Gendered experiences of work environment

– A study of stress and ambiguity among dental students in Sweden

Ingrid Schéle

Department of Psychology
Umeå Centre for Gender Studies,
Graduate School for Gender Studies
Umeå University
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Twenty years ago or so at Stockholm University, I encountered a former classmate from upper secondary school. She studied to become a dentist; I studied for my BA in human resource management. She gave me a badge that had been handed out at party for dental students. It was a hydroformic suction tip – the spiral shaped thing dentists place in your mouth to suck water and saliva – on a ribbon. The text on the ribbon said: "Tappa inte sugen" [Don't drop the suction device]. In Swedish that is actually a pun as it also means "Don't give up," and sometimes it is the first part of a quote from Hasse Alfredson, a well known Swedish comedian: "Tappa inte sugen, världen är full av tappade sugar,"
which I would say roughly translates to:

"When it sucks, don't lose it. The world is full of lost suckers."

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Abstract

This thesis explores how dental students experience their education. We aim to generate ways to understand which elements relate to the students' experience based on current theories and models regarding the quality of working life and gender (and) power relations.

Methods Twelve interviews with Umeå dental students in their clinical semesters were analysed with a Grounded Theory (GT) as well as a content analysis approach. A web-survey was sent to all clinical dental students in Sweden (P ≈ 805) with a response rate of 40% (p = 322). The quantitative methods included structural equation modelling (*SEM*) and cluster analysis.

Results The GT analysis resulted in the core category "Experiencing ambiguity," that captured the student's role-ambiguity. Central categories focused on perceived stress and performance assessment in relation to ambiguous inner and outer demands. The content analysis resulted in three categories: "Notions of inequalities," "Gendering," and "The student position." These categories present the ways groups of students are constructed in relation to the student/dentist norm and social gender relations, and how women and men of foreign descent risk subordination and stereotyping. The *SEM*-model contained psychosocial work environment, tolerance for ambiguity, perceived stress, and student satisfaction. Work environment influenced both perceived stress and satisfaction, and accounted for almost all of the explained variance in perceived stress for women, indicating that women are constructed as co-responsible for the work environment. About half of the variance for the men was explained by tolerance for ambiguity, indicating that the feeling of uncertainty may lead to stress in men who include "being in control" in their gender identity. The cluster analysis resulted in a six-cluster solution ranging from "The fresh and positive" to "The worn critiques." Psychosocial work environment again appeared to be the main factor. Gender also appears to be a factor as the gender distribution in the best as well as the two worst clusters differs from the population.

Conclusion Work environment stands out among the factors that relate to the students wellbeing and satisfaction, but the student group is heterogeneous and the ways students perceive their work environment relate to different processes and experiences. We suggest that the ways gender and ethnicity appear to be constructed in relation to the sociocultural gender power relations and the (traditional) medical hierarchy could be of importance for how the students' experience their psychosocial work environment.

Keywords: dental students, Swedish dental education, work and organisational theories, gender power relations, ambiguity, perceived stress, satisfaction, grounded theory, content analysis, SEM, cluster analysis

Acknowledgements

Though I have had the executive role in this thesis project, it has been a team effort. Without the support, input, and advice from my supervisor Professor Leif Hedman and co-supervisor Professor Anne Hammarström the process would have been much harder and the product lacking in finish, so they are the ones I acknowledge first and foremost. I will skip out on the journey metaphors and conclude that I have worked in a lot of projects in many different roles, this project has been the best one this far with the best learning opportunities and reasonable amounts of fun.

Research depends on data. I would like to thank the informants in the interview study and respondents to the web-survey, as well as the people who helped me find and contact them. Without you there would have been no results to report, and I sincerely hope that the dentistry programme and you will benefit from these results. I would also like to thank the people that gather and present facts and statistics about dental students and related topics and make it publicly available for, among others, doctoral students to find and appreciate. You do a time-consuming and thorough work which I am very thankful to have found, time after time, already done. In cases when knowledge has been less easy to come by, I have relied on a considerable amount of really helpful and patient people to whom I convey my heartfelt gratitude. Lack of space prevents me from naming all administrators and executing officers who are no longer anonymous to me. However, the former Faculty officer for the Umeå dentistry programme Carina Johansson needs mentioning as she is also the first person I made friends with when I moved to Umeå almost nine years ago. I do not doubt that she would have helped any other doctoral student as well and willingly, but I admit that I pestered her more with questions than I would have a stranger.

No thesis project exists without a context. An important part of the context are the people who are willing to listen, contribute with their knowledge; especially Susanne Tafvelin, who has helped me make sure that there is method to the madness (more specifically SEM analysis with all proper considerations) and in general lent a willing ear and sharp mind when I needed to voice my thoughts and Esther Hauer who shouldered the role of critical friend admirably well. As gender research in psychology all too often leans towards research on sex/gender differences, I also have to mention Eva Magnusson as an inspiration as her research and pathos makes it very clear that such differences are by no means all there is or should be to gender research. However, everyone cannot be acknowledged within the allotted space, and to be frank I probably fail to remember some of you who have helped or inspired me in dialogue or writing. If you find a paragraph or sentence you particularly approve of, feel therefore free to think “She would

never have thought about this had it not been for me," should you find none think instead "She failed to heed my advice."

No doctoral student exists solely within her thesis project. I have friends who have put up with their fair share of thesis talk and me being present in body rather than spirit. Thank you! And as you are my friends, you will realise that my memory will never be good, my tendency to double book will flourish more freely than ever post-doc, and I will not finish my garden this year either; I just won't blame any of it on my thesis any more.

