the naturally-occurring counselling conversations.

Furthermore, prior to commencing the study the participating dental hygienists received one-time training on the principles of the stage of model of change (Prochaska & Norcross 2003), on motivational interviewing (Miller & Rollnick 2002) and on applying them both to oral health counselling (see Appendix 1). The knowledge-based study protocol directed the counsellors' formulation of the counselling. Nevertheless, in the interaction counselling study, the dental hygienists were allowed to freely apply the knowledge of interaction provided during their pre-study training (Appendix 2). One-time training can be classified as natural occupational training in the organisation. Thus, the audiotaped interaction sessions were naturally-occurring encounters. After the first study year and, subsequently, almost once per study year, the dental hygienists received training and feedback sessions that were based on the gathered counselling data. The counselling data of this thesis were gathered during the first study year. The training sessions of the dental hygienists during the study years were not analysed in this thesis. Furthermore, the whole counselling study project included interviews of the schoolchildren and the dental hygienists, but the interview data were not analysed in this thesis. Prior to the data collection the ethical committee of the Jyväskylä University accepted the study protocol. Informative letters were sent to the schoolchildren's guardians (see Appendix 3). Informed consent was obtained from all participating schoolchildren, their guardians and dental hygienists (see Appendix 4).

4.2 Data of the counselling study

The aim of the counselling study of this thesis was to investigate oral health counselling of schoolchildren diagnosed with at least one active initial caries lesion by public oral health care in Finland. Thirty-one 11–13-year-old schoolchildren (n = 31, 15 girls, 16 boys) consented to participate in audiotaped counselling encounters conducted by four female dental hygienists. During

regular scheduled appointments, the dental hygienists systematically recruited voluntary schoolchildren who met the inclusion criteria to participate in the study. The data of a larger follow-up (2002-2005) counselling study comprised seven counselling periods that were carried out at intervals of six months. Number of counselling sessions varied from one to four per period. All counselling sessions were audiotaped. The dental hygienist did the recording themselves. After receiving training on recording techniques, the counsellors experienced no problems with producing the tape recording.

The counselling study of this thesis comprised one year (2002–2003) of follow-up data. The audiotaped data included a total of 97 counselling encounters. The data formed two sequential parts. In spring 2002 the data comprised 66 counselling encounters. There were one to four counselling sessions per schoolchild and the schoolchildren's sequential counselling encounters were mainly conducted within one month. The communication activities of change counselling were explored in detail from the data of 2002. The first counselling sessions in 2002 were selected for this study on the basis of the theoretical view that the basis of change counselling is the assessment of behaviour, the need of change and the readiness for change. In spring 2003 the data included 31 counselling encounters. The results of the schoolchildren's need assessments were explored from the data of 2003. In 2003, the needs assessment conversation was based on a structured questionnaire in which the schoolchildren were requested to assess their need for change of oral health habits (frequency of tooth brushing and flossing and consumption frequency of snacking products) by using a two-point scale (true /false) (see Appendix 5). In 2003, the assessments were conducted during a single session, with the exception of two schoolchildren. The assessment of one took place during two sessions. The other did not assess his need for change of oral health habits during the sessions in spring 2003.

4.3 Methods of data analysis in the counselling study

The data was analysed qualitative by using content analysis (Kyngäs & Vanhanen 1999; Pope et al. 2000; Krippendorff 2004; Hsieh & Shannon 2005). At first, the counselling conversations were read and reread and, then, conversations regarding oral hygiene habits and dietary issues within the counselling sessions were identified and recorded in separate text files. The study procedure for both issues included both single-valued and multi-valued data; a datum for every schoolchild concerned and a description of the counselling conversations (cf. Krippendorff 2004).

In Study I the analysis was continued by exploring, in the 2002 data, (1) introduction to counselling (2) discussion about assessing the schoolchildren's needs for change in oral hygiene habits, (3) discussion about readiness for change and (4) counselling strategies that considered changes and new oral

hygiene habits. In the data, the themes and categories that were focused on particular phrases, incidents, turns or types of behaviour, with regard to the schoolchildren's individual descriptions of their oral hygiene habits and the dental hygienists' counselling practices, were identified and indexed. These were coded under the four study aims described above. Two study aims, numbers three and four, were compared with analytic criteria that were based on the theoretical framework. The analysis also included inductively derived categories that identified different counselling strategies in the data since the deductively derived categories regarding the counselling strategies were not founded on the authentic data (cf. Pope et al. 2004; Hsieh & Shannon 2005.) The inductively derived categories were determined and named according to their content (Table 1). The analysis of Study II also focused on the characteristics of communication, with special attention to the meaning of the verbatim text (cf. Hsieh & Shannon 2005). The principle behind the analysis was to examine what communication activities were employed in constructing the assessment of the need for change of the schoolchildren's snacking habits. The content and characteristics that concerned snacking habits and included indications of behaviour were coded, classified and sorted into categories. Again, the inductively derived categories were named according to their content.

TABLE 1 Examples of the content and the names of the categories in the area of tooth brushing.

Determination of categories with respect to counselling strategies **Examples of the semantic content in the data**
Giving advice by the dental hygienist concerning an area of the schoolchild's need for change and in which appropriate health behaviours were normatively recommended and suggested.
DH: It would be really great if you'd have time to brush in the morning as well, it would be so good for your teeth to clean them twice a day, mornings and evenings. (No. 27)
Dental hygienist-centred goal setting was the practice in which the aim for action was set, in relation to the schoolchild's need for change. The schoolchild accepted the aim.
DH: I mean, could we now agree on a goal that by the next time you'd try to brush every single morning? SC: Yeah (No. 21)
Discussing change included issues of barriers, pros/cons and alternatives of oral hygiene habits and memory rules and the significance of dental well-being.
DH: What's so difficult to remember about it (brushing)? What? SC: I don't know DH: What do you think about your teeth, how important are they for you? SC: Not at all. DH: Not at all? What if you'd have no teeth any more? SC: Hmm DH: Of course there's nothing one can do if they're not important to you but still you feel that it's a pretty good idea to have teeth in your mouth for eating and they make speaking a lot easier too. You should think about that a little anyway, maybe you'd need them for something anyway (No. 6)

To conclude the analysis of counselling data, the schoolchildren's changes in oral health habits were explored after a follow-up year, in 2003. The results of the schoolchildren's changes were based on the schoolchildren's self-reports during the counselling conversation. The results were presented numerically.

4.4 Design and data of the organisation study

The data collection regarding the organisation study was carried out in December 2002 at a dental clinic, operated by 15 departments, by using a questionnaire (Appendix 6) that was distributed to each employee via internal mail. Response rate was high (84 %). The respondents (n = 58) are described in Table 2. One respondent did not disclose his or her occupation and two persons did not disclose their career length.

TABLE 2 The respondents' background.

Occupation	**%**
Dental nurses	53.4
Dentists	41.4
Other personnel	3.4
Career length in the organisation	**%**
0–10 years	27.6
11–20 years	41.4
Over 20 years	27.6

The questionnaire contained of 45 questions, including three open-ended questions and two background questions. In the questionnaire respondents were requested to describe their organisation regarding each of a total of ten attributes that were specified by using a five-point scale ranging from 1 (extremely) to 5 (not at all). The sense of the employees' position in the organisation was measured by a 12-item scale that covered a wide spectrum of affective factors, reactions to organisational events and commitment to work. The subjects responded on a five-point scale. The variables of the relations between employees and employers consisted of statements, with five response options, concerned with satisfaction, confidence, feedback, frankness and support in leadership relations. Furthermore, the questionnaire included three questions regarding satisfaction with the chain of communication, interaction and opportunities to exert influence in the organisation, by using a five-point scale. In addition, the respondents were requested to assess the communication in their organisation by answering two open-ended questions. Attitudes towards changes and future orientation were explored by requesting the employees to anticipate the situation of oral health care in a year from the

present time on a five-point scale. Furthermore, the respondents were requested to disclose their reactions to changes in the organisation by answering an open-ended question. The measurement of the variables is described in more detail in Study IV.

4.5 Methods of data analysis in the organisation study

The methods of analysis included calculations of frequency and percent and mean scores for data variables. Associations between the variables were described by using cross-tabulation. Four sum variables were recorded: Identity of organisation, The sense of one's position in the organisation, Communication satisfaction and Leadership. Table 3 indicates the reliability coefficient of the recorded sum variables. Differences between variables were tested statistically by using the chi-square test and non-parametric tests (significant level $p < .05$). The relationships between organisational and individual constructs were estimated by using structural equation modelling and performing statistical analyses with the LISREL 8.54 program (Jöreskog & Sörbom 1993). Moreover, the open questions were analysed qualitatively by using content analysis. All responses to the open-ended questions were recorded into computer text files and the whole database was systematically analysed and categorised. (Krippendorff 2004; Hsieh & Shannon 2005.)

TABLE 3 Reliability coefficient of the recorded sum variables.

Sum variable	α
Identity of the organisation (equal, participative, developmental, supportive of risk-taking, clear and unambiguous, responsibility-sharing, consistent, questioning old practices)	.68
The sense of one's position in the organisation (significance of work for oneself, significance of one's work for the organisation, manageability of work, conflicts and contradictory principles, experiences of unfair treatment, undesirable feelings, feelings of loss, opportunity to exert influence in the organisation, other employees' unpredictable and surprising behaviour, trust among employees, security/insecurity at one's work, reactions/attitudes toward changes	.81
Communication satisfaction (satisfaction with the chain of communication, satisfaction with opportunities to exert influence, satisfaction with interaction)	.69
Leadership (satisfaction with employer, employer creates community spirit, opportunity to openly disclose one's opinions to the employer, it is easy to approach the employer, the employer is receptive to employees, the employer is aware of employees' working requirements, trust in the employer, sufficient feedback from the employer, giving feedback to the employer is possible, the employer takes feedback into account)	.90

5 OVERVIEW OF THE RESULTS

5.1 Formulation of schoolchildren's oral health change counselling (Studies I and II)

The counselling encounters in 2002 were begun normatively by considering the schoolchildren's physical oral health status on the basis of a clinical oral examination. In the clinical part of the counselling, the counsellors showed the schoolchildren initial caries lesion(s) in their own mouths by using a mirror. Furthermore, in the beginning of the counselling the counsellors usually stated the purpose of the counselling and self-management and emphasised the schoolchildren's responsibility for oral health promotion and treatment. With the exception of a few unusual cases, the counsellors did not encourage the schoolchildren to disclose their own perceptions of oral health self-care and counselling.

Recalling the schoolchildren's oral hygiene habits and snacking habits began with a consideration of the issues. Usually, a question/answer-modelled sequence regarding the causative factors of initial caries preceded the recalls in the counselling but the issue of causative factors was rarely continued after the recalls. The recall of oral hygiene habits was typically based on the counsellors' predetermined questions regarding the regularity and frequency of the schoolchildren's oral hygiene habits. The snacking recall was realised very concisely in 12 cases, considering only the frequency of consumption but, in 17 cases, the recall was considerably extended to include the frequency of consumption, different delicacies and individual favourite products, eating habits, contexts and situations. The extended sequences were more exploratory and conversational in nature, enabling the schoolchildren to more readily express their own varied perspectives. As a whole, the schoolchildren's descriptions of their oral health habits were usually minimal and ambiguous in this data.

In the counselling encounters in 2002, the needs assessment of change in the area of tooth-brushing frequency was manifested through comparing the

schoolchildren's self-reports with the recommendations. The schoolchildren were often aware of the recommendations. The schoolchildren needed to revise the quality of their tooth brushing when plaque was found on their teeth in the clinical oral examination. The schoolchildren needed to revise their practical tooth-brushing skills when it was necessary for the counsellors to advise and guide the schoolchildren in proper practice. In some counselling sessions, the schoolchildren's practical tooth-brushing skills were not recalled or actually practised although there was a need to improve their tooth-brushing quality. Regarding dental flossing, the schoolchildren needed to change their habits when they had at least one initial caries lesion on the proximal surfaces and they did not regularly use dental floss. In a few cases, the schoolchildren's practical skills of dental flossing were not recalled although the schoolchildren had a need for flossing and, in some cases, the schoolchildren reported that dental flossing was very difficult.

Considering the needs assessment of the schoolchildren's snacking habits, the analysis included a total of 34 cases of counselling conversations. In a few cases, the schoolchildren disclosed their awareness of the need for change of snacking habits. The schoolchildren might begin spontaneous assessment of their need for change, besides considering the causes for any initial caries diagnosed, at the beginning of the counselling or, alternatively, the schoolchildren might disclose that they had already attempted to decrease their consumption of sweets. The counsellor confirmed the schoolchildren's appraisals on the basis of the recall. In some cases the counsellor explicitly determined the schoolchildren's need for change of snacking habits. However, there were a few indications that the schoolchildren's perception of the need for change differed from that of the counsellor in conversation. In many cases, the schoolchildren's needs assessment remained at the level of the counsellor's assessment or advice after the snacking recall. In these cases, the form of advice was usually very general; more detailed and focused advice was rarely provided. On the whole, in this data the schoolchildren might reply to the counsellor's assessment by offering excuses for their unhealthy behaviour. For instance, the schoolchild might generalise his or her snacking habits as being usual for his or her age and school grade, or the schoolchild might use a defensive argument that would focus on a positive side of his or her behaviour.

Furthermore, in many cases, the assessment of the schoolchildren's need for change was founded on several counsellor-controlled communication activities. The counsellors' combined practices of assessment, advice giving and change-inducing questions were usually based on raised lactobacillus counts and/or the outcome of the snacking recall. The common sequence of counselling practice progressed as follows: After an extended snacking recall, which included the counsellor's assessing statements, the session progressed with the counsellor's detailed change inducing questions and then, usually, with the counsellor's advice.

In this data, mutually constructed assessment of the need for change was rarely observed. It was usual that, when questioning the schoolchild's readiness

for change, by presenting change-inducing questions instantly after the snacking recall, the counsellor skipped the stage of mutual needs assessment. In some cases, the counsellors' understanding might have been that the statements of causal factors of initial caries and/or awareness of oral health habits signified a determination of the need for change and might constitute a positive acknowledgement of and readiness for change. In many cases, nevertheless, the counsellors' change-inducing questions were individualised and based on the snacking recall, the schoolchildren would respond with minimal and ambiguous expressions and occasionally manifested change resistance.

There were only a few cases in which the counsellors, usually after their own assessments or change-inducing questions, encouraged the schoolchildren to participate in assessing the outcomes of the recall and a possible association between the reported habits and initial caries. In these cases, the counsellor might state her assessment by using conditional questions or, alternatively, the counsellor's speculative style might induce the schoolchild to participation in the counselling conversation.

Correspondingly, in the area of oral hygiene, the counsellors rarely encouraged the schoolchildren to disclose their readiness for change after the needs assessment and, therefore, determining the schoolchildren's stages of change was occasionally difficult. Only in some encounters the schoolchildren began to reflect on their intention to make a change. For instance, regarding tooth-brushing frequency, one third of the schoolchildren were found to be in preparation on the grounds of how they responded the counsellors' questions. In many cases, the schoolchildren's stages of change regarding tooth-brushing frequency remained unclear.

Giving advice was the most frequently used change counselling strategy in this data. The counsellors responsibly guided the schoolchildren in what would be advisable for their oral health according to the recommendations. Nearly every counselling session included the counsellors' exhortations and advice regarding the regularity of tooth brushing and flossing in accordance with the recommendations and statements on paying attention to the quality and systematic technique of tooth brushing and consumption of snacking products. Goals for tooth brushing and dental flossing were quite rarely set during the encounters and these goal settings were counsellor-centred and question/answer-modelled. Discussion about the change process occurred during the counselling sessions and was typically based on the counsellors' questions and the schoolchildren's minimal responses.

There were indications in this data that counselling strategies for discussing readiness for change and change processes and goal setting were key elements in change counselling. In this data, the schoolchildren's changes in tooth-brushing frequency were related to these two counselling strategies. In addition, with respect to positive changes in snacking habits, the schoolchildren themselves were aware of the need for change or the sessions included change discussion that addressed readiness for change and making changes during the counselling in 2002.

5.2 Schoolchildren's changes of oral health habits during the follow-up year 2002–2003 (Studies I and II)

Because the outcomes of behavioural changes are the ultimate goals of most oral health counselling, it was desirable to document the schoolchildren's changes of oral health habits in this study. The schoolchildren's changes in oral hygiene habits and snacking habits were explored after a follow-up year in 2003. In 2002, nearly every schoolchild had a need for change in tooth brushing and dental flossing. The schoolchildren's needs for change varied in the different areas of these issues (frequency, quality, practical skills). More specifically, eighteen schoolchildren had a need for change in the area of tooth-brushing frequency. Approximately one half of the schoolchildren needed to revise the quality of tooth brushing. Seven schoolchildren brushed their teeth twice a day but they needed to improve the results of their tooth brushing. About one third of the schoolchildren needed to practice their tooth-brushing skills. Furthermore, two thirds of the schoolchildren needed to change their dental flossing frequency.

After a follow-up year, in 2003, most of the schoolchildren assessed that they still had a need for change of oral hygiene habits. More specifically, only four schoolchildren had made changes in tooth-brushing frequency and six schoolchildren had improved the quality of tooth brushing. Four schoolchildren, who had had clean teeth in 2002, needed to improve the quality of their tooth brushing in 2003. The data from the schoolchildren's changes in practical skills were not obtained because the practical skills of tooth brushing were not considered or practiced during the counselling in 2003. Regarding dental flossing, six schoolchildren stated that they had made positive changes after one year, in 2003. Three schoolchildren had made changes in both areas of oral hygiene: frequency of tooth brushing and flossing.

More than half of the schoolchildren had a need for change in the area of snacking habits in 2002. Eight schoolchildren had made positive changes during a follow-up year. New unhealthy snacking habits had been developed by eight schoolchildren after the follow-up year. On the whole, most of the schoolchildren assessed that they still had a need for change of snacking habits in 2003. Regarding ten cases, in which the schoolchildren's need for change of snacking habits remained ambiguous in 2002, it was impossible to explore the schoolchildren's changes during the follow-up year; eight of these ten schoolchildren disclosed that they had a need for change of snacking habits in 2003. Furthermore, in some cases, the schoolchildren might to report that they had no need for change while some factors raised their lactobacilli counts.

5.3 Culture and communication of public oral health care (Studies III and IV)

The employees described the organisation as role-dependent, goal-oriented and task-centred. The sole statistically significant difference between attributes of organisational identity and background factors (occupation, career length and the sense of one's position in the organisation) concerned the developmental attribute. The employees who had worked for more than ten years in the organisation described their organisation as less developmental than the employees who had worked there for a shorter time. The three best descriptive attributes of the chain communication were unidirectional, goal-oriented and conflicting. The interaction of the organisation was described as uncertain, responsible and varies. More specifically, unidirectional chain of communication and responsibility for interaction were observed as the descriptive attributes of communication, regardless of satisfaction or dissatisfaction with the communication**.** The employees felt that the best issue regarding the communication in their organisation was related to the channel of communication; the employees' experience was that email was an equal, quick and clear channel of communication. In addition, some employees disclosed that the communication in their organisation was efficient, matter-of-fact and sufficient. On the other hand, the most troublesome issues of the communication in their organisation concerned, first, the characteristics of the communication (for instance, negative nature of messages, unidirectional chain of communication, authoritarianism and slowness of communication) and, second, inadequate planning of the communication (for instance, weakness of message focus; mailing lists too extensive, etc.).

Although the employees viewed the chain of communication as negatively unidirectional, they were more satisfied with the chain of communication than with opportunities to exert influence, or with interaction in the organisation. More than thirty percent of the respondents had often felt that they did not have opportunities to exert influence in the organisation; nearly thirty percent were dissatisfied with this issue. No statistically significant differences between the variables of communication satisfaction and background factors were found.

Nearly four fifths of the respondents reported that they were at least fairly satisfied with their employer's action. The dentists were less satisfied with their employer than the dental nurses were. Over two of thirds of the respondents disclosed that revealing their opinions to their employer was possible while nearly one fifth of the respondents declared that open expression was sometimes problematical. Dentists reported less often than the dental nurses did that they could openly tell about their opinions to their employer. The employees, whose career lengths were shorter than 10 working years had experienced the most often that their employer was receptive.

By applying Antonovsky's salutogenic model (1987), the employees' sense of their position in the organisation was measured by a 12-item scale that covered a wide spectrum of affective factors, reactions to organisational events and commitment to work. The employees experienced that their position in the organisation was fairly secure. More than eighty percent of the studied dental clinic personnel reported that the most frequently their work had positive personal significance and was a source of pleasure and that it was of great significance for the organisation. The subjects, i.e., the dental clinic personnel, were divided into two groups according to the median of the sum variable of the sense of one's position in the organisation, with Group 2 indicating a more secure sense of one's position than Group 1. The employees in Group 1 experienced the goals of the organization less clearly and described the chain as less goal-oriented and open than the employees in Group 2. Furthermore, the respondents in Group 1 experienced more often that interaction in the organisation was uncertain than the respondents in Group 2. Statistically significant differences between group division and occupation and career length were not found.

Statistically significant differences between Group 1 and Group 2 were found regarding the sum variables of leadership and communication satisfaction. The respondents who had a secure sense of their position (Group 2) experienced leadership relations as more positive and were more satisfied with communication than did the employees who had a less secure sense of their position (Group 1). Statistically significant differences were found in four variables regarding leadership (opportunity to openly reveal one's opinions to the employer, the employer is receptive to employees, the employer is aware of employees' working requirements, trust in the employer), two variables regarding communication satisfaction (satisfaction with opportunities to exert influence, satisfaction with interaction). Furthermore, the employees in Group 2 experienced the organisation as more equal and participative than the employees in Group 1 did.

A LISREL model was created from the data in order to describe the significant associations between organisational and individual factors, i.e., leadership relations, the identity attributes of the organisation and the sense of one's position in the organisation. In the model, all factors were positively associated with each other. The model indicated that the communication in the organisation and communication satisfaction were associated with factors at the individual level in the organisation. In addition, the model revealed an association between communication satisfaction and managerial communication. Good leadership relations had a positive effect on communication satisfaction and, through this positive satisfaction, a positive effect on the sense of one's position in the organisation. The model explained twenty-two percent of the variation of the sense of one's position and twenty percent of the variation of the communication satisfaction factor.

A theoretical and empirical overview of the oral health care produced evidence for the existence of several cultural orientations and communication

processes. The orientations of consistency and mission were emphasised. Discussion on the cultural orientations of community spirit and adaptability has recently intensified as a result of nationwide development projects in oral health care. There was also clear empirical evidence of the cultural orientations of community spirit, including responsibility for interaction, and uncertain and conflicting communication, regarding the adaptability of oral health care. Reactions and attitudes towards changes in the organisation included prejudices and paradoxical conflicts, which were associated with the difficulty of reform and also with limited resources. On the other hand, reactions to changes were seen as signs of adaptability and accommodation. The employees experienced that the changes were caused by intensification of action and felt that uncertainty and confusion were related to changes. The assessment of the future direction of oral health care (better direction percentage/worse direction percentage) remained negative. No statistically significant differences between predicted future direction and background factors (occupation, career length, the sense of one's position in the organisation) were found.

6 DISCUSSION

6.1 Schoolchildren's oral health change counselling

The obtained results, described above, led to several conclusions, which will be discussed next in the light of the theoretical framework. The research findings presented here reveal how difficult the practical implementation of counselling can be (cf. Pyörälä 2000; Kettunen et al. 2001; Karhila et al. 2003; Kettunen et al. 2003; Kasila et al. 2003; Poskiparta et al. 2006). The effective practice of health counselling requires planning of content and communication activity. This study demonstrated that change counselling that involves schoolchildren in conversation is a complex and demanding process that entails a number of concerns (Tates et al. 2002; Cowley & Houston 2003; Mitcheson & Cowley 2003; Franklin & Sloper 2005). Furthermore, this study reaffirmed the long-standing principle that changing oral health habits is a difficult and prolonged process (Kuusela et al. 1996; Åström & Rise 1996; Lien et al. 2001; Åström 2004; Van Horn et al. 2005). The fact that schoolchildren form a heterogeneous group, which is a challenge for counselling, should be kept in mind when considering the results of the counselling study. Furthermore, the schoolchildren's counselling sessions continued even after the sessions reported in this study. Issues of oral hygiene habits and snacking habits may have been reviewed during the subsequent sessions.

The basis of behavioural change counselling is the assessment of health behaviour and possible need for change (Miller & Rollnick 2002; Prochaska & Norcross 2003). The results presented here reveal that the complex nature of the schoolchildren's oral health behaviour (cf. Schou et al. 1990; Story et al. 2002; Kasila et al. 2005) requires systematic, detailed and sensitive recall as well as continuous itemising of schoolchildren's minimal and occasionally ambiguous and confused responses. Also, the reliability of self-reports should of course be discussed in counselling. Such concise and non-critical recall might not always reveal the whole range of health behaviours in the schoolchildren's traits under scrutiny. For instance, in the studied counselling encounters, the schoolchildren

disclosed that they brushed their teeth according to the recommendations, yet their technique was incorrect. Alternatively, the schoolchildren stated that their tooth brushing was correct although it did not conform to the recommendations. In addition, on some occasions, confusion and somewhat conflicting views on the topic had an effect on the needs assessment of change. Furthermore, the schoolchildren might occasionally assess that they had no need for change of consumption frequency of snacking products while some factors raised their lactobacilli counts.

The schoolchildren's reflection on their oral health behaviour, including its attitudinal aspects, lays a foundation for individualised needs assessment and change discussion (cf. Baer & Peterson 2002; Mitcheson & Cowley 2003; Tsakos 2005). According to the theoretical framework, it is necessary that schoolchildren rather than counsellors assess health behaviour and present arguments for need for change (Miller & Rollnick 2002). Yet contrary to these principles, the explored counselling encounters were firmly counsellor-controlled. The result was in line with previous studies on health care (Hart & Chesson 1998; Pyörälä 2000; Kettunen et al. 2001; Tates & Meeuwesen 2001; Karhila et al. 2003) that have revealed that counselling in public health care often is controlled by professionals, who are the most active participants both in presenting the problems and in offering proposals and advice to their customers.

The study findings demonstrated that needs assessment is difficult process and varies in different areas of oral health habits. The needs assessment of oral hygiene habits was observed to be more normatively oriented and, thus, may be a clearer process than the needs assessment concerning complex snacking habits. This study recognised that the research protocol, which established the factual content of the counselling, might partly have directed the counsellors' information gathering to follow a structured format.

This study revealed that oral hygienists were experienced in gathering data. Yet mere charting of habits and giving advice on that basis, in the light of this research, will be insufficient for effecting change. Subsequent to charting habits, it would be vital to assess the gathered data collaboratively and then clearly define any need for change. During the assessment of the charted data, the discussion would naturally turn from an examination of past behaviour to examining a future behavioural change. An unambiguous assessment of the need for change would provide the starting point for the change process. Naturally, this would need to precede the discussion on readiness for change and the change process.

On the basis of the theoretical framework of this study (Miller & Rollnick 2002; Prochaska & Norcross 2003), the realisation of schoolchildren's readiness for change is essential for fostering an individual-centred approach to change counselling and for adapting appropriate counselling strategies to the context of schoolchildren's varied oral health histories and life situations (Baer & Peterson 2002). However, it was observable in this study data that perceiving schoolchildren's stages of change and reacting to their readiness for change was

not an easy task (cf. Kasila et al. 2003). The research indicated, as many previous studies in other health care sectors have done (Poskiparta et al. 2000; Karhila et al. 2003; Kiuru et al. 2004), that giving advice, by using recommending and persuasive styles, was a commonly used strategy when addressing the need for change. In this research data, the counsellors responsibly guided the schoolchildren in what would be considered good for oral health according to the recommendations. However, discussing readiness for change or the change process rarely occurred. Furthermore, goal setting came up fairly rarely and was usually counsellor-determined although motivational interviewing is more supportive of the schoolchildren's personal change goals rather than counsellor-based or institutional goals (Baer & Peterson 2002). In summary, the principles of the theoretical framework of change counselling largely failed to be manifested in the studied counselling encounters. However, there were some encouraging indications of enhanced communication activities, with schoolchildren being invited to self-assess their information and to disclose their own appraisals of their need for change. In addition, the schoolchildren's positive changes were related to these communication activities. Also, according to the study by Kettunen et al. (2006), change talk is best produced when the counsellor stays within the individual's frame of reference with a combination of reflective communication activities and providing conversational space. Acknowledging schoolchildren's own agenda as valid is not in conflict with the professional responsibility of the counsellor (cf. Franklin & Sloper 2005).

6.2 The organisational context of public oral health care

In the organisation study, it was assumed that by developing the theoretical and empirical perspectives of organisational coherence it would be possible to consider the total range of organisational reality without rigidly categorising the diversified spectrum of the actual practice of the organisation (cf. Mallak et al. 2003). The empirical results presented here produced evidence of the manifestation of several cultural orientations and communication processes in the studied organisation (cf. Nordblad et al. 2001; Alestalo & Widström 2002; Nordblad et al. 2002). The cultural orientations of consistency and mission and communication processes of unidirectional and goal-oriented were emphasised in the organisational reality. Co-operation invariably requires that the foundations and principles of an organisation are at least partly shared by producing common meanings. However, one-sided and unidirectional formal communication in an organisation may favour a stable, unchanging state of functional balance, in which its practices are rarely questioned and the capacity to change and be creative is limited. (Cf. Stacey 1996; Aula 1999.) In the studied organisation, there was also clear evidence of the cultural orientations of community spirit, including responsibility for interaction, and of uncertain and

conflicting communication, regarding the adaptability of oral health care. At the moment, the many changes in oral health care have evoked paradoxical feelings and resistance to change among employees (Alestalo et al. 2000), which can be observed concretely, for instance, in the negative assessment of future direction in this study.

In the studied organisation, the employees experienced that their position in the organisation was fairly secure. It was found that a good sense of one's position in the organisation was positively associated with several essential experiences (e.g., confidence, openness and quality) regarding organisational factors. A good sense of one's position can be seen as functional competence and as a resource of empowerment, which is associated with employees' observation, interpretation, interaction and giving meanings to their organisational environment at cognitive and emotional levels (cf. Pincus 1986; Antonovsky 1987; 1993; Johnson & McIntye 1998; Elovainio & Kivimäki 2001). Furthermore, the important communicative role of management, confidential listening and paying attention to employees' opinions and working requirements, may be seen as a major source of information and social intercourse with employees' sense of their position (Pincus 1986; Johnson & McIntye 1998, Juholin 1999). This research reaffirmed the view that organisational communication has a mediating role in organisational reality (Tourish 1997; Claver et al. 1998). This study indicated that good leadership relations had a positive effect on communication satisfaction and, through this positive satisfaction, a positive effect on the sense of one's position in the organisation.

Giving feedback and listening are important for the well-being and performance of an organisation (Van Vuuren et al. 2007). The main developmental challenges involved reciprocal communication; giving and receiving feedback in leadership relations as well as opportunities to exert influence in the organisation. In the broader Finnish health care context, feedback has also been found to be one of the main developmental challenges (Elovainio & Lindström 1993; Kivimäki & Elovainio 1995; Enckell 1998). In any case, the issue of opportunities to exert influence is essential because organisational goals only become effective through employees' voluntary self-direction and self-motivation (Merkens & Spencer 1998; Darby & Daniel 1999.) However, it is noteworthy that, in some cases in this study, even chief dentists or dental nursing chiefs had only limited opportunities to exert influence on the functioning of the organisation because of the limited financial resources of municipalities. In addition, the Ministry of Social Affairs and Health supervises the provision of oral health care together with other civil service departments in the appropriate administrative domains (From the Finnish health policy 1999).

6.3 Methodological evaluation

The question of reliability involved the theoretical, methodological and empirical foundations of the study. The critical issues of reliability were the presentation of the practical and concrete decisions made in the study protocol and data collection, the rigorous handling of data and the use of appropriate methods of analysis, the evaluation of the correspondence between the theoretical typology and the empirical findings, and the consideration of the generalisability of the findings beyond the study setting. (Polit & Hungler 1993; Nummenmaa et al. 1997; Silverman 2001; Graneheim & Lundman 2004; Krippendorff 2004.) Before the data collection, the ethical committee of the Jyväskylä University accepted the study protocol. Informed consent was obtained from all participating schoolchildren, their guardians and dental hygienists. The voluntary nature of the participation was emphasised. The participants' privacy and anonymity were assured. The participants were not named but were assigned numbers for the process of analysis. The analysis and the interpretations were carefully formulated with the intent of not causing offence to anyone.

In this study, the original study plan and data collection were carried out without significant changes. The main strength concerning the reliability of the study include the following factors: the research phenomenon, concept and items were operationalised by using reflective and critical thinking and the focus of the study, the selection of the context and participants and the course of detailed data gathering and analysis were explicitly described in order to confirm the credibility and reliability of this study. Furthermore, during the research process it was possible to discuss the analysis and interpretation with the extended research group. In general, it was found that the study findings raised crucial issues of communication, which also merit consideration in other health care settings. The current findings cannot readily be generalised but they may be transferable to other health care settings when they are carefully applied and when the limitations of the study taken into account. In the following, the reliability of the counselling and organisation studies will be considered in more detail.

6.3.1 Evaluation of the counselling study

The first issue was the research focus and, therefore, it was related to and influenced the overall quality of the whole study. The counselling study focused on the question of how the structure and the processes of schoolchild-dental hygienist communication concerning changes of oral health habits were constructed in oral health counselling. The focus and research questions of the study directed the selection of the research methods. The data comprised audiotaped counselling sessions. The counsellors did the recordings themselves; after training the counsellors had no problems with producing the

tape recordings. All of the recordings were transcribed verbatim into computer text files and then rechecked and the transcripts corrected accordingly. The audiotaped data made it possible to conduct a detailed process of analysing of naturally-occurring counselling communication activities (Poskiparta 1996; Pyörälä 2000; Kettunen 2001). Furthermore, the methodology of the content analysis was appropriate for researching the structure and the characteristics of communication with attention to the meaning of the verbatim text (Graneheim & Lundman 2004; Hsieh & Shannon 2005). Audiotaped data and qualitative content analysis made it possible to analyse the variation of communication activities and to describe turn-by-turn construction of activity (cf. Vehviläinen 1999; Pyörälä 2000; Hsieh & Shannon 2005).

Because of this focus of attention, the unit of analysis was defined at the semantic level (see Studies I and II). The analysis included both the deductively and the inductively derived categories. The theoretical typology of the transtheoretical model and the motivational interview offered conceptual tools for the analysis of data although the deductively derived categories did not correspond well with the empirical findings of the research. The analytic categories were exhaustive and exclusive (cf. Titsher et al. 2005). In other words, the entire database was systematically analysed and categorised. The derived categories were clearly described in way that illustrated similarities within and differences between the categories. Throughout the analysis, regular operational reflection and discussion on the criteria of categorisation were conducted, confirming that the final coding schema was not modified during the analysis (intra-coder reliability) (Titsher et al. 2005). To ensure credibility, the explicit descriptions of the categories, including numerous quoted examples from the original data, were presented (Graneheim & Lundman 2004; Titsher et al. 2005). Furthermore, the issues regarding the reliability of the findings and the interpretations of the analysis were discussed with the participating counsellors (cf. Krippendorff 2004).

On the basis of a large number of cases, the variation in the counselling phenomena was reliably observed. The total number of recordings (97) was high for a qualitative study. However, the descriptions of the counselling communication activities depended on particular circumstances and were collected in the public oral health care setting of a single town. In addition, the sample of dental hygienists was self-selected and quite small. Furthermore, the dental hygienists recruited voluntary schoolchildren for the study. What also needs to be recognised is that the categorisation of the data simplified and restricted the description of the counselling reality (cf. Cavanagh 1997; Graneheim & Lundman 2004). Furthermore, the study protocol had the effect of directing the counsellors' formulation of counselling towards a more structured format than their existing counselling practices.

In addition, a few words of caution regarding the theoretical framework of counselling are justified. The first crucial issue is: what grounds are there to claim that this theoretical framework is legitimate for analysing schoolchild-dental hygienist counselling practices? The critical evaluation considering the

theoretical models was taken into account in this study. It can be stated that the application of the transtheoretical model's stages of change and of motivational interviewing to oral health counselling can be useful for manifesting conversational aims and key structures of oral health change counselling, if flexibly applied and not allowed to narrowly categorise schoolchildren's actual life or counselling practice (cf. Povey et al. 1999; Whitelaw et al. 2000).

6.3.2 Evaluation of the organisation study

The purpose of the organisation study was to focus on the description of cultural orientations and communication processes of oral health care. The aim of the study was to create a comprehensive picture of these orientations and processes in the case of an oral health care organisation. In this organisation study the sample was small (n = 58) but the response rate was quite high (84 %). Consequently, this study was a case study.

A great variety of domains and variables are related to the concept of organisational culture. However, specified variables of the domains were determined. Because of a lack of consensus in the research literature, some uncertainties remained, in spite of clear goals and thorough analyses of the background literature. Furthermore, in Finland, few studies have been published on organisational culture and communication in oral health care. Yet the main principles of organisational culture did apply, although there were no ready-made tools for direct application. This study was, by its nature, an explorative study (cf. Peterson 1994). The instrument of the questionnaire, including closed and open-ended questions, the statistical methodology and the content analysis were appropriate for researching comprehensive characteristics of organisational culture and communication (Scott et al. 2003). The questionnaire method made it possible for the entire personnel of the organisation to have an opportunity to participate in this study.

Determining the true reliability of a measurement instrument is important. The development of the survey measurement was based on particular theories. Compiling and applying the measures and indices on the basis of the research questions of earlier studies enhanced the comprehensiveness of the questions. (Nummenmaa et al. 1997.) The major parts of the inquiry were based on questionnaires that had been previously tested and used in the context of public health care units and similar contexts (Antonovsky 1987; Elovainio & Lindström 1993; Vuori 1995; Enckell 1998). Reliability is equated with a measuring instrument's internal consistency. The reliability of the factors employed was accounted for by coefficient alpha, which may be one of the most commonly used factor coefficients (Peterson 1994; Nummenmaa et al. 1997). In this study, the reliability of sum variables was at a very acceptable level, in view of the fact that the survey instrument had an exploratory background (cf. Peterson 1994). For instance, applying Antonovsky's model to constructing a sum variable of the sense of one's position in an organisation proved to be encouraging and reliable.