No person is born a doctoral student, though my family has been rather unsurprised that I undertook this enterprise. To me, my family's lack of surprise in regard to my career choices is a vote of confidence and support. It's not that I'm never expected to fail; it's more like a belief that I do the right thing when I brave the straits.

Umeå, March 2011, Ingrid Schéle

Preface

This thesis project as well as my interest in gender research began with the virtual reality x-ray simulator my master thesis centred on. I started to notice differences between the male and the female dental students in their patterns of interaction with the simulator. Though I had had no intention to investigate the gender perspective, I noticed that some men tended to linger on the coolness of the device and how it was programmed, sometimes testing its limitations and interacting with it in a "what if way." The women tended to have a more utilitarian focus, learning as much as they could about x-raying teeth and some asked me if the session would help them ace the exam. I could not attribute these differences to sex, and borrowed books on gender and technology. I wondered whether my subjects were expressing patterns of learned preferences or behaved in ways they considered socially prescribed. My supervisor Leif Hedman and I decided that my doctoral project, which we had planned to centre on the dental students' interaction with the simulation, and the transfer effects of simulator training, would incorporate a gender perspective. For practical reasons the simulator never became an actual part of my doctoral thesis project, but I had already become hooked on dental students and the social construction of gender.

When I tried to find research on dental students I found that they are a small and underexplored group compared especially to the medical students; a PubMed search conducted on "dental students" and "stress" revealed 169 articles, while a search on "medical student" and "stress" resulted in 905 hits. Nevertheless, over the years research has accumulated that shows that life as a dental student can be tough, mentally as well as physically, and a fair amount of research shows that female students fare less well compared to their male peers in both respects.

Through our interaction with Professor Anne Hammarström, as well as my affiliation to the Umeå Centre for Gender Studies, the Graduate School for Gender Studies, my knowledge of gender relations has developed over the course of the project. Though far from considering myself a feminist researcher, I have reached a point where I feel that if I ever should do research in the future without applying a gender perspective, I would have a nagging feeling that I had forgotten something really important.

List of papers

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

I. Schéle, I., Hedman, L., & Hammarström, A. (accepted). Shared ambiguity but different experiences and demands among dental students – a gender perspective. *Qualitative Research in Psychology*.

II. Schéle, I., Hedman, L., & Hammarström, A. (submitted). The psychosocial work environment affects female dental students more than male. *Journal of Dental Education*.

III. Schéle, I., Hedman, L., & Hammarström, A. (manuscript). From "Fresh and positive" to "Worn critiques" – Six cluster profiles among Swedish dental students.

Theoretical point of departure

Theories on gender (and) power relations

When results imply significant differences between male and female participants, traditional psychological researchers tend to attribute these differences to biological sex (e.g. Stewart & McDermott, 2004). However – predominantly in social, critical and feminist psychology – the impact of cultural context on human behaviour has been recognised (e.g. Haaken, 1988; Shibley Hyde & McKinley, 1997; Spelke, 2005). In order to distinguish cultural influence and norms from biology researchers borrowed the term gender from its original language discipline (e.g. Scott, 1986; West & Zimmerman, 1987). While sex relates to biology, and implies that what constitutes males and females is inherent, gender is seen as sociocultural behaviours that constitute men and women, positioning gender research in a constructionist epistemological framework rather than a (post) positivist. In gender research the "truths" about women and men are expected to be constructed socioculturally in contrast to the (post) positivist notion that at least some sex attributes and sex differences are universal. The attributes of gender are not given by nature but by history, and culture, and they take individual effort to bring forth. To quote de Beauvoir (1949/2002), "one is not born, but becomes a woman" (ibid, p. 325). Different times, cultures and individual relations will inevitably shape different kinds of men and women rather than just biologically reproduce males and females.

The notion of doing gender rather than having a sex (West & Zimmerman, 1987) has become the foundation of contemporary gender research (e.g. Connell, 1987, 2009a, 2009b). Relatively stable sets of expectations or notions about men and women in a specific culture are usually referred to as (gender) norms, and these expectations and notions are (re)produced when people do gender by adhering to the norms. There are never a single set of gender norms in a culture, but several sets that relate, among other things, to age, class, subculture, and context. In the course of a day one person may need to relate to several different gender norms, either by adhering to or breaking them, depending on the situations they encounter. As the focus on culture and situations implies, gender is produced in relation to others, and we learn to interact differently based on own gender and the genders of those we interact with. In consequence, gender researchers should avoid using (the noun) "female" and "male," unless they specifically mean to ascribe sex, and instead use words like "girl," "boy," "woman," and "man." The researcher should also refer to actions rather than attributes to emphasise the achieved nature of gender (West & Zimmerman, 1987). In this thesis the focus is on how (gender related) sociocultural norms and expectations influence the dental students' experience of the dentistry programme, and we therefore

primarily use the term gender. However, in our interpretation combinations such as “female dentist” and “male students” do not violate the rule as it appears to be intended for the nouns, not the adjectives.

It is almost impossible to use gender as an analytical and theoretical point of departure without introducing power to the equation. Connell (1987) places gender relations within a power structure, where the structure is seen as both rather permanent and rather wide in its scope without being static. Power can be seen as an imbalance where some have more of the resources within a specific setting than others, or more of the control over the resources. Social power is also to some extent about setting the agenda: “The ability ... to set the terms in which events are understood and issues discussed, to formulate ideals and define morality, in short to assert hegemony, is also an essential part of social power” (Connell, 1987, p. 107).

In parallel to doing gender, men and women do power by imposing, adhering to or battling the structure of gender and power relations. Within this structure men in general are ascribed higher status than women, male issues tend to dominate the agenda, and the men who adhere to the hegemonic masculinity set the agenda (Connell, 1987). In this thesis project we have chosen Connells relational theory of gender (e.g. Connell, 1987, 2009a, 2009b) as a “sensitizing device” (Giddens, 1991, p. 213) in our gender power analysis. To use a theory as a sensitizing device is according to Giddens to use it in a “selective way in thinking about research questions or interpreting findings [not as a research programme]” (ibid, p. 213). The reader will therefore not in the present research find a systematic exploration of Connells theories on gender power relations, but research questions and interpretations that touch on different aspects of the theory.

Connells theory on gender power relations match both the constructionist epistemological base of this project and the relational and interactional focus of our analysis; the vertical (chiefly teacher-student) and horizontal (peer to peer) interaction that form the multitude of relations that (re)form the students’ experiences of their educational context. Connell describes four dimensions of gender relations: 1. power relations (direct, discursive and/or colonising), 2. relations regarding production, consumption and gendered accumulations, 3. emotional relations and, finally, 4. symbolism, culture and discourse (Connell, 2009a). Direct gender related power is, for example, men’s direct power over women in relations(hips), and laws or practices that regulate divorce, abortion, and violence against women, as well as the rights of gay men, lesbian women, bisexual persons and transpersons. Gender power is often discursive rather than direct, where discursive relates to how people are talked about and how the different categories talk about and relate to themselves and other categories. When a manager talks about secretaries as “the girls” he or she makes it harder to think about male secretaries, and to remember that there is such a thing as highly trained

secretaries. The dimension of production, consumption and accumulation is gendered primarily in that societies tend to be split into "men's work" and "women's work." Men's work tends to be in the official sphere, paid, and in higher regard then women's work that tends either to be confined to the home sphere, or be a capitalisation of the home sphere such as communal childcare or nursing, unpaid or less well paid than men's work, as well as imbued with less status and influence. Emotional relations are about how we relate to others emotionally; do we have positive or negative prejudice about women, men, and persons with different sexual orientations? Emotional relations are about how we relate to our own sexuality and the extent to which it fits the prejudice of our society; it is about how and why we flirt with others, but also how we act in relation to our gender in relationships, for example, as mothers and fathers. To be a "man," "woman," "mother" or "father" is not simply a definition or a category; the labels have vast symbolic values. One example of this is how even young schoolchildren use the words "fag" or "whore" completely unrelated to the sexual orientation or sexual activities of the person referred to, while simultaneously using the deprecatory connotations instilled in the words original discourse and adding new meanings to them.

In psychological research it can be useful to think of gender as a system with three levels: the social structural level, the interpersonal level, and the individual level (Crawford & Unger, 2004). Broadly speaking the first level concerns gender power relations, the second how gender functions as a cue for behaviours, interactions, etc., at a group level, and the third how masculinities and femininities are internalised as part of the self-concept. Within the first level of this system the work and efforts of women, as well as women as beings, are generally ascribed lower status than men and the male domain. On the interpersonal level we find the sociological notion of "doing gender." Doing gender leads to different actions and behaviours that in turn are likely to confirm rather than contradict preconceptions of what men and women are like, in other words doing masculinities and doing femininities. The social structural and interpersonal levels in turn influence individuals in becoming, to a greater or lesser degree, gender-typed: a term that refers to the internalisation of characteristics from the same-sex cultural gender norms which also constitutes the third level, the individual (Crawford & Unger, 2004).

Until recently the main concern in quantitative research in psychology has been statistically significant results, undoubtedly underscored by the policy of many leading journals to only publish articles where significant differences appear in the results. This has led to an overrepresentation of knowledge about what sets groups of people, for example, men and women, apart while intragroup differences are less often stressed (Stewart & McDermott, 2004). Feminist psychologists have been concerned by this

focus on sex differences, how the results has been achieved, and the striving to cast cultural differences as based on biology as well as to present men and women as essentially different that they believe lie behind (some of the) results (e.g. Caplan & Caplan, 1997; Spelke, 2005; Shibley Hyde, 2005). Gender research may also present results showing differences between (groups of) men and women, but these differences are discussed in terms of sociocultural gender power relations or discourses rather than inherent sex differences.

The constructionist paradigm remains contested in psychological research. (Post)positivist researchers and practitioners of psychology and medicine tend to share a scepticism regarding the notion of gender as something that can be socially constructed as well as the qualitative approach that is often used to capture (the processes behind) the construction of gender. Biological subject variables such as sex and age have been seen as relatively clear cut, well defined and agreed upon and thereby relatively unproblematic to use as variables or grouplabels. A focus on between-group differences takes the light of within-group differences, and the fact that intragroup differences may be larger than intergroup differences. A focus on between group differences may also present one group as the norm and one or more groups as deviant, "the Others," a process de Beauvoir dubs othering (1949/2002).

Variables that have swung from being related to nature to being related to nurture, such as race or ethnicity, have been used throughout history and are still used today. Which of the categories that are considered meaningful in group comparisons, which categories are considered to label relatively homogenous populations, as well as how the categories are defined varies based on history, society and politics. Nevertheless, the categories are usually based on the current consensus on what counts as "evident differences" within a research community, preferably in the form of dichotomies. When regarded as analytical categories (Scott, 1986) instead of variables ethnicity, class, sexuality, age, etc., can be used to cast light on the diversity inherent in the categories girls/women and boys/men. Instead of casting all men as units of a generic "man" variable, researchers ask "what can it entail to be a man of this background in this setting, in this situation." To regard gender and class separately may put the light on diversity; to regard the intersection between ethnicity, class and culture puts the light on complexity (Cole, 2009).