Structural equation modelling was found to be appropriate for estimating the relationships between organisational and individual constructs. The constructed LISREL model was statistically acceptable ($p = .38$, $> .05$). According to a high index of goodness of fit (.99), the model and data were compatible. RMSEA revealed an error of approximation that was caused by the simplification of the model. If the index is $< .05$, the model is good. This requisite was fulfilled in this model (RMSEA = .036). The RMR index shows how many percent of sample correlations remain unexplained. The RMR index was fairly low in this model (RMR = .071). (Jöreskog & Sörbom 1993.)

A few words of caution are called for. The constructed theoretical typology of cultural orientation and communication processes might simplify and restrict the description of the organisational reality (cf. Deetz 2001). The measurements of organisational factors were limited. For instance, satisfaction was measured by using three items and, therefore, a range of issues may have been excluded. Moreover, the dichotomy variables of communication were found to be poorly compatible with the LISREL model. The variables could not be included in the model and, therefore, the view on the relevant internal content and function of communication of oral health care was limited. Nevertheless, choosing the best descriptive communicational traits and answering open-ended questions regarding the communication in the organisation enabled the assessment of alternatives to be made and clarified the employees' beliefs.

6.4 Conclusion

This research provided new information on the communication activities in the process of schoolchildren's oral health change counselling within the performance context of public oral health care. Theoretical and process evaluations of audiotaped counselling data made it possible to conduct a detailed evaluation of counselling communication activities. Thus, it would appear advisable to base practical evaluation on direct observation by using audiotaping or videotaping (Poskiparta 1997; Miller & Mount 2001). Furthermore, health education needs always to be considered in its performance context. In this study, the counselling encounters were conducted within the context of a public oral health care organisation that was characterised by collective ownership and the entity of the organisation members (cf. Conrad 1994; Trethewey 1997; Lakomski 2001). A pattern of norms, goals, values and beliefs in the organisation was, to some extent, provided by dental hygienists, thereby defining the standards for performance in their work (cf. Brown & Starkey 1994). (See Figure 3.)

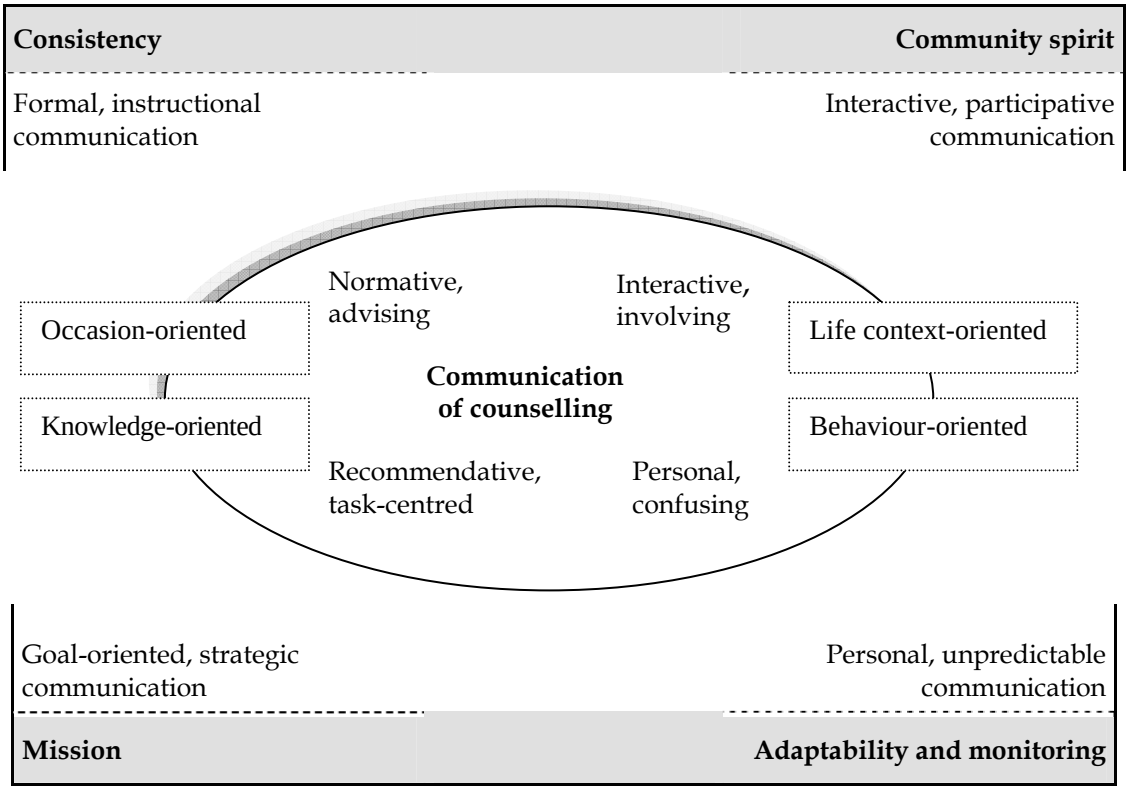

FIGURE 3 Model of counselling communication within the organisational context of oral health care.

In this data, the counselling encounters usually constituted strictly factually-oriented advice giving and, occasionally, consisted of one-sided delivery of information. Yet there were also isolated indications of interactive and behaviour-oriented counselling methods that took the schoolchild's life context into account (see Figure 3). Oral health knowledge is considered to be an important prerequisite for health-related behaviour (Watt 2005), but mere knowledge gain is insufficient for effecting behavioural change. In contrast, health counselling has traditionally been based on the idea that providing knowledge would modify attitudes and result in behavioural change. This approach has been linked to a core belief that individuals needed guidance on preventing dental diseases and that professionals do counselling to provide instructions, to tell individuals what to do (Tsakos 2005). However, schoolchildren's behaviour does not always appear to reflect the knowledge that they have (Seasam et al. 1997; Kay & Locker 1998; Brown et al. 2000; Freeman et al. 2000). Furthermore, it seems that oral health knowledge does not always sufficiently reach all schoolchildren (Kinirons & Stewart 1998; Poutanen et al. 2005) to empower them to make informed decisions about their oral health. In addition, the strong institutional and recommendative orientation of current practice may cause one to view human behaviour as rational and independent and disregard the manifold factors and complications of real life (cf. Prochaska & Norcross 2003).

The principal explanation underlying the counselling practices described above could involve the traditional, normative oral health care culture, in which a preventive orientation towards of ill health, knowledge and curative treatments are emphasised (Shier 2001; Tsakos 2005). In adopting and developing behaviour-oriented and life context-oriented approaches, reorientation from normative, recommendative and curative methods towards interactive and participating approaches of health counselling would be needed (cf. Tsakos 2005; Watt et al. 2006). This reorientation requires reflecting on a number of health concepts, behaviour and communication (cf. Tsakos 2005; Kettunen et al. 2006; Locker & Gibson 2006; Watt et al. 2006). Oral health counselling should optimally employ a range of orientations. (Cf. Miller & Rollnick 2002). (See Figure 3.)

Because the outcomes of behavioural changes are the ultimate goals of most oral health counselling, it was desirable to document the schoolchildren's changes of oral health habits in this study. However, from the empowering point of view, besides epidemiological and behavioural changes, active participation, improved decision-making skills and self-esteem should be seen as outcomes of health counselling and made criteria of efficiency (Tones & Tillford 2001). In Finland, there is, according to a study by Vehkalahti and Widström (2004), evidence of emphasis on active-client methods in caries prevention, which may indicate an impending change in the current policy of favouring passive-client methods. It is clear that an entirely traditional culture of health care may not be the most appropriate in the context of schoolchildren's current behavioural trends and their dynamic environment (cf. Jackson 1999; Watt 2006). This emphasis on reorientation at the organisational level implies combining goal-oriented action and management of human resources (cf. Mark & Critten 1998; Nordblad et al. 2001). As an organisation changes, it becomes important to consider its future and to construct shared understanding and dialectical orientation among its employees (Shelton et al. 2002). (See Figure 3.) The constructed model of counselling communication within the organisational context of oral health care (Figure 3) revealed the relationships between communication activities on individual and organisational levels. To summarise, communication processes were constructed within the organisation and, consequently, the organisational reality was constructed through the communication. In other words, it is impossible to deal with an organisation without referring to communication and, considering interaction processes, the context view is indisputably necessary. The core ideas of the constructed model are also transferable to other public and private organisations.

There are many alternative explanations for the schoolchildren's communication activities in the counselling encounters in this study. The schoolchildren adopted their own ways of participating in the counselling conversations, which could alternate between participation and non-participation (cf. Pyörälä 2000). Furthermore, the schoolchildren might have avoided deep and meaningful conversation because the counsellors adopted a

dominating role as professionals with knowledge and advice. Alternatively, the schoolchildren might have been unaccustomed to participating in a conversation and they might have felt that the issues were difficult or boring (cf. Laiho 1995; Pyörälä 2000; Kettunen et al. 2001). Schoolchildren are interested in varied health issues and their reasons for acting vary. Their opinions on health are multidimensional and manifest health ability and resources to take action. (Jakonen 2005.) However, health care evidence suggests that the involvement of schoolchildren is both limited and inconsistent and requires further progress (Franklin & Sloper 2005). Recent studies have shown that health care professionals gather information from children but exclude them from the needs assessment process, decision-making and goal setting (Hart & Chesson 1998; Tates & Meeuwesen 2001; Tates et al. 2002; Frankling & Sloper 2005).

Change processes of oral health habits need always be considered in the individual and environmental context of life (Story et al. 2002). Schoolchildren's most important environments of health learning are home, peers, the media and school (Jakonen 2005; Kwan et al. 2005). Oral health habits are not isolated behaviours but a part of schoolchildren's lifestyle. Therefore, the implementation of counselling practices and oral health problems occur in the context of schoolchildren's critical period of development, including biological, psychological and social processes, their everyday life and socio-economic variation. (Schou et al. 1990; Källestål et al. 2000; Story et al. 2002.) For ensuring a favourable development of schoolchildren's health promotion, it is necessary to establish co-operation between all relevant parties. For instance, schools provide an important setting for promoting schoolchildren's health through the pupils themselves, the school staff, families and the community at large (Kwan et al. 2005). Health counselling is also more likely to be effective if there is parental involvement in counselling and if good relationships and cooperation are fostered between parents and counsellors (Tossavainen et al. 2004; Kalavainen et al. 2007).

6.4.1 Practical implications

The findings and applications of the counselling study may have implications for primary oral health care practice and for education, both at graduate and postgraduate levels, since there is an evident need for improving and developing oral health education that addresses the personal dynamics of change (Varsio & Vehkalahti 1996; Kärkkäinen 1997; Varsio et al. 1999; Kay & Locker 1996; 1998; Tsakos 2005). The challenges for the practical implementation of these new orientations are associated with lack of time, professional predisposition and skills and schoolchildren's inexperience in participation (Emmons & Rollnick 2001; Cavet & Sloper 2004). Counsellors are advised to change their role, but also schoolchildren should learn that they are expected to participate in a negotiative conversation, although participation must always be voluntary, and they should learn to take responsibility for their own behaviour. This presupposes a cultural change concerning schoolchildren's

involvement and involves a broader Finnish school context (Rasku-Puttonen et al. 2003).

At the professional level, learning new approaches to counselling may involve suppressing previous practices that are inconsistent with a new individual-centred approach (i.e., persuading, directing, confronting, asking closed questions instead of listening). Next, acquiring specific evocative and interactive skills (i.e., asking open questions, listening reflectively, affirming, supporting optimism) need to be addressed. Therefore, training should be equally focused on selectively suppressing old counselling habits and on enhancing new ones. (Miller & Mount 2001; Miller & Rollnick 2002). Counsellors should observe what communication activities they use and thus gain professional self-awareness and discover new tools to work with (cf. Kettunen et al. 2001). Counsellors may regard their role as promotional in theory, but in actual practice, preventive and reactive actions are emphasised (Bagnall 1997). One-time training and mere awareness of the principles are unlikely to alter counselling practice (cf. Keller et al. 2000; Miller & Mount 2001); adaptation of orientation demands time and continuous practice. The combination of theory and empirical information can lead to an improved understanding of the process of schoolchildren's change counselling and, therefore, enable the future development of more appropriate and effective counselling strategies in the oral health care context.

The framework of the theoretical models, while currently subject to criticism, may provide guidelines for counselling practice. More specifically, the constructed theoretical framework of counselling may broaden counsellors' awareness of the needs assessment process and of readiness for change and foster a schoolchild-centred and a much more systematic and efficient approach to counselling and to contribute to adopting appropriate counselling strategies (Hedberg et al. 1998; Miller & Rollnick 2002; Prochaska & Norcross 2003). From the theoretical framework's point of view, mutual determination of goals for counselling and self-care, needs assessment and problem definition, realisation of stages of change and increasing readiness for change and discussing change process and goal setting all comprise essential conditions and structures for schoolchild-centred counselling of behavioural change. (Miller & Rollnick 2002; Prochaska & Norcross 2003.) These study findings may advance professional understanding of schoolchild-centred change counselling and reveal what impedes or facilitates it.

Needs assessment, including the recalling, assessing and determining processes, deserves special attention. A thorough needs assessment for change provides a foundation for individualised and behaviourally focused change counselling. Also, it provides a structure that may allow schoolchildren to have a voice in counselling. In needs assessment, it is important to encourage schoolchildren to think in a future and behaviour-oriented way (Miller & Rollnick 2002) (see Figure 3) although schoolchildren may have little perception of the future and therefore see little relevance in oral health promotion. The study findings regarding ambiguous needs assessment indicate that there is a

need for clearer application of the recommendations that address the personal level. Furthermore, it is suggested that a structured assessment tool, when flexibly incorporated in conversation, can be a useful means of ensuring clearer, personal, open and conversational needs assessment of schoolchildren (cf. Cowley & Houston 2003; Mitcheson & Cowley 2003). Also, Gherungpong et al. (2006) found in their study that a self-administered questionnaire on oral health behaviours is acceptable in terms of schoolchildren's responses.

Moreover, it is important to recognise, in counselling practice, potential confused statements in schoolchildren's self-reports (see Figure 3) because they might offer an opportunity to speculate about an issue and thus invite schoolchildren to participate in resolving their current problems. It should be particularly emphasised that in this study there were a few insightful and useful indications of the counsellors' encouraging communication activities regarding the schoolchildren's involvement in the examined counselling sessions. On the whole, it can be stated that the speculative style of counsellors, rather than the determining style of counselling, requires further practice-based evidence.

The need to understand the cultural diversity of an organisation and the employees' sense of their position in it is particularly relevant for oral health care (cf. Mark & Critten 1998) where various complex decisions and changes need to be made and implemented under the pressure of many demands and limitations (cf. Darby & Daniel 1999; Nordblad et al. 2001; 2002). The examination of organisational culture and communication indicates a need to consider the communication of an organisation in the light of developing human and behavioural understanding and management intervention. A clear feedback system would be especially important with regard to the current processes of change in oral health care. Furthermore, it would be significant that employees be aware of opportunities, responsibilities and limitations regarding this issue.

6.4.2 Suggestions for further research

In the future, the follow-up data would give an opportunity to investigate the development of schoolchildren's readiness for change and their continued commitment to existing changes. In addition, this research may lay a basis for further analysis to achieve deeper and more detailed understanding of the role of counselling strategies in how schoolchildren proceed to change their oral health habits. Furthermore, by examining schoolchildren's minimal communication cues, it is possible that new ways may be opened to approach oral health counselling. Schoolchildren's role and participation in counselling conversation deserves special attention. In addition, in further counselling studies, it would be a challenge to incorporate all relevant parties and environments, such as parents and school, in the study protocol. Further longitudinal research on the cultural orientations and communication processes within the changing oral health care is called for. Also, it would be important for future research to examine the external, stakeholder environment and its

influence on and co-operation with oral health care. Finally, changes in organisational factors and in the sense of one's position in an organisation should be investigated by using a longitudinal study design.

TIIVISTELMÄ

Suomessa koululaisten suun terveysneuvonta sisältyy kohderyhmälle maksuttomiin suun terveydenhuollon palveluihin. Aikaisemmat suun terveysneuvontaa koskeneet tutkimukset ovat suurelta osin tarkastelleet neuvonnan sisältöaiheita ja toteuttamisen useutta suun terveydenhuollossa. Koululaisten terveysneuvonnan rakenteellisesta ja vuorovaikutuksellisesta rakentumisesta tiedetään vielä varsin vähän. Lisäksi suomalaista julkisen suun terveydenhuollon organisaatiokulttuuria ja viestintää ei juuri ole tutkittu. Julkisessa suun terveydenhuollossa on tapahtunut viime vuosina monia rakenteellisia ja toiminnallisia muutoksia. Organisaation kulttuurilla ja viestinnällä on merkittävä rooli toiminnan toteuttamisessa, muutosten mahdollistamisessa ja läpiviemisessä.

Tässä väitöskirjatutkimuksessa tarkasteltiin koululaisten suun terveysneuvonnan rakenteellista ja vuorovaikutuksellista rakentumista julkisessa suun terveydenhuollon toimintakulttuurissa. Tavoitteena oli tutkia (1) kuinka koululaisten ja suuhygienistien väliset viestintäprosessit rakentuivat suuhygieniatottumusten muutoksiin tähtäävässä terveysneuvonnassa; (2) millaisia viestinnällisiä tapoja neuvonnassa ilmeni, kun koululaisten napostelutottumuksiin liittyviä muutostarpeita arvioitiin; (3) millaisia muutoksia koululaiset tekivät suun terveystottumusten osalta seurantavuoden aikana; (4) miten organisaation jäsenet kuvasivat organisaatiota ja omaa asemaa organisaatiossa; (5) erosivatko organisaatioidentiteettiin, viestintätyytyväisyyteen ja johtamiseen liittyneet kokemukset ammatin, työuran pituuden tai organisaatioon kuulumiskokemusten mukaisesti; (6) miten organisaatiotason ja yksilötason tekijät olivat yhteydessä toisiinsa. Lisäksi teoreettiseen viitekehykseen ja loogiseen päättelyyn pohjautuen tutkimuksessa tarkasteltiin organisaatiossa ilmeneviä kulttuurisia piirteitä ja viestinnällisiä prosesseja. Tulosten pohjalta rakentui myös malli neuvonnan vuorovaikutuksellisista piirteistä suun terveydenhuollon organisaatiossa.

Tutkimus koostui neljästä osajulkaisusta, joissa käytettiin kahta eri aineistoa. Neuvontatutkimuksen seuranta-aineisto (2002–2003) sisälsi 66 neuvontatilannetta vuodelta 2002 ja 31 neuvontatilannetta vuodelta 2003. Neljän suuhygienistin toteuttamiin terveysneuvontatilanteisiin osallistui 31 koululaista (n = 31, tyttöjä 15, poikia 16), jotka olivat iältään 11–13-vuotiaita. Organisaatiotutkimuksen aineisto (n = 58) kerättiin puolistrukturoidulla kyselylomakkeella vuonna 2002. Tutkimusaineistoja analysoitiin sekä kvalitatiivisesti sisällönanalyysilla että kvantitatiivisesti käyttäen tilastollisia menetelmiä.