To introduce a gender or intersectional perspective in research does not, per default, challenge dichotomies or the focus on differences. In feminist theory the gender differences tradition succeeded the gender similarities tradition as the most common framework (Crawford & Unger, 2004; Nicholson, 1997). Researchers within the difference tradition "look closely at women's lives to see how women's experiences create a uniquely feminine

psychology" (Crawford & Unger, 2004, p. 124), producing what in effect is close to a female counter norm. Researchers applying gender perspectives may well concentrate either on women's or on men's studies. It is not improbable to believe that this separation into different disciplines may even add to the dichotomous view on gender. Research with an intersectional approach does not automatically shift the focus from differences either as it brings forth a multitude of voices belonging to "the Others," contrasting them to the norms – often the same norms and differences that have been defined by politicians, researchers, and other members of the upper levels of the societal hierarchy as noteworthy.

The core of every dichotomy is that a concept is not only described by what it encompasses but also by what it excludes, it is described by means of defining its opposites. The main concept, or norm, is described chiefly by what it contains, while the other concepts are chiefly defined by what they lack in regard to the norm. Which concept is to become the norm is not arbitrary, but rises from cultural and historical contexts. The problematisation of the dichotomy between the norm(s) and "the Other(s)" has brought changes within the research communes that gave way to a "crisis of representation" in the social sciences in the 1980s and the post-modern period (Denzin and Lincoln, 2003; Sampson, 1993). Some of the issues that have been brought into light are: who speaks for whom about whom, how is the "the Other" constructed in scientific texts, and what is the influence of the subjective researcher on data-gathering, interpretation and presentation. The objective scientist is questioned in two main dimensions: the dichotomies he/she applies in his/her research, for example, when ascribing differences between men and women to sex, and the way objective scientific knowledge is contrasted to other ways of knowing. In gender research researchers are therefore encouraged to reflect on themselves as researchers the knowledge they produce, and to share these reflections with their readers.

Theories and models regarding the quality of working life

We consider stress to be socially constructed (e.g. Barley & Knight, 1992) rather than a phenomenon that exists "naturally." Socially constructed or not, stress does affect wellbeing: "a stressed worker by any name is still a stressed worker" (Kenny & McIntyre, 2005, p. 48). Job-satisfaction is another factor that has been shown to affect wellbeing and performance. For example, in a meta-analysis Faragher, Cass, and Cooper (2005) showed that job-satisfaction correlated most strongly with burnout (corrected r = .48) of the health measures investigated, and the researchers suggest that job-satisfaction is more likely to affect health than the other way around.

We regard psychosocial work environment as elements in context of the dentistry programme that have impact on the dental students stress and

satisfaction but are not related to the physical work environment. Such psychosocial elements are, for example, how intellectually stimulating students find the dentistry programme, the students' influence on decisions regarding the programme, the formal as well as informal flow of information, the perceived supportiveness of faculty, staff and peers, and how fair the students perceive faculty and staff to be. On the other hand, it is hard to argue that psychosocial work environment is the only factor behind work related stress as not all employees develop the same stress symptoms or perceive the same amount of stress under the same/similar work conditions; a fact that deems even the well-renowned Demand-Control-Support (DCS) model by Karasek and Theorell (1990) incomplete. Kenny and McIntyre (2005) suggest that researchers in workplace stress should use multiple theories that account for what is universal and what is related to individual differences in how occupational stress is experienced. On this note we will introduce several models and constructs in our own attempt to account for what leads dental students to experience stress and satisfaction, and what lies behind (gendered) differences in their experiences.

Härenstam (2009) argues that researchers who want to explore the significance of gender in work and health with a quantitative approach need to acknowledge that private life as well as working life is gender segregated and will interact and affect the health of (groups of) men and women. Early theories tended to assume a rational view on work-family conflicts/balance with time as a limited resource, but the picture has proven to be more complex than that (for a discussion see e.g. Gutek, Searle, & Klepa, 1991). Recent research also acknowledges the possibility of positive "spillover" (e.g. Nordenmark, 2002) between the two – increasingly blurred (e.g. Perrons, 2003) – arenas of work and (family) life. These findings complicate the analysis of self-reported work-life balance in quantitative studies. Moreover, work-life interface has begun to replace work-family interface, acknowledging that family is no longer considered a requisite for imbalance in regard to ones working-life. Leisure-time, devoid of household duties, has for a long time been seen as an important factor in recovery from work stress, but the use of mere leisure-time as a measure of recovery may not be enough. A study by Rook and Zijlstra (2006) indicates that the amount of leisure-time individuals need in order to recover appears to vary, and the whole life-style pattern may need to be taken into account, which further complicates the use of the constructs leisure-time, recovery, and work-life balance.

Theories and models that include control are of great interest to research on the quality of working life and work related stress. The by now classical DCS model that gathers several aspects of work and workplace characteristics affecting stress and wellbeing was originally proposed and refined by Karasek, Theorell and associates (e.g. Karasek et al., 1998;

Karasek & Theorell, 1990). The core of the model is based on physical and psychological/cognitive job demands, workplace democracy and worker autonomy, and social support from supervisors and colleagues. The model stipulates, among other things, that high demands combined with low control affects the employees' wellbeing negatively. As mentioned above, the DCS model can be expected to benefit from being used together with other models. For example, research by Rydstedt, Devereux, and Sverke (2007) indicates that the DCS model and the effort reward imbalance (ERI) model (Siegrist, 1996) are complementary. In accordance with Colquitt's (2001) research on the dimensionality of organisational justice, the (ERI) model may offer a too narrow a definition of organisational justice as the focus is on distributive justice. By confirmatory factor analysis Colquitt confirms four dimensions of organisational justice: distributive, procedural, interpersonal, and informational, all of which appear to affect different aspects of the quality of working life (ibid). In a meta-analysis Colquitt, Conlon, Wesson, Porter, and Ng (2001), for example, connect procedural justice to job-satisfaction, corrected population correlation (r_c) = .62, r^2 = .02, and trust, r_c = .61, r^2 = .04, but also show that the four dimensions together explain more of the variance in the outcome than when their unique contribution is measured. Organizational justice as a whole explains 45% of the variance in job-satisfaction and trust respectively, but only 19% of performance (ibid).

Related to the issue of control is job- or role-ambiguity, which is usually defined by Breaugh and Colihan (1994) as employees' perceptions of uncertainty in regard to various aspects of their jobs. Frone (1990) proposes that the effect of role-ambiguity is moderated by an individual's tolerance of ambiguity (Furnham & Ribchester, 1995). However, uncertainty is not a given result by ambiguity (Grenier, Barrette, & Ladouceur, 2005). Ambiguous situations are by nature open to interpretation and offer the possibility to choose how to interpret them, though the impact of a persons' interpretation is likely to relate to his or her power and control. It is not necessarily role-ambiguity as such, but a person's tolerance for ambiguity in combination with his or her striving to be in control that affect the effects of role-ambiguity. In an unambiguous situation the majority of students would rate a situation as either threatening or non-threatening, and they would feel fairly certain of the consequences of their actions on the outcome of the situation. In an ambiguous situation we would expect the students' prior experiences and cognitive dispositions to affect how they assess the situation, as well as how and with what certainty they assess the outcome of their actions. In an ambiguous environment a cognitive disposition towards low tolerance for ambiguity can be expected to increase the number of situations seen as possible threats since the appraisal process (Folkman & Lazarus, 1984; Terry & Callan, 2000) will be affected. A person with low tolerance for ambiguity is expected to experience stress when he or she

encounters ambiguity, and would avoid ambiguous situations, while a person with high tolerance is more likely to perceive ambiguous situations as challenging and interesting (Furnham & Ribchester, 1995).

The multidimensional model of job related burnout, introduced by Maslach and others (e.g. Maslach & Leiter, 2000), includes six areas of working-life that mediate burnout: workload, control, reward, community, fairness and values (tested in e.g. Leiter & Maslach, 2005). In the model the "area of [shared] values plays an integrating role ..., reflecting the overall consistency in the other areas of work life. Consequently it mediates the relationship of the other areas with ... burnout or engagement" (ibid, p. 546). The construct of shared values is not covered by any of the other theories presented in this section, and to include it would add an interesting dimension to our overall framework and the possibility to test whether the variable mediates the relation between psychosocial work environment and stress.

The quality of working life includes bodily wellbeing, which also appears to be entwined with physical wellbeing. Musculoskeletal problems, especially in the upper limbs, has in many studies been connected with psychosocial factors and stress (for a review see Bongers, Kremer, & ter Laak, 2002), but of course also with physical environment and ergonomic conditions (e.g. Åkesson, 2000). Ergonomics therefore has its place in the system of theories that explain the quality in working life not only by its own right as a bodily health issue, but as it can be expected to interact with psychosocial factors and stress in causing musculoskeletal problems.

The view on (work related) stress that best suits our present project data is that the stress or strain is primarily caused by stressors, and that gender-power relations as well as individual dispositions affect how the work related stressors are experienced and how the stress is perceived. The overall framework is along the lines of the DCS model proposed by Karasek and Theorell (1990). However, we do not limit the demands to workplace demands but include inner/internalised demands, demands the individual relates to gender norms and societal norms, as well as managing the work-life balance. On the same note we do not limit control to workplace democracy but include job-ambiguity, the individual's tolerance of ambiguity, (gender) power relations, as well as the possible threat of powerlessness to the individual (gendered) self-image. We also do not assume that social support necessarily works the same way and provides the same benefits for men and women (e.g. Greenglass, 2002; Greenglass, Burke, & Konarski, 1998; though Greenhaus and Parasuraman, 1999), and also acknowledge the possibility that more women than men view their work context through a relational lens (e.g. Fletcher, 1998). When the individual experiences that the demands exceed his or her available resources, inner as well as outer, we expect the individual to experience stress. This tentative

definition shares similarities with Bakker and Demerouti's Job-Demands-Resources (JD-R) model (2007) of work related stress, which can be seen as an attempt to merge and refine the DCS model (Karasek & Theorell, 1990) and the ERI model (e.g. Siegrist, 1996). One appealing aspect of the approach presented by Bakker and Demerouti is that though the overall model is expected to be general, the actual demand and resources are expected to be different for different types of jobs and in different workplaces. Though we do not specifically test the JD-R model, we share the intent of Bakker and Demeoruti and other researchers who attempt holistic yet contextually anchored approaches when exploring work related stress.

The Instruments section below includes elements of the theories and models presented in this section. Our approach is in line with the synthesised construction of occupational stressors suggested by Kenny and McIntyre (2005), "a unified system that attempts to account for both universal commonalities and individual differences in the experience of occupational stress and to take account of occupational stressors and the labor process" (pp. 50-51).