Tutkimus osoitti, että koululaisten suun terveysneuvontatilanteet toteutettiin usein asiantuntijajohtoisesti. Neuvontatilanteet perustuivat monipuoliseen tiedonjakamiseen ja neuvojen antamiseen, joka oli yleisin neuvonnoissa käytetty strategia. Tiedon kerääminen koululaisten suun terveystottumuksista tapahtui selkeästi ja oli useissa tapauksissa laaja-alaista. Koululaisten suuhygieniatottumusten osalta muutostarpeiden määrittäminen tapahtui normatiivisesti ja eksplisiittisesti. Sen sijaan koululaisten napostelutottumuksiin liittyneiden muutostarpeiden määrittäminen oli useasti implisiittistä ja tapahtui suuhy-

gienistien arvioinnin, neuvojen ja muutosta ehdottavien kysymysten kautta. Tällöin koululaisten muutostarpeiden määrittäminen jäi useasti epäselväksi. Suuhygienistit pyysivät vain harvoin koululaisia itseään arvioimaan kartoitustietoa ja tuomaan esille omia näkemyksiä muutoksen tekemisestä. Osin tästä johtuen koululaisten muutosvalmiuden arvioiminen osoittautui osassa tapauksista vaikeaksi. Muutosprosessista keskustelemista ja tavoitteen asettamista ilmeni neuvonnoissa melko harvoin. Toteutuessaan nämä strategiat olivat kuitenkin yhteydessä koululaisten tekemiin suun terveystottumusten muutoksiin. Lisäksi koululaisten itsensä tiedostama ja ääneen sanottu muutostarve oli tärkeä tekijä muutosten tekemisessä. Tutkimusaineistossa esiintyi yksittäisiä keskusteluja, joissa ilmeni teoreettisen viitekehyksen mukaista yksilö- ja käyttäytymislähtöistä, vastavuoroista neuvontakeskustelua. Tutkimus osoitti vahvistaen aikaisempia tutkimuksia, että muutokset suun terveystottumuksissa vaativat aikaa ja omakohtaista asioiden prosessointia.

Tutkimuksen kohteena ollutta suun terveydenhuollon organisaatiota kuvattiin vahvasti roolisidonnaiseksi sekä tavoite- ja tehtäväkeskeiseksi. Organisaation kulttuurisina piirteinä korostuivat yhdenmukaisuus ja tavoitteellisuus, mutta myös yhteisöllisyys ja sopeutuminen nousivat esiin. Organisaation keskeiset viestinnälliset prosessit liittyivät tiedonkulun yksisuuntaisuuteen ja vuorovaikutuksen vastuullisuuteen, riippumatta siitä oltiinko viestintään tyytyväisiä vai tyytymättömiä. Organisaation jäsenet kokivat oman asemansa organisaatiossa melko turvalliseksi. Turvallisuuden tunne oli positiivisesti yhteydessä esimies-alaissuhteeseen, viestintätyytyväisyyteen sekä organisaation näkemiseen tasa-arvoisena ja osallistuvana. Kokonaisarvio organisaation tulevaisuuden suunnasta jäi kuitenkin negatiiviseksi. Tulokset osoittivat, että viestintätyytyväisyydellä on välittävä vaikutus yksilötason ja organisaatiotason tekijöiden välillä. Kehitykselliset haasteet tutkimusorganisaatiossa liittyivät vastavuoroiseen palautteen antamiseen ja saamiseen esimies-alaissuhteessa sekä vaikuttamismahdollisuuksien osoittamiseen. Tutkimus toi esille, että ihmisten ymmärryksen ja tiedon lisääminen aidoista vaikuttamismahdollisuuksista organisaatiossa, niiden esteistä sekä vaikuttamiseen liittyvästä vastuusta on tärkeää.

Koululaiset muodostavat terveysneuvonnalle erittäin haastavan heterogeenisen ryhmän. Keskustelullisen ilmapiirin ylläpitäminen ja koululaisten osallistaminen keskusteluun eivät aina ole helppoja tehtäviä toteuttaa. Tässä tutkimuksessa koululaisten vastaukset suuhygienistien kysymyksiin olivat useasti hyvin lyhyitä ja joskus myös epämääräisiä ja ristiriitaisia. Koululaisten vastaukset saattoivat olla ristiriitaisia heidän aiemmin esittämiin näkemyksiin tai sitten esimerkiksi suun terveystottumuksia koskeviin suosituksiin nähden. Neuvonnassa olisi tärkeää huomioida koululaisten puheessa esiintyvät ristiriitaisuudet ja ottaa ne keskustelun ja ihmettelyn aiheeksi. Tutkimus antoi viitteitä siitä, että näin neuvontakeskustelusta voisi syntyä yhteistä ongelman tai arvoituksen ratkaisua, eikä niinkään pelkästään asiantuntijajohtoista ongelmaa määrittävää ja neuvoja antavaa keskustelua. Muutostarpeen arvioiminen erityisesti koululaisten monitahoisten napostelutottumusten osalta on haastavaa. Suuhygienistit ovat tottuneita tiedon kerääjiä, mutta pelkkä tottumusten kartoittaminen ja sen pohjalta ohjeiden antaminen ei tämän tutkimuksen valossa ole riittä-

vää muutoksen aikaansaamiseksi. Tottumusten kartoittamisen jälkeen olisi tärkeää yhdessä arvioida kerättyä tietoa ja sen jälkeen selkeästi määrittää mahdolliset muutostarpeet. Kartoitustiedon arvioinnin aikana keskustelu kääntyy menneestä käyttäytymisen tarkastelusta tulevaan käyttäytymismuutoksen tarkasteluun. Muutostarpeen selkeä määrittäminen on lähtökohta muutosprosessille ja sen täytyy luonnollisesti edeltää muutosvalmiudesta ja muutosprosessista keskustelua.

Tutkimuksessa rakennettu terveysneuvontaa koskeva teoreettinen viitekehys osoittaa yksilölähtöisen ja käyttäytymismuutokseen tähtäävän terveysneuvonnan tärkeitä osa-alueita ja viestinnällisiä neuvontastrategioita. Organisaation toimintaympäristöä koskeva teoreettinen viitekehys korostaa ihmis- ja käyttäytymisperusteisten sekä viestinnällisten tekijöiden tärkeyttä suun terveydenhuollon organisaatiotasoisen toiminnan toteuttamisessa ja kehittämisessä. Tutkimustulosten pohjalta rakennettu terveysneuvonnan vuorovaikutusprosesseja suun terveydenhuollon organisaatiossa kuvaava malli tuo esille eri osa-alueiden symbolisen ja rakenteellisen yhteen kietoutumisen. Suun terveydenhuollon rakenteellisia ja toiminnallisia muutoksia ei voida tarkastella ilman organisaation kulttuuristen ja viestinnällisten piirteiden huomioimista. Jatkossa näiden ilmiöiden tunnistaminen, tukeminen sekä vielä syvällisempi tutkiminen ovat tarpeen.

REFERENCES

Adams, J. & White, M. 2003. Are activity promotion interventions based on the transtheoretical model effective? A critical review. British Journal of Sports Medicine 37, 106-114.

Allen, B.J. 2005. Social constructionism. In S.K. May & D.K. Mumby (Eds.) Engaging organizational communication theory and research: Multiple perspectives. Thousand Oaks: Sage, 35-54.

Allert, J.R. & Chatterjee, S.R. 1997. Corporate communication and trust in leadership. Corporate Communications: An International Journal 2, 14-21.

Alestalo, P., Widström, E. & Mattelmäki, U. 2000. Johtajuus suun terveydenhuollossa. Selvitys kymmenen kehittämisprojektiin osallistuneen kunnan hammashuollon johtajuudesta. Sosiaali- ja terveysalan tutkimus- ja kehittämiskeskus, Aiheita 8/2000, Helsinki.

Anderson, J.A. 1996. Communication theory: Epistemological foundations. New York: Guilford.

Anderson, P. 1999. Complexity theory and organisation science. Organisation Science 10, 216-232.

Antonovsky, A. 1987. Unraveling the mystery of health. How people manage stress and stay well. San Fransisco: Jossey-Bass.

Antonovsky, A. 1993. Complexity, conflicts, chaos, coherence, coercion and civility. Social Science and Medicine 37, 969.

Ashworth, P. 1997. Breakthrough or bandwagon? Are interventions tailored to stage of change more effective than non-staged interventions? Health Education Journal 56, 166-174.

Aula, P. 1999. Organisaation kaaos vai kaaoksen organisaatio? Helsinki: Loki-Kirjat.

Baer, J.S. & Peterson, P.L. 2002. Motivational interviewing with adolescents and young adults. In W.R. Miller & S. Rollnick (Eds.) Motivational interviewing preparing people for change (2nd edition) New York: Guilford, 320-332

Bagnall, P. 1997. The future contribution of school nurses to the health of school age children. Health Education 97, 127-31.

Bandura, A. 1977. Self-efficacy: toward a unifying theory of behavioral change. Psychological Review 84, 191-215.

Bechtold, B. 1997. Toward a participative organisational culture: evolution or revolution. Empowerment in Organisation 5, 4-15.

Berg-Smith, S.M., Stevens, V.J., Brown, K.M., Van Horn, L., Gernhofer, N., Peters, E., et al. 1999. A brief motivational intervention to improve dietary adherence in adolescents. Health Education Research 3, 399–410.

Berry, T., Naylor, P.J. & Wharf-Higgins, J. 2005. Stages of change in adolescents: an examination of self-efficacy, decisional balance, and reasons for relapse. Journal of Adolescent Health 37, 452-459.

Borup, I. 1998. Psychosocial and health factors associated with school children's perceived benefits of the health dialogue in Denmark. Health Education Journal 57, 339-350.

Bourdeaudhuij, I.D., Philippaearts, R., Crombez, G., Matton, L., Wijndaele, K., Balduck, A-L. & Lefevre, J. 2005. Stages of change for physical activity in a community sample of adolescents. Health Education Research 20, 357-366.

Brown, A. & Starkey, K. 1994. The effect of organisational culture on communication and information. Journal of Management Studies 31, 807-828.

Brown, K., McIlveen, H. & Strugnell, C. 2000. Nutritional awareness and food preferences of young customers. Nutrition & Food Science 9, 230-235.

Brown, R. & Ogden, J. 2004. Children's eating attitudes and behaviour: a study of the modelling and control theories of parental influence. Health Education Research 19, 261-271.

Burrell, G. & Morgan, G. 1994. Sociological paradigms and organisational analysis: Elements of the sociology of corporate. Aldershot: Arena.

Campbell, C.R. 2007. On the journey toward wholeness in leader theories. Leadership and Organization: Development Journal 28, 137-153.

Cannon, G. 1992. Food and health: the experts agree. An analysis of one hundred authoritative scientific reports on food, nutrition and public health published throughout the world in thirty years, between 1961 and 1991. http://www.mcspotlight.org/media/reports/food_health1.html.

Cavanagh, S. 1997. Content analysis: Concepts, methods and applications. Nurse Researcher 4, 5-16.

Cavet, J. & Sloper, P. 2004. The participation of children and young people in decisions about UK service development. Child: Care, Health & Development 30, 613-621.

Choo, C. 2000. Working with knowledge: how information professionals help organisations manage what they know. Library Management 21, 395-403.

Claver, E., Llopis, J. & Gasco, J. 1998. Communicating culture: A reinforcement process model. Corporate Communications 3, 142-149.

Colby, S.M., Monti, P.M., O`Leary Tevyaw, T., Barnett, N.P., Spirito, A., Rohsenow, D.J., Riggs, S. & Lewander, W. 2005. Brief motivational intervention for adolescent smokers in medical settings. Addictive Behaviors 30, 865-874.

Conrad, C. 1994. Strategic organisational communication: Toward the twenty-first century. Fort Worth: Harcount Brace College Publishers.

Conrad, C. & Haynes, J. 2001. Development of key constructs. In F.M. Jablin & L.L. Putnam (Eds.) The new handbook of organizational communication: Advances in theory, research, and methods. Newbury Park: Sage, 47-77.

Contento, I., Balch, G.I., Bronner, Y.L., Paige, D.M., Gross, S., Bisignani, L., et al., 1995. Nutrition education for school-aged children. Journal of Nutrition Education 6, 299-311.

Cowley, S. & Houston, A.M. 2003. A structured health needs assessment tool: acceptability and effectiveness for health visiting. Journal of Advanced Nursing 43, 82-92.

Cullen, K.W., Baranowski, T. & Smith, S. 2001 Using goal setting as a strategy for dietary behavior change: Review. Journal of the American Dietetic Association 1010, 562-566.

Cullen, K.W., Zakeri, I., Pryor, E.W., Baranowski, T., Baranowski, J. & Watson, K. 2004. Goal setting is differentially related to change in fruit, juice, and vegetable consumption among fourth-grade children. Health Education & Behavior 31, 258-269.

Darby, D. & Daniel, K. 1999. Factors that influence nurses' customer orientation. Journal of Nursing Management 7, 271-280.

Deetz, S. 2001. Conceptual foundations. In F.M. Jablin & L.L. Putnam (Eds.) The new handbook of organizational communication: Advances in theory, research, and methods. Newbury Park: Sage, 3-46.

Denison, C. 1990. Corporate culture and organisational effectiveness. New York: Wiley.

Denison, R. & Mishra, A. 1995. Toward a theory of organisational culture and effectiveness. Organisation Science 6, 204-223.

DiClemente, C.C., Prochaska, J.O., Fairhurst, S.K., Velicer, W.F., Velasquez, M.M. & Rossi, J.S. 1991. The process of smoking cessation: An analysis of precontemplation, contemplation, and preparation stages of change. Journal of Consulting and Clinical Psychology 59, 295-304.

DiClemente, C.C. & Velasquesz, M.M. 2002. Motivational interviewing and the stages of change. In: W.R. Miller & S. Rollnick (Eds.) Motivational interviewing preparing people for change. (2nd edition) New York: Guilford, 201–216.

Diet nutrition and the prevention of chronic diseases. 2003. World Health Organization. Report of a joint WHO/FAO expert consultation. Geneva.

Domestic sales of Finnish food products. Forkful of facts Finnish food and drink industries' federation. http://www.finfood.fi/tietohaarukka.

Eisenburg, E.M. & Riley, P. 2001. Organizational culture. In F.M. Jablin & L.L. Putnam (Eds.) The new handbook of organizational communication: Advances in theory, research, and methods. Newbury Park: Sage, 291-322.

Elovainio, M. & Kivimäki, M. 2001. The effects of personal need for structure and occupational identity in the role stress process. The Journal of Social Psychology 14, 365-378.

Elovainio, M. & Lindström, K. 1993. Sosiaali- ja terveydenhuollon työyhteisöjen toimivuus Suomessa. Sosiaali- ja terveysalan tutkimus- ja kehittämiskeskus, Raportteja 113. Helsinki: Gummerus Oy.

Elving, W.J.L. 2005. The role of communication in organisational change. Corporate Communications: An International Journal 10, 129-138.

Emmons, K.M. & Rollnick, S. 2001. Motivational interviewing in health care settings: opportunities and limitations. American Journal of Preventive Medicine 20, 68-74.

Enckell, M. 1998. Organisational cultures of Finnish hospitals in change. Swedish School of Economics and Business Administration. Helsinki.

Finnish nutrition recommendations. 1999. Ministry of Agriculture and Forestry. Committee report 7, National Nutrition Council.

Fiske, J. 1990. Introduction to communication studies. (2nd edition) London: Routledge.

Frame, C.J., Green, C.G., Herr, D.G., Myers, J.E. & Taylor, M.L. 2001. The stages of change for dietary fat and fruit and vegetable intake of patients at the outset of a cardiac rehabilitation program. American Journal of Health Promotion 6, 405-413.

Frank, K. & Fahrbach, K. 1999. Organisation culture as a complex system: balance and information in models of influence and selection. Organisation Science 10, 253-277.

Franklin, A. & Sloper, P. 2005. Listening and responding? Children's participation in health care within England. International Journal of Children's Rights 13, 11-29.

Freeman, R., Heimonen, H., Speedy, P. & Tuutti, H. 2000. Determinants of cariogenic snacking in adolescents in Belfast and Helsinki. European Journal of Oral Science 108, 504-510.

Freeman, R. & Sheiham, A. 1997. Understanding decision-making processes for sugar consumption in adolescence. Community Dentistry and Oral Epidemiology 25, 228-32.

From the Finnish health policy. 1999. The Ministry of Social Affairs and Health. http://www.vn.fi/stm/suomi/pao/julkaisut/tervh99/tervh2/htm.

Gherunpong, S., Tsakos, G. & Sheiham, A. 2006. A sociodental approach to assessing dental needs of children: concept and models. International Journal of Paediatric Dentistry 16, 81-88.

Goffee, R. & Jones, G. 1998 The character of a corporation. London: Harper Business.

Graneheim, U.H. & Lundman, B. 2004. Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. Nurse Education Today 24, 105–112.

Grint, E. 1997. (Ed.) Leadership: Classical, contemporary, and critical approaches. New York: Oxfrod University Press.

Grunig, J.E., Grunig, L.A., Sriramesh, K., Huang, Y-H. & Lyra, A. 1995. Models of public relations in an international setting. Journal of Public Relations Research 7, 163-186.

Gustavsson, B. 2001. Towards a transcendent epistemology of organizations: New foundations for organizational change. Journal of Organizational Change Management 14, 352-378.

Hart, C. & Chesson, R. 1998. Children as consumers. British Medical Journal 316, 1600-1603.

Hatch, M.J., & Schultz, M. 1997. Relations between organizational culture, identity and image. European Journal of Marketing 31, 356-364.

Hausen, H., Kärkkäinen, S. & Seppä, L. 2000. Application of the high-risk strategy to control dental caries. Community Dentistry and Oral Epidemiology 28, 26–34.

Hedberg, V.A., Klein, J.D. & Andersen, E. 1998. Health counseling in adolescent preventive visits: Effectiveness, current practices, and quality management. Journal of Adolescent Health 23, 344-53.

Helms, M. & Stern, R. 2001. Exploring the factors that influence employees' perceptions of their organisation's culture. Journal of Management in Medicine 15, 415-429.

Hiiri, A. & Oikarinen, K. 2005. Käypä hoito hoitotakuun tukena. Suomen Hammaslääkärilehti 1-2, 8.

Hofstede, G. & Hofstede, G. 2005. Cultures and organizations: software of the mind. New York: McGraw-Hill.

Holtzhausen, D.R. 2000. Postmodern values in public relations. Journal of Public Relations Research 12, 93-114.

Honkala, S. & Honkala, E. 2004. Koululaisten suun terveystottumukset vuosina 1984-2002. In L. Kannas (Ed.) Koululaisten terveys ja terveyskäyttäytyminen muutoksessa. WHO-Koululaistutkimus 20 vuotta. Jyväskylän yliopisto, Terveyden edistämisen tutkimuskeskus. 219-237.

Honkala, S., Honkala, E., Rimpelä, A. & Vikat A. 2002. Oral hygiene instructions and dietary sugar advice received by adolescents in 1989 and 1997. Community Dentistry and Oral Epidemiology 30, 124-132.

Hsieh, H-F. & Shannon, S.E. 2005. Three approaches to qualitative content analysis. Qualitative Health Research 15, 1277-1288.

Hugoson, A., Lundgren, D., Asklöw, B. & Borkglint, G. 2003. The effect of different health programmes on young adult individuals: A longitudinal evaluation of knowledge and behaviour including cost aspects. Swedish Dental Journal 27, 115-130.

Jackson, S. 1999. Achieving a culture of continuous improvement by adopting the principles of self-assessment and business excellence. International Journal of Health Care Quality Assurance 12, 59-64.