Higher education – a stressful workplace for dental students

Dental students have quite often been described as stressed (e.g. Henning, Ey, & Shaw, 1998; Humphris et al., 2002; Murphy, Gray, Sterling, Reeves, & DuCette, 2009; Pöhlmann, Jonas, Ruf, Harzer, 2005; Polychronopoulou & Divaris, 2009), and they are not unique among university students to be described as stressed (Cotton, Dollard, & De Jonge, 2002). Our own assessment of the research on stress in dental students (see Paper II) in many respects lead to a conclusion similar to that of Cotton et al.; namely that the bulk of the research lacks a theoretical framework. As Cotton et al. we consider the parallels between university students and paid works to be substantial: "Like many paid workers, students work in hierarchical structures, with defined job tasks and variable levels of control and support" (Cotton et al., 2002, p. 148). In Sweden the laws and regulations on work environment also apply to university students; their wellbeing falls under the same laws as the wellbeing of paid workers. Moreover, many students, among them those who intend to enter medical and dental professions, carry out the practical/clinical part of their studies either in work-like situations or in actual workplaces. Towards the latter part of their education, dental students stand with one foot in the student role and the other in their future professional role, a position which among other things can be expected to lead to role-ambiguity (Breaugh & Colihan, 1994). In the context of the Swedish dentistry programme we construe role-ambiguity as three-dimensional: the tension between the student role and the dentist role,

contradictory demands on each role, and finally the tension between the self and ideal image the students ascribe to each role. Dental students also appear to experience considerable uncertainty in regard to how their performance is assessed (Dahan & Bedos, 2010; Garbee, 1981, Henzi, Davis, Jasinevicius, & Hendricson, 2006; Muirhead & Locker, 2007; Murphy et al., 2009), which is clearly related to control (Karasek et al., 1998). Previous research on the stress of dental students has also shown that factors in the everyday life act as stressors (e.g. Garbee, 1981; Muirhead & Locker, 2007; Murphy et al., 2009), which corresponds to general research on job stress/ burnout and work-life interface (e.g. Härenstam, 2009; Härenstam et al., 2003).

Gender, power and (the medical educational) hierarchy

How gendered organisations and the gendering process is described, explained, and applied varies (Britton, 2000). Here we will focus on two ways in which the medical hierarchy is gendered: the traditional vertical separation of men and women, and the gendered qualities women are expected to contribute. Gamarnikow (1978) draws a parallel between the traditional nurse-doctor-patient triad and the family structure: nurturing mother/nurse, patriarchal father/doctor, and dependent child/patient. Not only does this parallel imply that the gender-power structure of a patriarchal family is reproduced in the medical hierarchy, but that the professions/ occupations are inherently gendered and that the women in medicine were given tasks similar to those traditionally performed by housewives and mothers. Davies (2001) gives a brief exposé of gendered notions in medicine and nursing, describing how nursing became a suitable occupation for women in the nineteenth century, in times when a caring attitude was basically presented as a female virtue. Feminine caring is still a well established norm in the health sector, primarily upheld in regard to nursing (ibid).

Gender research within the work and organisational contexts of medicine often focuses on the fact that men and women traditionally have occupied positions on different hierarchical levels, such as male doctors/female nurses, and how recent changes challenge this order. One such challenge is the professionalisation of nursing; another is the feminisation of the medical doctor and dentist corps (e.g. Cassell, 1997; Davies, 2001; Nordgren, 2000; Riska, 2008). The positions as medical doctors and dentists in the "Western World" have, almost exclusively, been occupied by men up until the first half of the 20th century. From the 1950s and onwards this has gradually changed. In Sweden 13% of the practicing medical doctors and 24% of the dentist were women in 1960, 27 and 35%, respectively in 1980, and 43 and 53%, respectively in 2002 (Löfström, 2005). Based on expected retirements and the number of women admitted in medical and dental education the

percentage of women is expected to continue to rise in both professions (Nordgren, 2000).

Female students in medicine and odontology risk double subordination. First as students, who occupy the lowest rung on the ladder of medical hierarchy, then as women as women have traditionally been associated with subordinate positions within the same hierarchy while the position of doctor or dentist has had male connotations (Cassell, 1997; Davies, 2001; Nordgren, 2000; Riska, 2008). Male students in the same positions are more likely to encounter single subordination in relation to teachers and staff, a subordination based on their student position. In this study we assume that the dental students are part of the gender power relations in today's Sweden where women and tasks gendered as feminine in general are assigned lower status than men and tasks gendered as masculine, but we are aware that this picture is complex and, for example, includes class and ethnicity combined with gender.

Dental students in Sweden – a short introduction

In Sweden there was little demand for dentists in the 1980s, which also affected the admittance scores and number of applicants at the dentistry programme. This trend coincided with a marked increase in the number of women attending the programme, as well as the number of students of foreign descent (defined as born abroad or born in Sweden with both parents born abroad). The trend shifted towards the latter half of the 1990s, and then de-regulation in 1999 provided more job opportunities and better incomes especially for dentists in the private sector. Today 65% of the dental students were women in 2009 compared to the overall proportion of women in higher education in Sweden that year which was 59% (Swedish National Agency for Higher Education, 2009). The proportion of students of foreign descent remains among the highest at Swedish university programmes. In 2008/09 a total of 17% of the university entrants were of foreign descent, compared to 38% of the students who entered the dentistry programme (Swedish National Agency for Higher Education, 2010).

Objectives

The objective of this thesis is to explore dental students in Sweden in the context of their (psychosocial) work environment and work-life interface with the help of theories on gender as well as theories on work and organisations. To our knowledge, neither set of theories have been applied on a whole student population before. The gender-power and power relations, the challenges to the traditional medical hierarchies and the

stressful work environment of the students will act as the backdrop for our study.

This thesis focuses on two research questions. Firstly: How is gender and ethnicity constructed in the context of the Umeå dentistry programme, and how do these constructions relate to the expectations on and power of the dental students? and secondly: How does gendered experiences of the work environment relate to the perceived stress and satisfaction of dental students in Sweden?

Methods

A mixed methods design – exploration and triangulation

In this thesis project, we apply a sequential qualitative-quantitative methods design. According to Kelle (2006) this design overcomes the "limited transferability of findings from qualitative small *n* research as well as the ... [lack of sociocultural 'local' knowledge, which represents a crucial problem for quantitative HD [hypothetico-deductive] research]" (ibid, p. 307). Methodological triangulation does not automatically ensure accuracy (Henwood, 2004), but in the present project we have actively chosen tools with different weaknesses and strengths, as well as the ones best suited to answer our research questions. For the initial data-gathering we chose a qualitative, explorative approach with semi-structured interviews and used Grounded Theory (GT) as our method (Paper I). The Experiencing Ambiguity (EA) model (Paper I, Figure 1) that was the result constituted the base for our web-survey, primarily quantitative in nature. The web-survey (Appendix 3) does not encompass the whole scope of the EA model but centres on the students' experiences of ambiguity, pressure and stress.

Advantages of a person oriented and a variable oriented approach on the same data

Bergman, Magnusson, and El-Khouri (2003, 2009) stress the advantage of using both a person oriented and a variable oriented approach on the same material. Among other things, the variable based analysis can provide valuable insight on which variables should be used in the person oriented analysis, and the person oriented analysis presents the complexity of the individuals in a way that the more reductionistic variable approach cannot (ibid). In this project we have chosen Structural equation modelling (*SEM*) as the variable oriented approach and cluster analysis as the person oriented approach.

The use of *SEM* allowed for three things essential to our objectives. Firstly, it allowed for the use of latent variables, which was imperative as we measured our theoretical constructs with scales comprising five to fifty-five

items (an overview of the scales is presented in Appendix 2). Secondly, the method allowed us to test the hypothesised model in a single analysis and simultaneously conduct a group-comparison between men and women, an option not offered in other statistical analyses. Thirdly, *SEM* is the only method that allows for unidirectional relations between variables on theoretical and chronological ground in a non-intervention cross-sectional study (Maruyama, 1998; Tabachnick & Fidell, 2007). Cluster analysis offers, among other things, ways to cluster individuals based on how they score on multiple factors of mental, behavioural and/or biological origin that can be expected to be theoretically important in relation to the research questions at hand (Bergman et al., 2003, 2009). Where *SEM* provides an analysis of the overall relations between variables valid for all respondents, cluster analysis gathers person specific variable relations that are similar to each other into clusters, which means that variable relations that are valid for some but not all of the respondents can be discerned.

Setting

The five year Swedish dentistry programme is found at four study venues: Malmö University, Göteborg University, Karolinska Institutet (KI) and Umeå University. All study venues provide both theoretical and practical/clinical education. The onset of the clinical part of the education differs somewhat between the study venues. At Malmö University problem based learning is practiced, and the students are introduced to the clinical part of the education in the first year. At KI clinical training begins in year two, and in Göteborg and Umeå it is introduced in the third year. The onset does not mirror the total amount of hours dental students spend in clinical training, where Umeå University clocks the most hours. Graduates from the programme may practice dentistry immediately without prior internship or residency, though it is common that a newly graduated dentist is assigned a supervisor for his or her first year at a clinic.

Dental students in Sweden train at special (student driven) dental clinics. Students interact individually or in small groups with instructors/teachers and nurses in the clinical setting, as opposed to the classroom settings where fewer students get the chance to interact directly with the lecturer/teacher. The clinics are also workplaces, and the ergonomics of the physical workplace may affect the students' physical wellbeing.

The qualitative studies – the interview data

Sample

For our qualitative studies we were interested in students nearing their graduation as they would have the most experience of clinical practice, and teachers with long experience of the dentistry programme as we believed

they would be able to provide us with the most comprehensive overview. We asked students to volunteer as informants by visiting them in class and contacting them by e-mail, and our teacher informants were recruited with the help of the Director of studies of the Umeå dentistry programme. The qualitative data consist of semi-structured interviews with twelve dental students (seven women and five men) in the eighth to tenth semester (P ≈ 130 in 2007) and three experienced teachers at the Umeå dentistry programme (two women and one man). Except for one male 40+ outlier the students were between 24 and 28 years of age.

Procedure – general

The data were gathered in accordance with GT methodology recommended by Glaser (e.g. Glaser, 1978) but within a constructionist epistemological frame (Charmaz, 2006). Charmaz concludes that though the founders of GT share a (post)positivist epistemology, the tools of the method do not require researchers to adhere to the same epistemology. That we lean on Glaser and Charmaz means that the theoretical framework is the goal, not the base, of the research and that research questions are not phrased to test hypotheses but to indicate the intended direction of the study. Data, and the process of analysis, are expected to lead the investigation away from the initial questions if those are not central to the informants. We see ourselves as interpreters rather than discoverers, acknowledge that our data are socially constructed rather than objective facts, and recognize that it consists of reconstructed experiences rather than the experiences themselves (Charmaz, 2006).

The same qualitative data material has been further analysed with a content analysis approach (Patton, 2002). The different procedures will be presented separately below.

Grounded Theory analysis

As Cutcliffe (2000) recommends that researchers begin their research by finding informants who possess the knowledge to provide a general overview of the topic, we initiated our research by interviewing three experienced teachers at the dentistry programme at Umeå University in the fall of 2007 and integrated the knowledge we gained from these interviews into our interview-guide. The interview-guide underwent several changes, and three examples of the guide can be found in Appendix 1.