Jakonen, S. 2005. Terveyttä joka päivä. Itäsuomalaisen peruskoulun oppilaiden näkemyksiä ja kokemuksia terveyden oppimisesta. Kuopion yliopiston julkaisuja E. Yhteiskuntatieteet 121.

Jakonen, S., Tossavainen, K. & Vertio, H. 2005. Lasten ja nuorten terveydenlukutaidon oppiminen – haaste terveysneuvonnalle ja –opetukselle. Suomen Lääkärilehti 60, 2891-2896.

Janis, I.L. & Mann, L. 1977. Decision making: A psychological analyses of conflict, choice and commitment. New York: The Free Press.

Johnson, J., Donohue, W., Atkin, C. & Johnson, S. 1994. Difference between formal and informal communication channels. Journal of Business Communication 31, 111-122.

Johnson, J. & McIntye, C. 1998. Organisational culture and climate correlates of job satisfaction. Psychological Reports 82, 843-850.

Juholin, E. 1999. Paradise lost or regained? The meanings and perceptions of organisational communication of 1990's in Finnish work organizations. Helsinki: Inforviestintä.

Juholin, E. 2001. Communicare! Viestintä strategiasta käytäntöön. Helsinki: Inforviestintä.

Jöreskog, K.G. & Sörbom, D. 1993. Lisrel8, user's reference quide. Chigago: SSI.

Kalavainen, M.P., Korppi M.O. & Nuutinen, O.M. 2007. Clinical efficacy of group-based treatment for childhood obesity compared with routinely given individual counselling. International Journal of Obesity, 1-9.

Kallio, P.J. 2000. Health promotion and behavioural approaches in the prevention of periodontal disease in children and adolescents. Periodontology 26, 135-145.

Kansanterveyslaki 1972. http://www.finlex.fi/.

Karhila, P., Kettunen, T. & Poskiparta, M. 2003. Negotiation in type 2 diabetes counselling: from problem recognition to mutual acceptance during lifestyle counselling. Qualitative Health Research 13, 1205-1224.

Karjalainen, S., Söderling, E., Sewón, L., Lapinleimu, H. & Simell O. 2004. A prospective study on sucrose consumption, visible plaque and caries in children from 3 to 6 years of age. Community Dentistry and Oral Epidemiology 29, 136-142.

Kasila, K., Hausen, H., & Anttonen, V. 2005. Tuloksia koululaisten ruokatottumusten kartoituskyselystä. Suomen Hammaslääkärilehti 12, 700-704.

Kasila, K. & Poskiparta, M. 2004. Organisational culture: Pursuing a theoretical foundation within the Finnish public oral health-care context. International Journal of Health Care Quality Assurance 17, 258–267.

Kasila, K., Poskiparta, M., Karhila, P. & Kettunen T. 2003. Patients` readiness for dietary change at the beginning of counseling: A transtheoretical model-based assessment. Journal of Human Nutrition and Dietetics 16, 159–166.

Kasila, K., Poskiparta, M., Liimatainen, L. & Sjögren A. 2002. Terveyden edistämisajattelun kehittyminen terveysalan ammattikorkeakoulutuksessa. Kasvatus 5, 484-494.

Kautiainen, S., Rimpelä, A., Vikat, A. & Virtanen, S.M. 2002. Secular trends in over-weight and obesity among Finnish adolescents in 1977-1999. International Journal of Obesity and Related Metabolic Disorders 26, 544-552.

Kay, E.J. & Locker, D. 1996. Is dental education effective? A systematic review of current evidence. Community Dentistry and Oral Epidemiology 24, 231-235.

Kay, E.J. & Locker, D. 1998. A systematic review of the effectiveness of health promotion aimed at improving oral health. Community Dental Health 15, 132-44.

Keller, S., Donner-Banzhoff, N., Kaluza, G., Baum, E. & Basler, H.D. 2000. Improving physician-delivered counseling in a primary care setting: Lessons from a failed attempt. Education for Health 3, 387-397.

Kelly, D. 2000. Using vision to improve organisational communication. Leadership & Organization: Development Journal 21, 92-101.

Kettunen, T. 2001. Neuvontakeskustelu. Tutkimus potilaan osallistumisesta ja sen tukemisesta sairaalan terveysneuvonnassa. University of Jyväskylä. Studies in Sport, Physical Education and Health.

Kettunen, T., Poskiparta, M. & Liimatainen, L. 2001. Empowering counseling. A case study: Nurse-patient encounter in a hospital. Health Education Research 16, 101–112.

Kettunen, T., Poskiparta, M. & Karhila, P. 2003. Speech practices that facilitate patient participation in health counseling – A way to empowerment? Health Education Journal 62, 326–40.

Kettunen, T., Poskiparta, M., Kiuru, P. & Kasila, K. 2006. Lifestyle counseling in type 2 diabetes prevention: A case study of a nurse's communication activity to produce change talk. Communication & Medicine 3, 3-14.

Kinirons, M.J. & Stewart, C. 1998. Adolescents` knowledge of common foods and drinks and the importance of the pattern of consumption: A study undertaken in an area of high dental needs. Community Dental Health 15, 175-178.

Kiuru, P., Poskiparta, M., Kettunen, T., Saltevo, J. & Liimatainen, L. 2004. Advice-giving styles by Finnish nurses in dietary counseling concerning type 2 diabetes care. Journal of Health Communication 9, 337-354.

Kivimäki, M. & Elovainio, M. 1995. Goal-publication, feedback and communication processes: Views of the Finnish health care work force. Quality Management in Health Care 4, 50-55.

Kreps, G.L. 1990. Organizational communication: Theory and practice. London: Longman.

Kreps, G.L. 1992. Health communication: Theory and practice. Prospect Heights: Waveland Press.

Krippendorff, K. 2004. Content analysis: An introduction to its methodology. California: Sage.

Kuusela, S. 1997. Oral health behaviour in adolescence. University of Helsinki. Institute of Dentistry, Faculty of Medicine.

Kuusela, S., Honkala, E. & Rimpelä, A. 1996. Toothbrushing frequency between the ages of 12 and 18 years – longitudinal prospective studies of Finnish adolescents. Community Dental Health 13, 34-39.

Kwan, Y.L., Petersen, P.E., Pine, C.M. & Borutta, A. 2005. Health-promoting schools: An opportunity for oral health promotion. Bulletin of the World Health Organization 83, 677-685.

Kyngäs, H. 1995. Diabeetikkonuorten hoitoon sitoutuminen: Toreettisen mallin rakentaminen ja testaaminen. Acta Universitatis Ouluensis D Medica 352.

Kyngäs, H. & Vanhanen, L. 1999. Sisällön analyysi. Hoitotiede 1, 3-12.

Kärkkäinen, S. 1997. Caries prevention in Finland in the early 1990`s. University of Oulu.

Källestål, C., Dahlgren, L. & Stenlund, H. 2000. Oral health behaviour and self-esteem in Swedish children. Social Sciences and Medicine 51, 1841-1849.

Källestål, C., Dahlgren, L. & Stenlund, H. 2006. Oral health behavior and self-esteem in Swedish adolescents over four years. Journal of Adolescent Health 38, 583-590.

Laiho, M. 1995. Oral health education in Finnish health centres. University of Kuopio. Department of Community Dentistry Faculty of Dentistry.

Lakomski, G. 2001. Organisational change, leadership and learning: culture as cognitive process. The International Journal of Education Management 15, 68-77.

Lazega, E. 1992. Micropolitics of knowledge: communication and indirection control in workgroups. New York: Aldine.

Lien, N., Lytle, L.A. & Klepp, K-I. 2001. Stability in consumption of fruit, vegetables, and sugary foods in a cohort from age 14 to age 21. Preventive Medicine 33, 217-226.

Ludwig, D., Peterson, K. & Gortmaker, S. 2001. Relation between consumption of sugar-sweetened drinks and childhood obesity: A prospective, observational analysis. Lancet 357, 505-552.

Locker, D. & Gibson, B. 2006. The concept of positive health: A review and commentary on its application in oral health research. Community Dentistry and Oral Epidemiology 34, 161-73.

Läärä, M., Widström, E. & Kentala, J. 2000. Suun terveydenhuollon henkilöstön työajan käyttö. Selvitys kymmenessä erikokoisessa terveyskeskuksessa. Hammaslääkärilehti 7, 1098-103.

MacGregor, I.D., Regis, D. & Balding, J. 1997. Self-concept and dental health behaviours in adolescents. Journal of Clinical Periodontology 24, 335–339.

Maes, L., Maser, M. & Honkala S. 2004. Oral Health. In C. Currie, C. Roberts, A. Morgan, R. Smith, W. Setterbulte, O. Sandal & V.B. Rasmussen (Eds.) Young people's health in context. Health Behaviour in School-aged Children (HBSC) study: International report from the 2001/2002 survey. Health Policy for Children and Adolescents 4. Copenhagen: WHO, 130–33.

Mallak, L., Lyth, D., Olson, S., Ulshafer, S. & Sardone, F. 2003. Diagnosing culture in health-care organizations using critical incidents. International Journal of Health Care Quality Assurance 16, 180-190.

Mark, A., & Critten, P. 1998. Chaos and complexity the future for health-care HTM. Health Manpower Management 24, 139-42.

Martin, J. 1992. Cultures in organizations – three perspectives. Oxford: Oxford University Press.

Mastrangelo, A., Eddy, E.R. & Lorenzet, S.J. 2004. The importance of personal and professional leadership. The Leadership & Organization: Development Journal 25, 435-451

Mattelmäki, U. (Ed.) 2001. Final report on the oral health care development project. Stencils of the Ministry of Social Affairs and Health 13. The Ministry of Social Affairs and Health. Helsinki. http://www.stm.fi/suomi/julkaisu/julk01fr.htm.

Mayrhofer, W. 1997. Warning: flexibility can damage your organisational health! Employee Relations 19, 519-534.

Memorandum of the national project on safeguarding the future of health care service. 2002. Ministry of Social Affairs and Health. Working Group Memorandum 2002:3. http://www.stm.fi/suomi/julkaisu/julk01fr.htm.

Merkens, B., & Spencer, J. 1998. Leadership in health services. International Journal of Health Care Quality Assurance incorporation Leadership in Health Services 11, i-iv.

Miller, W.R. 1983. Motivational interviewing with problem drinkers. Behavioural Psychotherapy 11, 147-172.

Miller, W.R. & Mount, K.A. 2001. A small study of training in motivational interviewing: Does one workshop change clinician and client behavior? Behavioural and Cognitive Psychotherapy 29, 457-471.

Miller, W.R. & Rollnick, S. 1991. Motivational interviewing: Preparing people for change. New York: Guilford.

Miller, W.R. & Rollnick, S. 2002. Motivational interviewing: Preparing people for change (2nd edition). New York: Guilford.

Mitcheson, J. & Cowley, S. 2003. Empowerment or control? An analysis of the extend to which client participation is enabled during health visitor/client interaction using a structured health need assessment tool. International Journal of Nursing Studies 40, 413-426.

Moynihan, P. & Petersen, P.E. 2004. Diet, nutrition and the prevention of dental diseases. Public Health Nutrition 7, 201-222.

Mumby, D.K. 1997. Modernism, postmodernism, and communication studies: A rereading of an ongoing debate. Communication Theory 7, 1-28.

Nenonen, M. & Nylander, O. 2001. A Theoretical framework for health information systems. National Research and Development Centre for Welfare and Health, Themes 3/2001, Helsinki.

Nigg, C.R. & Courneya, K.S. 1998. Transtheoretical model: Examining adolescent exercise behavior. Journal of Acolescent Health 22, 214-224.

Norcross, J.C., Prochaska, J.O. & Hambrecht, M. 1985. Levels of attribution and change (LAC) scale: Development and measurement. Cognitive Therapy and Research 9, 631-649.

Nordblad, A., Hiekkanen, S., Helminen, S. & Linna M. 2001 Tasapainotettu arviointi muutoksen johtamisessa. Terveyskeskusten suun terveydenhuollon Suhat-hanke suunnannäyttäjänä. Sosiaali- ja terveysalan tutkimus- ja kehittämiskeskus, Aiheita 15/2001, Helsinki.

Nordblad, A., Suominen-Taipale, L., Rasilainen, J. & Karhunen, T. 2004. Suun terveydenhuoltoa terveyskeskuksissa 1970-luvulta vuoteen 2000. Sosiaali- ja terveysalan tutkimuskeskus, Raportteja 278, Helsinki.

Nordblad, A., Varsio, S., Linna, M., Karhunen, T., Strömmer, P. & Huhtala S. 2002. Suhat 2001 -pilothanke. Suun terveydenhuollon haasteet. Hyviä tuloksia bencmarking-menetelmästä suun terveydenhuollossa. Sosiaali- ja terveysalan tutkimus- ja kehittämiskeskus, Aiheita 28/2002, Helsinki.

Northouse, P.G. 2001. Leadership: Theory and practice. (2nd edition) California: Sage Publications.

Nummenmaa, T., Konttinen, R., Kuusinen, J. & Leskinen, E. 1997. Tutkimusaineiston analyysi. Porvoo: WSOY.

Nylander, A., Kumlin, I., Martinsson, M. & Twetman S. 2001. Effect of a school-based preventive program with salivary lactobacillus counts as sugar-motivating tool on caries increment in adolescents. Acta Odontologica Scandinavica 59, 88-92.

Nyvad, B., Machiulskiene, V. & Baelum, V. 1999. Reliability of a new caries diagnostic system differentiating between active and inactive caries lesions. Caries Research 33, 252-260.

Ogbonna, E. & Harris, L. 2000. Leadership style, organizational culture and performance: Empirical evidence from UK companies. International Journal of Human Resource Management 11, 766-788.

Ogbor, J.O. 2001. Critical theory and the hegemony of corporate culture. Journal of Organizational Change Management 14 , 590-608.

Ottawa charter for health promotion. 1986. Health Promotion 1, iii-v.

Parker, M. 2000. Organizational culture and identity: Unity and division at work. California: Sage.

Petersen, P.E. 2003. The world oral health report 2003. Continuous improvement of oral health in the 21st century – the approcah to the WHO global oral health programme. Community Dentistry and Oral Epidemiology 31, 3-24.

Petersen, P.E. & Lennon, M.A. 2004. Effective use of fluorides for the prevention of dental caries in the 21st century: The WHO approach. Community Dentistry and Oral Epidemiology 32, 319–21.

Peterson, R.A. 1994. A meta-analysis of Cronbach`s coefficient alpha. Journal of Consumer Research 21, 381-391.

Pincus, J.D. 1986. Communication satisfaction, job satisfaction and job performance. Human Communication Research 12, 395-419.

Pirouznia, M. 2001. The association between nutrition knowledge and eating behavior in male and female adolescent in the US. International Journal of Food Sciences and Nutrition 52, 127-132.

Polit, D.E. & Hungler, B.P. 1993. Essentials of nursing research: Methods, appraisals and utilisation. (3rd edition) Philadelphia: JB Lippincott Co.

Pope, C., Ziebland, S. & Mays N. 2000. Qualitative research in health care: Analysis qualitative data. British Medical Journal 320, 114-116.

Poskiparta, M. 1997. Terveysneuvonta, oppimaan oppimista: Videotallenteet hoitajien terveysneuvonnan ilmentäjinä ja vuorovaikutustaitojen kehittämismenetelmänä. University of Jyväskylä. Studies in Sport, Physical Education and Health.

Poskiparta, M., Liimatainen, L., Kettunen T. & Karhila, P. 2001. From nurse-centered health counseling to empowermental health counseling. Patient Education and Couseling 45, 69–79.

Poskiparta, M., Kasila, K. & Kiuru, P. 2006. Dietary and physical activity counselling in Type 2 diabetes and impaired glucose tolerance by physicians and nurses in primary healthcare in Finland. Scandinavian Journal of Primary Health Care 24, 206-210.

Poskiparta, M., Kettunen, T. & Liimatainen, L. 2000. Questioning and advising in health counseling: Results from a study of Finnish nurse counselors. Health Education Journal 95, 47-67.

Poutanen, R., Lahti, S. & Hausen, H. 2005. Oral health-related knowledge, attitudes, and beliefs among 11 to 12-year-old Finnish schoolchildren with different oral health behaviours. Acta Odontologica Scandinavica 63, 10-16.

Povey, R., Conner, M., Sparks, P., James, R. & Shepherd, R. 1999. A critical examination of the application of the Transtheoretical model's stages of change to dietary behaviors. Health Education Research 5, 641-651.

Prochaska, J.J., Sallis, J.F. & Rupp, J. 2001. Screening measure for assessing dietary fat intake among adolescents. Preventive Medicine 233, 699-706.

Prochaska, J.O. 1994. Strong and weak principles for progressing from precontemplation to action on the basis of twelve problem behaviors. Health Psychology 13, 47-51.

Prochaska, J.O. & DiClemente, C.C. 1983. Stages and processes of self-change of smoking: Toward an integrative model of change. Journal of Consulting Clinical Psychology 3, 390-395.

Prochaska, J.O., DiClemente, C.C. & Norcross, J.C. 1992. In search of how people change: Applications to addictive behaviours. American Psychologist 47, 1102-1114.

Prochaska, J.O. & Norcross, J.C. 2003. Systems of psychotherapy: A Transtheoretical analysis. (5th edition) Los Angeles: Thomson Learning.

Prochaska, J.O., Velicer, W.F., DiClemente, C.C. & Fava, J. 1988. Measuring processes of change: Applications to the cessation of smoking. Journal of Consulting and Clinical Psychology 56, 520-528.

Prochaska, J.O., Velicer, W.F., Guadagnoli, E., Rossi, J.S. & DiClemente, C.C. 1991. Patterns of change: Dynamic typology applied to smoking cessation. Multivariate Behavioral Research 26, 83-107.

Prochaska, J.O., Velicer, W.F., Rossi, J.S., Goldstein, M.G., Marcus, B.H., Rakowski, W., Fiore, C., Harlow, L.L., Redding, C.A., Rosenbloom, D., Rossi, S.R. 1994. Stages of change and decisional balance for 12 problem behaviors. Health Psychology 13, 39-46.

Putnam, L.L. & Fairhurst, G.T. 2001. Discource analysis in organizations: Issues and concerns. In F.M. Jablin & L.L. Putnam (Eds.) The new handbook of organizational communication: Advances in theory, research, and methods. Newbury Park: Sage, 78-136.

Putnam, L.L. & Pacanowsky, M.E. 1983. Communication and organizations: An interpretive approach. Beverly Hills: Sage.

Pyörälä, E. 2000. Interaction in dietary counselling of diabetic children and adolescents. University of Helsinki. Department of Public Health.

Rasku-Puttonen, H., Eteläpelto, A., Arvaja, M. & Häkkinen, P. 2003. Is successful scaffolding and illusion? – Shifting patterns of responsibility and control in teacher-student interaction during a long-term learning project. Instructional Science 31, 377-393.

Report on social affairs and health 2002. Ministry of Social Affairs and Health, Publications 11. http://www.stm.fi/suomi/julkaisu/julk01fr.htm.

Resnicow, K., Borrelli, B., Hecht, J. & Ernst, D. 2002. Motivational interviewing in health promotion: It sounds like something is changing. Health Psychology 21, 444-451.

Resnicow, K., Davis, R. & Rollnick, S. 2006. Motivational interviewing for pediatric obesity: Conceptual issues and evidence review. Journal of the American Dietetic Association 106, 2024-2033.

Robson, P.J.A. & Tourish, D. 2005. Managing internal communication: An organizational case study. Corporate Communications: An International Journal 10, 213-222.

Rollnick, S. & Heather, N. 1992. Negotiating behaviour change in medical settings: The development of brief motivation interviewing. Journal of Mental Health 1, 25-37.

Rollnick, S., Mason, P. & Christopher, B. 1999. Health behavior change: A guide for practitioners. Edinburgh: Churchill Livingstone.

Rollnick, S. & Miller, W.R. 1995. What is motivational interviewing? Behavioural and Cognitive Psychotherapy 23, 325-334.

Rondeau, K. & Wagar, T. 1999. Hospital choices in times of cutback: The role of organisational culture. International Journal of Health Care Quality Assurance in Corporating Leadership in Health Service 12, XIV-XXII.

Rubak, S., Sandbaek, A., Lauritzen, T. & Christensen B. 2005 Motivational interviewing: A systematic review and meta-analysis. British Journal of General Practice, 305-312.

Ruottinen, S., Karjalainen, S., Söderling, E. & Pienihäkkinen, K. 2004. Sucrose intake since infancy and dental health in 10-year-old-children. Caries Research 38, 142-148.

Räihä, T., Tossavainen, K. & Turunen, H. 2006. Adolescents` nutrition health issues: Opinions of Finnish seventh-graders. Health Education 106, 114-132.

Salminen, J. 2001. Johtamisviestintä: Mekanistinen maailmankuva murroksessa. Helsinki: Kauppakaari.

Saltman, R., Figueres, J. & Sakellarides, C. 1998. Critical challenges for health-care reform in Europe. Buckingham: Open University Press.

Schein E. 1990. Organizational culture. American Psychologist 45, 109-119.

Schou, L., Currie, C. & McQueen, D. 1990. Using a “lifestyle” percpective to understand toothbrushing behaviour in Scottish schoolchildren. Community Dentistry and Oral Epidemiology 18, 230–34.

Scott, T., Mannion, R., Davies H. & Marshall, M. 2003. The quantitative measurement of organizational culture in health care: A review of the available instruments. Health Services Research 38, 923-945.

Seasam, C., Woods, M. & Grosset, E. 1997. Attitudes to healthy eating among Scottish school children. Health Education 19-22.

Seigfried, R. 1998. Systems coherence: A method for evolving relationship and measuring system change. Quality Management in Health Care 7, 29-37.

Seppä, L., Kärkkäinen, S. & Hausen, H. 2000. Caries trend 1992–1998 in two low-fluoride Finnish towns formerly with and without fluoridation. Caries Research 34, 462–68.

Shannon, C.E. & Weaver, W. 1963. The mathematical theory of communication. Urbana: University of Illinois Press.

Shaw, P. 1997. Intervening in the shadow systems of organizations: Consulting from a complexity perspective. Journal of Organisational Change Management 10, 235-250.

Sheiham, A. 2001. Dietary effects on dental diseases. Public Health Nutrition 4, 569–591.

Shelton, C., McKenna, M. & Darling, J. 2002. Leading in the age of paradox: Optimizing behavioural style, job fit and cultural cohesion. The Leadership & Organization Development Journal 23, 372-379.

Shier, H. 2001. Pathways to participation: Openings, opportunities and obligations. A new model for enhancing children's participation in decision-making, in line with Article 12.1 of the United Nations Convention on the rights of the child. Children & Society 15, 107-117.

Silverman, D. 2001. Interpreting qualitative data: Methods for analysing talk, text and interaction. London: Sage Publications.

Smircich, L. 1983. Concepts of culture and organizational analysis. Administrative Science Quarterly 28, 339-358.

Spinks, N. & Wells, B. 1995. Quality communication: A key to quality leadership. Training for Quality 3, 14-19.

Sutcliffe, K.M. 2001. Organizational environments and organizational information processing. In F.M. Jablin & L.L. Putnam (Eds.) The new handbook of organizational communication: Advances in theory, research, and methods. Newbury Park: Sage, 197-230.

Stacey, R. 1996. Complexity and creativity in organizations. San Fransisco: Berret-Koehler.

Steptoe, A., Kerry, S., Rink, E. & Hilton, S. 2001. The impact of behavioral counseling on stage-for change in fat intake, physical activity, and cigarette smoking in adults at increased risk of coronary heart disease. American Journal of Public Health 91, 265-269.

Stone, E.J., Baranowski, T., Sallis, J.F. & Cutler, J.A. 1995. Review of behavioural research for cardiopulmonary health: Emphasis on youth, gender, and ethnicity. Journal of Health Education 26, 9-17.

Story, M., Neumark-Sztainer, D. & French, S.A. 2002. Individual and environmental influences on adolescent eating behaviors. Journal of the American Dietetic Association 102, 40-51.

Strecher, V.J., Seijits, G.H., Kok, G.J., Latham, G.B., Glasgow, R., DeVellis, B., Meertens, R.M. & Bulger, D.W. 1995. Goal setting as a strategy for health behavior change. Health Education Quarterly 22, 190-200.

Sutton, S. 2001. Back to the drawing board? A review of application of the transtheoretical model to substance use. Addiction 96, 175-186.

Talja, S., Tuominen, K. & Savolainen, R. 2005. "Isms" in information science: Constructivism, collectivism and constructionism. Journal of Documentation 61, 79-101.

Tates, K. & Meeuwesen, L. 2001. Doctor-parent-child communication: A (re)view of the literature. Social Science and Medicine 52, 839-851.

Tates, K., Meeuwesen, L., Elbers, E. & Bensing, J. 2002. ´I´ve come for his throat´: Roles and identities in doctor-parent-child communication. Child: Care, Health & Development 28, 101-08.

Taylor, J.R. 1993. Rethinking the theory of organizational communication: How to read an organization. Norwood: Ablex.

Taylor, B.C. 2005. Postmodern Theory. In S.K. May & D.K. Mumby (Eds.) Engaging organizational communication theory and research: Multiple perspectives. Thousand Oaks: Sage, 113-140.

Taylor, B.C., Irvin, L.R. & Wieland, S.M. 2006. Checking the map: Critiquing Joanne Martins` metatheory of organizational culture and its uses in communication research. Communication Theory 16, 304-332.

Terveyden edistämisen laatusuositus. Sosiaali- ja terveysministeriön julkaisuja 2006: 19.

Thorne, S., Kazanijan, A. & MacEntee, M. 2001. Oral health in long-term care: The implications of organisational culture. Journal of Aging Studies 15, 271-283.

Titscher, S., Meyer, M., Wodak, R. & Vetter, E. 2005. Methods of text and discourse analysis. London: Sage Publications, 55-73.

Tones, K. & Tilford, S. 1994. Health education: Effectiveness, efficiency and equity. London: Chapman and Hall.

Tossavainen, K., Turunen, H., Jakonen, S., Tupala, M. & Vertio, H. 2004. School nurses as health counsellors in Finnish ENHPS schools. Health Education 104, 33-44.

Tourish, D. 1997. Transforming internal corporate communications: The power of symbolic gestures and barriers to change. Corporate communications 2, 109-116.

Trethewey, A. 1997. Organisational culture. In P. Byers (Ed.) Organisational communication: Theory and behavior. Toronto: Allyn & Bacon, 203-34.

Tsakos, G. 2005. Redefining the way dental needs are assessed. Euro Observer: Newsletter of the European Observatory on Health Systems and Policies 7, 7-8.

Tukiainen, T. 2001. An agenda model of organisational communication. Corporate Communications 6, 47-52.

Van Duyn, M.A.S., Heimendinger, J., Russek-Cohen, E., DiClemente, C.C., Sims, L.S., Subar, A.F., Kreps-Smith, S.M., Pivonka, E. & Kahle, L.L. 1998.

Use of the transtheoretical model of change to succesfully predict fruit and vegetable consumption. Journal of Nutrition Education 6, 371-380.

Van Horn, L., Obarzanek, E., Friedman, L.A., Gernhofer, N. & Barton, B. 2005. Children's adaptation to a fat-reduced diet: The dietary intervention study in children (DISC). Pediatrics 115, 1723-33.

Van Sluijs, E.M.F., Van Poppel, M.N.M. & Van Mechelen, W. 2004. Stage-based lifestyle interventions in primary care: Are they effective? American Journal of Preventive Medicine 26, 330-343.

Van Vuuren, M., de Jong, M.D.T. & Seydel E.R. 2007. Direct and indirect effects of supervisor communication on organizational commitment. Corporate Communications: An International Journal 12, 116-128.

Varsio, S. & Vehkalahti, M. 1996. Evaluation of preventive treatment by risk of caries among 13-year-olds. Community Dentistry and Oral Epidemiology 24, 277-81.

Varsio, S., Vehkalahti, M. & Murtomaa H. 1999. Treatment practices in caries prevention fro 6-year-olds in Finland. Community Dentistry and Oral Epidemiology 27, 338-43.

Vehkalahti, M.M. & Widström, E. 2004. Teaching received in caries prevention and perceived need for Best Practices Guidelines among recent graduates in Finland. European Journal of Dental Education 8, 7-11.

Vehkalahti, M., Tarkkonen, L., Varsio, S. & Heikkilä, P. 1997. Decrease in and polarization of dental caries occurrence among child and youth populations, 1976-1993. Caries Research 31, 161-165.

Vehviläinen, S. 1999. Structures of counselling interaction: A conversational analytic study of couselling encounters in career guidance training. Helsinki: Helsinki University Press.

Velicer, W.F., DiClemente, C.C., Prochaska, J.O. & Brandenburg, N. 1985. Decisional balance measure for assessing and predicting smoking status. Journal of Personality and Social Psychology 48, 1279-1289.

Vereecken, C., Ojala, K. & Jordan, M.D. 2004. Eating habits. In C. Currie, C. Roberts, A. Morgan, R. Smith, W. Setterbulte, O. Sandal & V.B. Rasmussen (Eds.) Young people's health in context. Health Behaviour in School-aged Children (HBSC) study: International report from the 2001/2002 survey. Health Policy for Children and Adolescents 4. Copenhagen: WHO, 110-119.

Vereecken, C., Inchley, J., Subramanian, S.V., Hublet, A. & Maes, L. 2005. The relative influence of individual and contextual socio-economic status on consumption of fruit and soft drinks among adolescents in Europe. European Journal of Public Health 15, 224-232.

Vikat, A., Rimpelä, M., Rimpelä, A., Lahti-Koski, M. & Peltola, T. 1998. Miten nuorten ruokatottumukset ovat muuttuneet 20 vuoden kuluessa? Suomen Lääkärilehti 53, 2269-2279.

Vuori, J. 1995. Kenen terveydenhuolto? Julkinen ja yksityinen vertailussa. Tutkimus henkilöstön merkityssuhteista julkisen ja yksityisen sairaalaorganisaation osastokulttuurissa. Vaasa: Ankkurikustannus.

Vähäsarja, K., Poskiparta, M., Kettunen, T. & Kasila, K. 2004. Transteoreettinen muutosvaihemalli perusterveydenhuollon liikuntaneuvonnassa. Liikunta & Tiede 6, 81-88.

Watt, R. 2005. Public health strategies for oral health improvement. Euro Observer: Newsletter of the European Observatory on Health Systems and Policies 7, 6-7.

Watt, R.G., Harnett, R., Daly, B., Fuller, S.S., Kay, E., Morgan, A., Munday, P., Nowjack-Raymer, R. & Treasure, E.T. 2006. Evaluating oral health promotion: Need for quality outcome measures. Community Dentistry and Oral Epidemiology 34, 11-17.

Whitelaw, S., Baldwin, S., Bunton, R. & Flynn D. 2000. The status of evidence and outcomes in stages of change research. Health Education Research 6, 707-718.

Widström, E. & Eaton, K.A. 2004. Oral health systems in the extended European Union. Oral Health and Preventive Dentistry 3, 155-94

Widström, E. & Eaton, K. 1999. Systems for the provision of oral health care. Workforce and cost in the EU and EEA. National Research and Development Centre for Welfare and Health, A council of European Chief Dental Officers'survey, Helsinki.

Widström, E. & Erkinantti, J. 2002 Erillisselvitys suun terveydenhuollon kustannuksista ja tuotoksista terveyskeskuksissa vuonna 2000. Sosiaali- ja terveysalan tutkimus- ja kehittämiskeskus, Helsinki.

Widström, E., Linna, M. & Niskanen T. 2004. Productive efficiency and its determinants in the Finnish public dental service. Community Dentistry and Oral Epidemiology 32, 31-40.

Widström, E., Pietilä, I. & Erkinantti, J. 2002 Hammashoitouudistus etenee. Sosiaali- ja terveysalan tutkimus- ja kehittämiskeskus, Helsinki.

Wiio, O.A. 1992. Viestinnän tutkimussuuntauksia. Helsinki: Yliopistopaino.

The world oral health report 2003. World Health Organization. http//www.who.int/oral_h

Yolles, M. 2007. The dynamics of narrative and anternarrative and their relation to story. Journal of Organizational Change Management 20, 74-94.

Åberg, L. 1989. Viestintä – tuloksen tekijä. Mänttä: Semerka.

Åberg, L. 2000. Viestinnän johtaminen. Keuruu: Inforviestintä

Åström, A.N. 1998. Parental influences on adolescents` oral health behaviour: Two-year follow-up of the Norwegian longitudinal health behavior study participants. European Journal of Oral Sciences 106, 922-930.

Åström, A.N. 2004. Stability of oral health-related behaviour in a Norwegian cohort between the ages of 15 and 23 years. Community Dentistry and Oral Epidemiology 32, 354–62.

Åström, A.N. & Rise, J. 1996. Analysis of adolescents` beliefs about the outcome of using dental floss and drinking non-sugared mineral water. Community Dentistry and Oral Epidemiology 24, 211–16.

Appendix 1

Koeryhmän ehkäisyohjelma

Terveysneuvonnan rakentuminen
Lasten ja nuoren terveysneuvontatilanteet tulisi rakentaa kohderyhmän ikä- ja kehitysvaiheet sekä yksilöiden erilaiset tarpeet huomioiden. Lapsella tulisi olla mahdollisuus osallistua terveysneuvontakeskusteluun ja siinä tiedon tuottamiseen ja päätöksentekoon. Pelkkä kysymyksiin vastaaminen vuoropuhelussa ei anna riittävästi mahdollisuuksia tuottaa yhdessä uutta tietoa, arvioida muutosvalmiutta sekä saada aikaan muutoksia. Terveysneuvontakeskustelun rakentumisessa molempien osapuolten, niin terveydenhuollon ammattilaisen kuin myös asiakkaan osallistumisella ja vuorovaikutuksella on tärkeä merkitys. Neuvonnan osapuolet yhdessä muokkaavat käsiteltäviä asioita sekä asettavat tavoitteita ja luovat merkityksiä neuvonnalle. Lasten subjektiivisten käsitysten ja koko kasvu- ja elinympäristön huomioiminen on tärkeää heidän terveyteen liittyvässä toiminnassa. Keskusteluissa olisi hyvä pohtia, millaisia merkityksiä lapset antavat suun terveydelle ja miten he voivat omassa arkiympäristössään toteuttaa suun terveyttä ylläpitäviä toimintoja. Terveysneuvonnan toteuttamisessa on aina kuitenkin huomioitava, että lapset ovat eri tavalla kykeneviä osallistumaan yhteiseen keskusteluun ja päätöksentekoon.

Terveysneuvontakeskustelu voi muodostua monimuotoiseksi ja dynaamiseksi prosessiksi lapsen roolin vaihdellessa aktiivisesta osallistujasta passiiviseen tiedon vastaanottajaan. Lapsella on siis oikeus olla myös osallistumatta terveysneuvontakeskusteluun. Ammattilaisen roolina terveysneuvonta-tilanteessa on toimia motivoijana, vastavuoroisena ja tasa-arvoisena vuorovaikutuksen ohjaajana ja tukijana. Lapsen osallistumista tukevalla vuorovaikutuksella sekä elämän ja terveydenhallintakyvyn tukemisella on myös yhteys terveystiedon ja -käyttäytymisen väliseen suhteeseen.

Esimerkkejä terveysneuvonnan vuorovaikutuksen rakentumisesta:

Avoimia kysymyksiä suun terveydenhoidon ja neuvonnan tavoitteiden sekä merkityksen pohtimiseen
Neuvonnan aloitus on tärkeää positiivisen ilmapiirin luomisen ja lapsen motivoinnin kannalta. Seuraavassa on muutamia kysymysesimerkkejä, joita voi soveltaen käyttää neuvontatilanteen aloituksessa. Jokainen vuorovaikutustilanne kuitenkin rakentuu ja etenee yksilöllisesti, lapsen tarpeet ja sen hetkinen tilanne huomioiden. Alla olevia kysymyksiä voidaan pohtia neuvontakartan sisältöjen (napostelu, suuhygienia, fluorin ja ksylitolin käyttö, tupakointi jne.) avulla.

"Oletko miettinyt koskaan, miksi sinulla on hampaat?"
"Kuinka tärkeää sinun mielestäsi on hoitaa hampaita ja suun terveyttä?"
"Hoidatko omasta mielestäsi tarpeeksi hampaitasi?"
"Millä tavalla hoidat hampaitasi?"
"Mitä mieltä olet, onko sinusta tarpeellista, että me yhdessä pohdimme ja keskustelemme suun terveyteen liittyvistä asioista?"

"Kuinka paljon jo tiedät näistä asioista?"
"Mistä asioista haluaisit erityisesti keskustella?"
"Mitkä asiat sinusta olisivat tärkeimpiä, kun mietitään hampaiden hoitamista?"

Motivoinnin ja sitoutumisen kannalta voi olla myös hyvä keskustella itse neuvontatilanteeseen liittyvistä asioista.

"Oliko neuvonta-aika sinulle sopiva?"
"Oliko sinusta kiva tulla tähän neuvontaan?"

Jos lapsi vastaa myöntävästi, voidaan pohtia, mitä positiivisia asioita neuvontaan ja yhdessäoloon liittyy. Jos lapsi vastaa kieltävästi, voidaan taas pohtia, miksi neuvontaan ei ollut kiva tulla (lasta on voinut esim. pelottaa tai häntä ei kiinnosta koko juttu jne.) ja mitä voitaisiin tehdä, että neuvontaan olisi aina mukava tulla.

Keskustelun aikana asiakkaan tottumuksissa voidaan havaita tarvetta muutokseen, esim. lapsi syö usein välipaloja, unohtaa hampaiden harjaamisen jne. Keskustelun aikana on tärkeää arvioida myös lapsen halukkuutta muuttaa tapojaan. Lapsen muutoshalukkuus ja motivaatio vaikuttavat siihen, miten neuvonnan sisältöasioista jatkossa keskustellaan. Seuraavassa on muutamia esimerkinomaisia lähestymistapoja terveysneuvonnan ja siinä muutosprosessin rakentumiseen. Huomioitavaa on, että konkreettisessa neuvontatilanteessa lähestymistapojen ei ole tarkoitus edetä mitenkään järjestyksessä, vaan ne yhdistyvät ja etenevät eri tavoin riippuen aina vuorovaikutuksesta ja sen etenemisestä.

Avoin lähestymistapa / arkipäivän kuvaus

Lähestymistapa sopii erityisesti neuvontatilanteeseen, jossa lapsi ei ole heti valmis muutokseen tai hän ei vielä harkitse muutoksen tekemistä. Lapsi ei ehkä tiedä elintapojensa vaikutusta terveyteen tai ei ole kiinnostunut koko asiasta, lapsen asenne voi olla välinpitämätön tai vastustavakin.

"Voisitko kertoa, millainen on sinun aivan tavallinen arkipäivä? Aamulla kun nouset ylös… niin syötkö aamupalaa?.. mitä yleensä syöt aamupalaksi?"

Hammashuoltajan tehtävänä on auttaa lasta päivän kuvauksen kertomisessa viemällä keskustelua eteenpäin ja tekemällä tarvittaessa tarkentavia kysymyksiä. Tällaisella lähestymistavalla voidaan saada lapsen tottumusten lisäksi käsitystä myös hänen koko kasvu- ja elinympäristöstä.

Lapsen tottumukset ja niiden yhteys suun terveyteen

Kun lapsen tottumuksista on keskusteltu yleisellä tasolla, voidaan edetä pohtimaan, miten tällaiset tottumukset vaikuttavat suun terveyteen.

"Mainitsit äsken, että juot aina harkkojen päälle limpparia. Kuinka monta kertaa viikossa sinulla on harkkoja? Mitä luulet, miten limppari vaikuttaa hampaisiin?"

Jos lapsi vastaa, ettei tiedä, hammashuoltaja voi kysyä *"Haluaisitko tietää asiasta enemmän?"* Keskustelu voi myös edetä näin: *"Mielestäsi limppari voi siis aiheuttaa hampaiden reikiintymistä. Mitä sinä voisit tehdä estääksesi hampaittesi reikiintymisen?"*

Neuvonnassa voidaan pohtia vaihtoehtoisia/korvaavia toimintatapoja kuten että lapsi joisi vain kerran viikossa limpparia, muina kertoina vettä jne.

Tiedon antaminen

Tiedon välittäminen on tarpeellista tilanteessa, jossa lapsi harkitsee muutosta, mutta ei toimi. Lapsi on kiinnostunut asiasta ja saattaa itse ilmoittaa, että haluaisi enemmän tietoa joistakin asioista tai sitten asiakkaalta voi kysyä

"Tiedätkö, miten reiät syntyvät hampaisiin?"
"Mitä tiedät hammaslangan käytöstä?"
"Oletko ajatellut, miksi useiden välipalojen syöminen voi olla haitallista hampaille?"

Tiedon antamisessa on hyvä välttää uhkaavilta kuulostavia ilmaisuja kuten "näin kuuluisi toimia, jos et toimi, sinulle voi tapahtua tällä tavalla".

Tottumusten hyvät ja huonot puolet

Lähestymistapa sopii esimerkiksi tilanteeseen, jossa lapsi kertoo tietävänsä tottumuksensa / käyttäytymisensä vaikuttavan negatiivisesti suun terveyteen, mutta että muutoksen tekeminen on vain niin vaikeaa. Lapsi on siis harkinnut muutosta. Tällöin voidaan pohtia asiaan liittyviä hyviä ja huonoja puolia.

"Mitä hyviä puolia näet karkin syömisessä?"
"Mitäs sitten voisivat olla karkin syömisen huonot puolet?"

Hammashuoltaja voi lopuksi tehdä yhteenvedon puhutuista asioista.

"Siis mielestäsi karkit maistuvat hyviltä ja syöt niitä yleensä kavereiden kanssa… jne. Mutta toisaalta sanoit, että karkkeihin menee rahaa ja ne aiheuttavat hampaisiin reikiä, varsinkin jos niitä syö usein."

Tästä voi edetä vaikkapa kysymyksellä *"Mitä luulet, pystyisitkö vähentämään karkin syömistä?"*

Reflektoiva keskustelu terveystottumuksista

Reflektoiva keskustelu muutosta vaativasta terveystottumuksesta sopii erityisesti tilanteeseen, jossa lapsi on päättänyt tehdä muutoksen tai sitten on jo tehnyt muutoksen. Motivoiva keskustelu on tarpeen tilanteessa, jossa lapsi yrittää ylläpitää muutosta ja sitoutua siihen. Yhteisessä keskustelussa on tärkeää pohtia lapsen arkipäivän tilannetta, muutoksen esteitä ja toimintamahdollisuuksia.

"Kerroit äsken, että kaikki kaveritkin menevät välkällä kioskille ostamaan karkkia. Tiedän, että on vaikeaa olla menemättä mukaan, mutta olisiko sinulla mitään ehdotuksia, miten voisit välttää ettet ostaisi karkkia joka kerta?"

Asiaa voidaan pohtia myös rahan säästämisen näkökulmasta ja laskea vaikka puolessa vuodessa kertyvät säästöt, ja miettiä mitä muuta niillä saisi kuin karkkia. Hammashuoltaja voi kertoa esimerkkejä, mitä muut lapset ovat tehneet vastaavassa tilanteessa. Lapselta voi myös kysyä suoraan hänen valmiuttaan muuttaa tottumuksiaan.

"Olisiko mahdollista, että pesisit hampaitasi myös aamuisin?"

Motivoinnissa on hyvä puhua positiivisista asioista ja tulevaisuudesta, ei niinkään aikaisemmin tehdyistä virheistä. Sanoja virhe, väärät tottumukset, tai ongelmat on yleensä hyvä välttää. Jos lapsi kertoo tekemistään pienistäkin muutoksista, ammattilaisen on hyvä tehdä niistä "iso asia" ja antaa positiivista palautetta.

"Todella hienoa, että viime viikolla et kertaakaan ostanut karkkia. Tuntuiko se sinusta vaikealta?"

Neuvonnan lopuksi hammashuoltaja voi vielä kysyä asiakkaalta

"Jos ajattelet tämän keskustelun pohjalta, niin mitkä asiat hampaiden hoitamisessa voisivat sinun kohdallasi olla ne tärkeimmät?" "Mikä jäi tästä kerrasta tärkeimpänä mieleen?"

Hammashuoltaja voi auttaa tärkeimpien asioiden kertaamisessa ja mieleen palauttamisessa. Neuvonnan onnistunut lopettaminen on tärkeää, koska se vaikuttaa lapsen mielikuvaan koko neuvontatilanteesta, neuvonnassa sovittuihin tavoitteisiin ja niihin sitoutumiseen sekä halukkuuteen tulla seuraavaan neuvontaan. Neuvonnan rakentumisessa tulee huomioida lapsen yksilöllinen vastaanottokyky ja osallistuminen neuvontakeskusteluun. Yhdessä asetettuja tavoitteita on hyvä aina kerrata ja sisältöasioihin palata uudestaan tarpeen vaatiessa. On hyvä muistaa, että epäonnistuneet muutosyritykset ja repsahdukset muutosten tekemisessä eivät tarkoita, että neuvonta olisi epäonnistunut. Repsahdukset ovat osa terveystottumusten muutosprosessia. Epäonnistumisia on tärkeä käsitellä neuvonnan aikana. Ammattilaisen motivointi ja empaattisuus korostuvat tällaisissa tilanteissa. Terveystottumusten ja -käyttäytymisen muutosprosessit ovat aikaa vieviä ja pitkäkestoisia tapahtumasarjoja.

Karieksen etiologia

Lapsille on syytä kertoa karieksen etiologiasta, että miksi ja miten:

- Jotta hampaaseen syntyisi reikä, suun mikrofloorassa pitää olla kariesbakteereita, ennen muuta mutans streptokokkeja.
- Kariesbakteerit tuottavat ruokavalioon sisältyvistä fermentoituvista hiilihydraateista happoja, jotka liuottavat hammaskiillettä.
- Jos hapon aiheuttamia hyökkäysjaksoja ei ole kohtuuttoman usein, pienet liukenemat kovettuvat sellaisten lepojaksojen aikana, jolloin bakteereilla ei ole käytössään hapontuottoon tarvittavaa ravintoa.
- Jos lepojaksoja ei ole riittävästi, liukeneminen etenee ja hampaaseen syntyy reikä.

Kariesbakteerit

Pääasiallinen kariesbakteeri on mutans streptokokki. Jos suussa on paljon kariesbakteereita, välinpitämättömyys karieksen hallinnassa heijastuu helpommin reikiintymisenä verrattuna henkilöihin, joilla kariesbakteereita on vähän. Kariesbakteerien pysyvä häätäminen ei ole mahdollista.

Karies ja paikalliset tekijät
Puhkeavat hampaat, jotka eivät vielä ole purennassa, ovat erityisen alttiita reikiintymään. Puhkeavan hampaan kiille ei ole vielä lopullisesti kovettunut. Puhkeavan hampaan purupinnalle kertyy helposti bakteeriplakkia, jota ei ole useinkaan helppo harjata pois.

Syljen puolustusmekanismit torjuvat monin tavoin reikien syntymistä, esimerkiksi neutraloivat happohyökkäyksen aikana syntyviä happoja. Jos syljen eritys tai syljen laatu eivät ole normaaleja, karieksen hallinnassa on oltava tavanomaista tarkempi. Syljeneritystä vähentävät tyypillisimmillään tietyt yleissairaudet ja/tai niihin käytetty lääkitys.

Johdanto karieksen hallintaan
Tarkoituksena on lapsen kanssa yhdessä selvittää, miksi hänelle on tullut kariesta ja miksi se on tullut kyseiselle (kyseisille) kohdalle. Lapsen kanssa käydään myös läpi se, miten hän voi pysäyttää kariesleesion etenemisen hoitohenkilökunnan avustuksella, ja kuinka hän voi estää uusien kariesleesioiden kehittymisen. Terveysneuvonta pitää sisällään samat asiat kuin koko väestölle suunnattu terveyskampanja, mutta yksilöllisin painotuksin. Keskeiset viestit ovat:

- *vähennetään happohyökkäyksiä napostelukertoja vähentämällä*
- *vahvistetaan hampaita antamalla niille fluoria (min 2xpäivässä hammastahnaa)*
- *alennetaan bakteerien toimintakykyä käyttämällä ksylitolia*

Kaikessa toiminnassa pyritään siihen, että lapsi ottaa asiat omaan haltuunsa ja vastaa itse terveydestään. Hoitohenkilöstö ainoastaan opastaa ja tukee lasta hänen toimissaan, ja tarvittaessa on omin toimenpitein laittamassa yhdessä lapsen kanssa tervehtymisprosessia liikkeelle.

Fluori ja suuhygienia
Kaikille annetaan alussa suuhygienianeuvonnan yhteydessä fluori-ksylitolihammastahna ja hammasharja. Näytetään lapselle kädestä pitäen harjan ja langan käyttö. Apuna käytetään tarvittaessa plakkivärjäystä. Koetetaan etsiä lapsen kanssa yhdessä hänelle parhaiten sopivat tekniikat (harjausote, langan virittely) sekä ajankohdat, jolloin harjaus ja lankaus tulisi varmimmin tehtyä (esim. tv:tä katsellessa). Hammasharjan saa vaihtaa uuteen tuomalla vanhan harjaksiltaan levinneen harjan vaihtoon. Harjojen vaihtokäytäntö sovitaan paikallisesti (kouluterveydenhoitajat?). Tärkein fluorinsaantilähde on hammastahna (mielellään ksylitolipitoinen). Hampaat harjataan huolellisesti puhtaaksi vähintään aamuin illoin; aamulla ennen aamupalaa ja illalla viimeksi juuri ennen nukkumaanmenoa. Näin varmistuu, että syljessä on aamuin illoin fluoria. Fluori säilyy syljessä noin kaksi tuntia. Happohyökkäysjaksojen aikana syljen fluori vähentää kiilteen liukenemista, ja lepojaksojen aikana syljen fluori kiihdyttää kiilteen kovettumista. Suuhygienianeuvonta perustuu käytyyn keskusteluun alkavista kariesleesioista, ja siihen millä alueilla lapsen karies on, ja missä kohdin reikiintymistä yleensä tapahtuu, ja kyseisten alueiden huolelliseen puhdistamiseen. Koska reiät usein syntyvät symmetrisesti myös toiselle puolen leukaa vastaavalle kohdalle, kiinnitetään huomioita myös toisen puolen saman kohdan harjaamiseen.

Fluorihammastahnan käytöstä neuvotaan, että sitä ei mielellään huuhdella suusta vedellä pois, van ainoastaan syljetään suu puhtaaksi. Perustellaan lapselle, miksi toimitaan näin. Jos lapsella on alkavaa kariesta approksimaalipinnoilla, nämä kohdat puhdistetaan huolellisesti hammaslangalla joka päivä ennen illalla tapahtuvaa hampaiden pesua. Mielellään tässä tapauksessa käydään langalla läpi kaikki välit, mutta vähintään leesiovälit käydään läpi. Jos lapsella on vain fissuurakariesta, langan käytöstä ei tarvitse puhua.

Jos lapsella on runsaasti näkyvää plakkia, harjaukseen paneudutaan erityisellä huolellisuudella, ja toistetaan kannustavaa neuvontaa. Puhkeavien hampaiden puhdistukseen kiinnitetään erityistä huomiota, ja kerrotaan lapselle missä purentatason alapuolella olevia hampaita on. Puhkeava hammas ei puhdistu normaalein menetelmin. Mutans streptokokin mielipaikkoja ovat fissuurat, joten ne on saatava puhtaaksi.

Fludent-tabletteja jaetaan kaikille lapsille, ja he pitävät niitä aina pieniä määriä mukanaan. Tablettien jakokäytäntö sovitaan paikallisesti (kouluterveydenhoitajat?) Fluorirasia täytetään noin kahden viikon välein. Kaikilla lapsilla voidaan katsoa olevan naposteluongelma. Yksi Fludent-tabletti imeskellään ennen napostelusyömisen/-juomisen alkamista. Yli neljää tablettia ei päivän aikana imeskellä. Jos päivän aikana on syöty vain ruoka-aikoina ja hampaat on pesty aamulla ja illalla, eikä päivään sisälly makeita välipaloja eikä napostelusyömistä, lisäfluoria ei välttämättä tarvita. Tarkoituksena on, että lapsille muodostuisi fluorinkäytöstä tapa, ja he ostaisivat tutkimuksen jälkeen fluoritabletit itse. Päiväaikaisen fluoritablettien käytön voi korvata hammastahnan käytöllä.

Jos jostain syystä tilanne aamulla tai illalla on sen kaltainen, että on täysin mahdotonta pestä fluorihammastahnalla hampaita, tällöin harjauksen voi korvata imeskelemällä fluoritabletin tai sivelemällä hieman hammastahnaa muutaman hampaan pinnalle.

Jos lapsi tai hänen vanhempansa eivät hyväksy fluoritablettien käyttöä, ne voidaan korvata fluorihammastahnalla, jota käytetään hammasharjan kanssa tai ilman. Tarkoituksena on turvata fluoritablettien tapaan syljen riittävä fluoripitoisuus päiväaikana, napostelusyömisen aikana ja heti sen jälkeen. Harjalla tai sormella levitetään vähäinen määrä hammastahnaa hampaiden pinnalle, jonka jälkeen syljen kanssa hetki purskutellaan ja syljetään liiat pois. Saman purskuttelun voi tehdä ottamalla em. toimenpiteen jälkeen vähäisen määrän vettä suuhun ja tehdä purskuttelu veden kanssa. Suuta ei huuhdella vedellä kummassakaan tapauksessa.

Ravintoneuvonta
Neuvonnassa lähdetään liikkeelle lapsen omista tottumuksista. Pienetkin edistysaskeleet ovat kannustamisen arvoisia. Neuvonnassa ei pyritä luomaan listoja kielletyistä ja sallituista ruoka-aineista vaan lapselle kerrotaan, että mikään ruoka-aine ei järkevästi käytettynä aiheuta reikiintymistä, mutta lähes kaikki ruoka-aineet holtittomasti käytettyinä tekevät sen. Ravintoneuvonnassa painotetaan seuraavia seikkoja: ruoka-aikojen rytmitystä, ravintoainesisältöä, kunnon perusruoan merkitystä, napostelusyömisen haitallisuutta, ja makeisten kohdalla ksylitolilla makeutettujen suosimista.

Kerrotaan ksylitolituotteiden hyödyt karieksen ehkäisyssä. Ksylitolista on syytä kertoa, että se on makeudeltaan sokeria vastaava, ja ettei mutans streptokokkibakteeri, eivätkä muutkaan suun bakteerit, pysty käyttämään ksylitolia ravinnokseen eli kiilteen liukenemiseen vaadittavaa hapontuottoa ei synny. Lisäksi ksylitoli vähentää mutans streptokokkien tarttumista ja pysymistä hampaiden pinnalla. Napostelusyömisen jälkeen ksylitoli on hyvä keino pysäyttää happohyökkäys.

Lapsilla otetaan ksylitolipastillit rutiinikäyttöön. Pastillit jaetaan lapsille. Jokaisella lapsella on aina mukanaan pieni määrä pastilleja. Pastillien jakokäytäntö sovitaan paikallisesti (kouluterveydenhoitajat?). Tarkoituksena on, että ksylitolista tulisi elinikäinen tapa. Kaksi ksylitolipastillia (vaihtoehtoisesti purkka) kerrallaan imeskellään kolmasti joka päivä. Nämä imeskelyt on syytä pyrkiä tekemään aterioiden jälkeen; esimerkiksi aamupalan, päiväruuan ja iltaruuan/välipalan jälkeen. Lisäksi ksylitolipastilli imeskellään jokaisen napostelusyömisen/-juomisen jälkeen.

Klooriheksidiinilakka (Cervitec)
Aktiiviset alkavat kariesleesiot lakataan Cervitec-klooriheksidiinilakan ja fluorilakan sekoituksella. Lapsi on mukana eli hän tietää tarkalleen, missä leesiot ovat, ja miksi lakkaus tehdään. Ennen lakkausta tehdään putsi. Puhdistustahnan jälkeen kunkin alueen kariesleesiot kuivataan ja leesiot lakataan. Lakkaseoksen annetaan vaikuttaa 15 sekuntia, jonka jälkeen alue puustataan kuivaksi ja jatketaan seuraavalla alueella. Käsittely toistetaan viikon kuluttua. Edeltävä putsi tehdään vain, jos alue on plakin peittämä. Lakkaseos kerrostetaan mahdollisen säilyneen edellisen lakan päälle. Jos lyhyt käyntiväli ei ole mahdollinen, käsittely toistetaan sitten, kun se on mahdollista. Edeltävä putsi tehdään, jos alue on plakkinen. Lisäksi fluorilakkaseos laitetaan selektiivisesti muille mahdollisille kriittisille alueille, kuten fissuuroihin; erityisesti puhkeavien hampaiden fissuuroihin.

Vaikka linjaksi otetaan, että alkaviin kariesleesioihin käytetään varsin alkuvaiheessa klooriheksidiinilakan ja fluorilakan seosta, tähän voi tehdä poikkeuksia. Jos yhteistyö lähtee lapsen kanssa hyvin liikkeelle ja remineralisaatioprosessi lähtee suurella todennäköisyydellä liikkeelle ilman lakkaseoksen käyttöä, siitä

voidaan luopua. Lakkaseoksen voi tällöin korvata pelkällä selektiivisellä fluorilakkauksella.

Pinnoitukset
Lasten hampaita ei pinnoiteta.

Tupakka
Tupakoinnin ensi kokeilut osuvat tähän ikään. Tupakoinnista kysäistään, onko kokeillut tupakan polttoa tai nuuskaamista. Samalla selvitetään, tietääkö millaisia hyvin nopeastikin näkyviä vaikutuksia tupakalla on suussa. Tilanteessa voi soveltaa aiemmin esitettyjä vuorovaikutuksen muotoja. Kerrotaan tupakan ja nuuskan vaikutuksista suussa; haju tarttuu ja pysyy pitkään, kieli, limakalvot ja hampaat värjäytyvät. Jos asiaan on enemmälti kiinnostusta, tupakan vaikutuksista yleisterveyteen kerrotaan.

Kodin informointi
Alkukäyntien jälkeen tiedote lähetetään kotiin. Tiedote sisältää tärkeimmät asiat itsehoidosta.

Käynnit hammashoitolassa ja niiden dokumentointi
Käyntejä on yksilöllisen tarpeen mukaan. Käynnit kirjataan liitteenä olevan ohjeen mukaan. Jatkossa lapset käyvät hammashoitolassa puolen vuoden välein, joten jokaisella on vähintään yksi käynti puolessa vuodessa. Jos lapsi jättää tulematta, kutsu uusitaan rutiininomaisin keinoin korkeintaan kaksi kertaa. Tämän jälkeen otetaan yhteyttä kotiin. Jos karieksen eteneminen on täysin pysähtynyt, fluori- ja klooriheksidiinilakkauksia ei tehdä. Lasta kannustetaan jatkamaan samalla tavalla.

Paikkaushoito
Alku- väli ja lopputarkastukset tekevä tutkija määrittelee milloin tarvitaan paikkaushoitoa tai restoratiivista pinnoitusta. Paikattava hammas merkitään lapsen hammashoitokorttiin Porissa yleisesti käytettävällä Effica-järjestelmän merkinnällä. Merkinnän havaittuaan hammashuoltaja lähettää lapsen paikkaushoitoon lasta hoitavalle hammaslääkärille esimerkiksi tilaamalla hänelle ajan puhelimitse. Mikäli hammashuoltaja havaitsee tutkijan tarkastusten välillä paikattavan reiän, hän toimii samalla tavalla. Maitohampaiden paikkauksen suhteen toimitaan Porissa yleisen käytännön mukaan, eli jos maitohammas on irtoamassa, sitä ei enää paikata. Epäselvissä tapauksissa hammashuoltajan on syytä konsultoida hoitavaa hammaslääkäriä.

Jos jollain tutkittavalla kariestilanne jostain syystä dramaattisesti huononee, tehtävistä toimenpiteistä keskustellaan Liisa Sepän kanssa. Tällainen tilanne on aikaisempien tutkimusten perusteella harvinaista.

Kontrolliryhmällä ei tutkijan tekemää tarkastusta huomioida lainkaan, vaan he käyvät normaaliin tapaan omalla hammaslääkärillä, joka tekee paikkauspäätökset.

Appendix 2

JYVÄSKYLÄN YLIOPISTO
TERVEYSTIETEIDEN LAITOS

Terveysneuvonnan vuorovaikutustutkimus
Tutkimukseen osallistuvat suuhygienististit

Valitkaa koululaisten nimilistasta itsellenne yhteensä kahdeksan (4 tyttöä ja 4 poikaa) koululaista ja lähettäkää valitsemienne koululaisten kotiin suostumuskirje ja allekirjoituslomake, jonka heidän vanhempansa / huoltajansa allekirjoittavat.

Ensimmäisellä neuvontakerralla tulisi täyttää teidän ja koululaisen suostumuslomake. Terveysneuvonnan on tarkoitus olla normaali, karieksen hallintaprojektin ohjeistuksen mukaisesti toteutettu neuvontatilanne. Neuvontatilanne on tarkoitus videoida ja äänittää c-kasetille. Videokameran käytöstä on erillinen ohje.

Koululaiset käyvät alussa sovitut käyntikerrat sekä puolen vuoden ja vuoden kontrollikäynnit. Ensimmäisellä neuvontakerralla sekä puolen vuoden kontrollikäyntien yhteydessä on tarkoitus ottaa laktobasilli- ja streptokokkimutanstestit ja merkitä saadut tulokset potilastietoihin.

Ensimmäisen tutkimusvuoden jälkeen on teidän ja koululaisten haastattelut, joissa voidaan yhdessä tarkentaa ja täsmentää tutkimuksen kannalta tärkeitä asioita ja kysymyksiä. Mikäli neuvontaprosessin aikana teille herää kysymyksiä, ajatuksia tai haluatte kommentoida esim. neuvontatilannetta, voitte nauhoittaa ne neuvontatilanteen jälkeen c-kasetille.

Tarvittaessa voitte aina ottaa myös yhteyttä puhelimitse tai sähköpostin kautta.

Kirsti Kasila
puh. 040-7290 764
kikasila@cc.jyu.fi

Marita Poskiparta
puh. 014-260 2148
poskipar@pallo.jyu.fi

Appendix 3

JYVÄSKYLÄN YLIOPISTO
TERVEYSTIETEIDEN LAITOS

Hyvät vanhemmat / huoltajat

Olette antaneet lapsellenne luvan osallistua Porin hammashuollossa tapahtuvaan tutkimukseen, jonka tarkoituksena on estää alkavien reikien eteneminen niin, ettei niitä tarvitsisi paikata. Tähän tutkimukseen liittyen hammashuollossa on alkamassa myös terveysneuvontatutkimus, jossa selvitetään suun terveydenhuollon ammattilaisten ja heidän asiakkaiden terveysneuvontatilanteiden vuorovaikutuksellista rakentumista, vaikuttavuutta ja kehittämistarpeita.

Vuorovaikutustutkimus on osa Porin kaupungin, Jyväskylän yliopiston terveystieteiden laitoksen ja Oulun yliopiston sosiaalihammaslääketieteen laitoksen yhteistä tutkimusprojektia. Tutkimuksessa videoidaan samojen, iältään 11 - 12-vuotiaiden koululaisten suun terveydenhuoltoon liittyvät terveysneuvontatilanteet vuosien 2002 - 2005 aikana. Terveydenhuollon ammattilaiset ja koululaiset haastatellaan kerran vuodessa. Aineiston keruussa ja käsittelyssä noudatetaan tutkimuksenteon eettisiä periaatteita ja luottamuksellisuutta.

Terveysneuvontatutkimukseen on valittu 32 koululaista. Lapsenne kuuluu tähän joukkoon. Pyydämme Teitä ystävällisesti täyttämään ohessa olevan suostumus- ja allekirjoituskaavakkeen ja palauttamaan sen lastanne hoitavaan hammashoitolaan, mikäli annatte luvan lapsellenne osallistua Porin hammashuollossa tapahtuvaan terveysneuvonnan vuorovaikutustutkimukseen. Tarvittaessa voitte aina ottaa yhteyttä allekirjoittaneisiin tutkimuksen aikana.

Yhteistyöstä lämpimästi kiittäen

Kirsti Kasila
Terveyskasvatuksen tutkija
p. 040 7290 764
kikasila@cc.jyu.fi

Marita Poskiparta
Terveyskasvatuksen lehtori
p. 014-260 2148
poskipar@pallo.jyu.fi

Appendix 4

VANHEMMAN / HUOLTAJAN ALLEKIRJOITUS

Annan luvan Porin kaupungin terveyskeskuksen hammashoitolassa tapahtuvan _____(lapsen nimi) ja hammashuollon ammattilaisen välisen neuvontakeskustelun nauhoittamiseen ja sen käyttämiseen tutkimusaineistona suun terveyden terveysneuvontaa selvittävässä tutkimuksessa, josta tehdään tieteellisiä opinnäytetöitä ja julkaisuja. Tutkimukseen osallistuvien henkilöllisyys ei ole tunnistettavissa tutkimusraporteista. Tutkimukseen osallistuvia sitoo täydellinen vaitiolovelvollisuus.

Porissa _____/_____ 2002

_____
Vanhemman / huoltajan allekirjoitus

POTILAAN SUOSTUMUS

Annan luvan Porin terveyskeskuksessa videoida itseni _____ (nimi) ja terveydenhuollon ammattilaisen välisen keskustelun käytettäväksi tutkimusaineistona suun terveyden terveysneuvontaa selvittävässä tutkimuksessa, josta on tarkoitus tehdä tieteellisiä opinnäytetöitä ja julkaisuja. Tutkijan ja potilaan sekä terveydenhuollon ammattilaisen välinen neuvontaa käsittelevä keskustelu nauhoitetaan. Annan tutkijalle luvan myös potilasasiakaskirjoihin tutustumiseen suun terveyttä kuvaavien tunnuslukujen seuraamista varten. Tutkimukseen osallistuvia sitoo täydellinen vaitiolovelvollisuus.

Porissa _____/_____ 2002

_____
Allekirjoitus

TERVEYDENHUOLLON AMMATTILAISEN SUOSTUMUS

Annan luvan Porin terveyskeskuksessa videoida itseni _____(nimi) ja potilaan välisen keskustelun käytettäväksi tutkimusaineistona suun terveyden terveysneuvontaa selvittävässä tutkimuksessa, josta on tarkoitus tehdä tieteellisiä opinnäytetöitä ja julkaisuja. Tutkijan ja itseni välinen neuvontatilannetta käsittelevä keskustelu nauhoitetaan. Tutkimukseen osallistuvia sitoo täydellinen vaitiolovelvollisuus.

Porissa _____/_____ 2002

_____
Allekirjoitus

Appendix 5

Tilannekartoitus ensimmäisen tutkimusvuoden jälkeen / kevät 2003:

Kirsti Kasila / Jyväskylän yliopisto

Lähtötilanne alkutarkastuksessa ___ . ___ / _____

Reiänalkuja: _____

Tämän hetken tilanne ___ . ___ / _____

Parantuneita: _____

Reiänalkuja: _____

Reikiä / paikattuja: _____

Hampaiden reiällisyyden ilmeneminen

Hampaiden terveyttä edistävät tavat

Vaatii korjaamista		**Asia kunnossa**
	Hampaiden pesu 2 kertaa päivässä	
	Ksylitolin käyttö päivittäin: 2 pastillia / purkkapalaa kolmen aterian jälkeen	
	Fluorin käyttö päivittäin: hammastahna, fluoritabletit	
	Hammaslangan käyttö	
	Päivittäisiä syöntikertoja vähemmän kuin 6	
	Ei mehujen tai limsojen juontia syöntikertojen välillä	
	Ei jatkuvaa napostelua syöntikertojen välillä (karkit, sipsit, keksit)	
=>	**Rasteja yhteensä**	=>

Reiänalkujen paranneminen

Tämän hetkiset muutostarpeet ja tavoitteet:	**Halu toteuttaa muutos / oma arvio**		
	☺ Kyllä	Ehkä / ehkä ei	☹ Ei
-			
-			
-			

Tarvittaessa voitte aina ottaa yhteyttä:

_____

Appendix 6

HAMMASHUOLLON TYÖYHTEISÖ JA VIESTINTÄ

1-10

Miten hyvin alla luetellut ominaisuudet kuvaavat mielestäsi hammashuollon **työyhteisöä**?

	erittäin hyvin	hyvin	kohtalaisesti	vähän	ei lainkaan
1. Tasa-arvoinen	1	2	3	4	5
2. Roolisidonnainen	1	2	3	4	5
3. Osallistumista tukeva	1	2	3	4	5
4. Kehittyvä	1	2	3	4	5
5. Riskien ottamista suosiva	1	2	3	4	5
6. Selkeä, yksiselitteinen	1	2	3	4	5
7. Vastuuta kaikille jakava	1	2	3	4	5
8. Tehtäväkeskeinen	1	2	3	4	5
9. Yhtenäinen	1	2	3	4	5
10. Vanhoja toimintamalleja kyseenalaistava	1	2	3	4	5

11-23. Seuraavat kysymykset koskevat työyhteisössä toimimista. Ympyröi mielipidettäsi parhaiten kuvaava numero.

11. Tähän saakka työyhteisössäsi on ollut

1 = ei selkeitä tavoitteita tai päämäärää
2 = melko epäselvät tavoitteet ja päämäärä
3 = osittain selkeät ja osittain epäselvät tavoitteet ja päämäärä
4 = melko selkeät tavoitteet ja päämäärä
5 = hyvin selkeät tavoitteet ja päämäärä

12. Työsi merkitsee sinulle

1 = mielipahan ja ärtyisyyden lähdettä
2 = melko useasti ikävystymistä
3 = neutraalia asiaa, ei positiivista eikä negatiivista
4 = useimmiten positiivista asiaa
5 = tyytyväisyyden ja mielihyvän lähdettä

13. Koetko, että et voi todellisuudessa vaikuttaa siihen, mitä työyhteisössäsi tapahtuu?

1 = hyvin useasti
2 = useasti
3 = silloin tällöin
4 = harvoin

5 = en koskaan

14. Tuntuuko sinusta, että olet tuntemattomassa tilanteessa ja et tiedä mitä pitää tehdä?

1 = hyvin useasti
2 = useasti
3 = silloin tällöin
4 = harvoin
5 = ei koskaan

15. Onko sinulla ristiriitaisia tuntemuksia ja ideoita liittyen työyhteisöösi?

1 = hyvin useasti
2 = useasti
3 = silloin tällöin
4 = harvoin
5 = ei koskaan

16. Oletko viime aikoina yllättynyt jonkun työyhteisösi jäsenen käyttäytymisestä, vaikka luulit tuntevasi hänet hyvin?

1 = hyvin useasti
2 = useasti
3 = silloin tällöin
4 = harvoin
5 = en kertaakaan

17. Oletko viime aikoina pettynyt johonkin työyhteisösi jäseneen johon luotit?

1 = hyvin useasti
2 = useasti
3 = silloin tällöin
4 = harvoin
5 = en kertaakaan

18. Oletko kokenut, että sinua on kohdeltu epäoikeudenmukaisesti työyhteisössäsi?

1 = hyvin useasti
2 = useasti
3 = silloin tällöin
4 = harvoin
5 = en koskaan

19.Onko sinulla ollut sellaisia työyhteisöösi liittyviä sisäisiä tuntemuksia, joita et olisi halunnut kokea?

1 = hyvin useasti
2 = useasti
3 = silloin tällöin
4 = harvoin
5 = ei koskaan

20. Monet ihmiset tuntevat itsensä joskus häviäjiksi tietyissä tilanteissa. Kuinka usein olet tuntenut työyhteisössäsi tällä tavoin viime aikoina?

1 = hyvin useasti
2 = useasti
3 = silloin tällöin
4 = harvoin
5 = en kertaakaan

21. Kun työyhteisössäsi tapahtuu jotakin, kuinka yleensä suhtaudut asiaan?

1 = yliarvioit tai aliarvioit tapahtuman tärkeyttä
2 = suhtaudut asiaan epäilevästi
3 = et ajattele koko asiaa
4 = yrität suhteuttaa ja arvioida asian erilaisia puolia
5 = näet asiat oikeassa suhteessa

22. Kuinka usein sinusta tuntuu, että työlläsi on vähän merkitystä työyhteisösi päivittäiseen toimintaan?

1 = hyvin usein
2 = usein
3 = silloin tällöin
4 = harvoin
5 = ei koskaan

23. Kuinka useasti tunnet epävarmuutta oman työn hallittavuudessa?

1 = hyvin usein
2 = usein
3 = silloin tällöin
4 = harvoin
5 = en koskaan

24. Miten hyvin alla luetellut ominaisuudet kuvaavat mielestäsi **tiedonkulkua** työyhteisössäsi? Laita rasti **kolmen** työyhteisösi tiedonkulkua parhaiten kuvaavan ominaisuuden kohdalle.

__ Tavoitteellisuus
__ Luotettavuus
__ Ristiriitaisuus
__ Selkeys
__ Palautteen antamisen ja saamisen toimivuus
__ Avoimuus
__ Riittävyys
__ Yksisuuntaisuus
__ Suunnitelmallisuus
__ Muu mikä? _____

25. Seuraavaksi pyydän sinua ajattelemaan **työyhteisösi vuorovaikutusta**, jolla tarkoitan tiedon, ajatusten ja tunteiden luomista, muokkaamista ja ylläpitämistä yhdessä työyhteisön jäsenten kesken. Miten hyvin alla luetellut ominaisuudet kuvaavat mielestäsi tätä vuorovaikutusta hammashuollossa? Laita rasti **kolmen** työyhteisösi vuorovaikutusta parhaiten kuvaavan ominaisuuden kohdalle.

__ Vastavuoroisuus
__ Ristiriitaisuus
__ Kannustavuus
__ Luotettavuus
__ Yhdenmukaisuus
__ Monimuotoisuus
__ Epävarmuus
__ Spontaanius
__ Osallistuvuus
__ Empaattisuus
__ Vastuullisuus
__ Muu mikä?_____

26-35

Kuinka hyvin seuraavat väittämät pitävät mielestäsi paikkansa? Esimiehellä tarkoitetaan **lähintä esimiestäsi**.

	täysin eri mieltä	jokseenkin eri mieltä	en osaa sanoa	jokseenkin samaa mieltä	täysin samaa mieltä
26. Olen tyytyväinen esimieheeni	1	2	3	4	5
27. Esimieheni luo yhteishenkeä	1	2	3	4	5
28. Voin ilmaista avoimesti mielipiteeni esimiehelleni	1	2	3	4	5
29. Esimiestäni on helppo lähestyä	1	2	3	4	5
30. Esimieheni kuuntelee minua	1	2	3	4	5
31. Esimieheni on perillä työhöni liittyvistä tarpeista (koulutus, materiaalit)	1	2	3	4	5
32. Luotan esimieheeni	1	2	3	4	5
33. Saan riittävästi palautetta esimieheltäni	1	2	3	4	5
34. Voin antaa esimiehelleni palautetta hänen toiminnastaan	1	2	3	4	5
35. Esimieheni huomioi palautteen	1	2	3	4	5

36. Mikä hammashuollon viestinnässä on mielestäsi parasta?

_____

_____

37. Mikä hammashuollon viestinnässä on mielestäsi harmittavinta?

_____

_____

38-40

Kuinka tyytyväinen olet seuraaviin viestinnän osa-alueisiin työyhteisössäsi?

	Erittäin tyytymätön	Melko tyytymätön	En osaa sanoa	Melko tyytyväinen	Erittäin tyytyväinen
38. Sisäiseen tiedonkulkuun	1	2	3	4	5
39. Vaikuttamismahdollisuuksiin	1	2	3	4	5
40. Vuorovaikutukseen	1	2	3	4	5

41. Kuinka paljon hammashuollossa on mielestäsi tapahtunut muutoksia viimeisen vuoden aikana?

Ei lainkaan	Melko vähän	Jonkin verran	Melko paljon	Todella paljon	En osaa sanoa
1	2	3	4	5	6

42. Jos hammashuollossa on tapahtunut muutoksia, niin miten muutoksiin on mielestäsi suhtauduttu?

_____

_____

43. Minkälaiseksi arvioisit hammashuollon tilanteen vuoden kuluttua verrattuna tämän hetkiseen tilanteeseen?

Paljon huonompi	Jonkin verran huonompi	Ennallaan	Jonkin verran parempi	Paljon parempi	En osaa sanoa
1	2	3	4	5	6

TAUSTATIEDOT

44. Pääasiallinen virkanimikkeesi hammashuollossa on _____

45. Kuinka kauan olet työskennellyt X hammashuollossa? _____vuotta

Kiitos vastauksista!