In GT methodology researchers are recommended to analyse each interview as soon as possible, and preferably before the following interview so that the output from each interview can be used as input to the interview-guide of the next interview (Glaser, 1978). In the analysis rows, sentences, or other suitable units are labelled with codes. In our analysis the coding was done passage by passage as the material consisted of many fragmented

sentences and an isolated row of text often would make no sense at all. The codes were initially worded or phased as close to the wording used by our informants as possible and all data were coded. This stage of the analysis is called the open coding phase. After the coding of each new interview, all previously analysed interviews were reanalysed and the coding in them was altered or added to in accordance with the newest data. In the next stage, selective coding, the open codes were gradually clumped together and made more abstract and less close to the data in their wording. In the final stage, theoretical coding, we started sorting the codes into categories, and conducted two interviews to test if the informants could relate to the emerging categories and the tentative model. In all three stages of coding (open, selective, and theoretical) we strived to adhere to Charmaz (2006) practice of phrasing the codes with verbs so that theoretical concepts were not introduced prematurely. All the interviews were conducted by me, tape-recorded, professionally transcribed word by word, and lasted 50±20 minutes. For a comprehensive description of the GT analysis see Paper I.

Content analysis

I have conducted a content analysis (Patton, 2002) on a specific selection of our qualitative material, the results of which will be presented in the Results section. The focus of the content analysis was gender and power relations, and I therefore selected the interview material that in the GT analysis had already been labelled with codes that in one way or the other related to power, gender and/or students being treated unequally. In the content analysis I then systematically re-coded, re-structured, and re-categorised the material. I used Connells theory on gender power relations (Connell, 1987, 2009a, 2009b) as a sensitising device (Giddens, 1991) in the content analysis.

The quantitative studies – the web-survey data

Population

There were 1119 dental students in Sweden in the spring of 2009. Based on the students self-reports, we estimated that 805 of them had entered the clinical part of the programme. These 805 students constituted the population for the quantitative studies, and the number of participants was 322. Descriptive analyses of the population are shown in Table 1 below.

Response rate and comparison between participants and population

The overall response rate was 40%, but the participant/non-participant ratio differs considerably between the four study venues (Table 1). The students from Karolinska Institutet, who were the first to answer the survey,

Table 1

Overview of the total clinical student-population, respondents and response rates

	Population		Respondents		
	Men (%)	Women (%)	Men (%)	Women (%)	Response rate
Malmö	95 (40)	143 (60)	36 (35)	66 (65)	43%
Göteborg	57 (32)	119 (68)	15 (28)	41 (72)	32%
Umeå	47 (36)	84 (64)	34 (36)	60 (64)	72%
KI	79 (30)	181 (70)	18 (26)	52 (74)	27%
Total	278 (35)	527 (65)	103 (32)	219 (68)	40%

unfortunately encountered technical problems as they could complete the survey but not send their answers to the web-server, which lowered the number of respondents from this study venue. The response rate from Göteborg remained low, and we have not been able to explain why this is the case. Due to these differences we will make no further comparisons between the four study venues.

The proportion of men and women did not differ between the respondents and non-respondents. A *t*-test for each of the study venues revealed that there were no statistically significant differences between respondents and non-respondents regarding the mean year of birth: Malmö University 1983 and 1983; Göteborg University 1980 and 1981; Umeå University 1982 and 1981; Karolinska Institutet 1983 and 1984, respectively.

Procedure

The dental students in Sweden were first invited to participate in our web-survey in the late spring of 2009. Due to logistics, the invitation to participate was made in person only at Karolinska Institutet. The students of this study venue also received one e-mail reminder. All other dental students received one e-mail invitation via their official student-e-mail and one reminder to the same address. The invitation was repeated to the same students early in the autumn. This time the students at Umeå University

were visited in person, and received one e-mail reminder. In order to reach the students at Göteborg University, the study venue with the lowest response rate, we contacted the dental student union of that university. The student union agreed to send our invitation once using their own send-lists, which contained the students private e-mail addresses, but the reminder was sent to the students' student-e-mail. All other students received one e-mail invitation to their student mail as well as one reminder.

The invitations to the students included a web-address where they could find a link to the web-survey, and they participated by filling in the survey and sending it to the central web-server from which we later retrieved their answers (see also Paper II and III).

Instruments

All operationalisations are based on the presumption that the students' experience and perception of their context will affect their perceived wellbeing (see also the "Experiences filtered ..." section).

Ambiguity: Based on Paper I we assume dental students in Sweden to experience role-ambiguity. Instead of measuring role-ambiguity as such we decided to measure the students' (in)tolerance of ambiguity (Furnham & Ribchester, 1995) and how their (in)tolerance related to their perceived stress. We chose Norton's (1975) MAT-50 as our instrument as it is among the most validated tolerance for ambiguity scales (Furnham & Ribchester, 1995). The MAT-50 measures several dimensions of ambiguity tolerance of which we concluded that the subscales Philosophy, Job-Related, and Problem-Solving (Appendix 3, section D, item 1-21) were the ones most relevant to our line of research.

Ergonomics: Musculoskeletal problems among students as well as practising dentists are commonly reported (e.g. Åkesson, 2000), and musculoskeletal problems have been connected to psychosocial factors (e.g. Bongers et al., 2002) as well as ergonomics. We defined ergonomics as the extent to which dental students can organise and adjust their workstation so that they can work comfortably, the extent to which they receive assistance from dental nurses, and the extent to which they can organise their work so that they have time to rest between and after treating patients (Appendix 3, section B, item 57-59 and 62-63).

Psychosocial work environment: We chose to operationalise psychosocial work environment as contextual elements that have impact on the dental students stress and satisfaction and are not related to the physical work environment; specifically intellectual stimulation (psychological demands/ challenges), the students' possibilities to influence their education and communication/information (control), social support from faculty, staff and peers, organisation (is the administration well organised, is the curriculum well organised), perceived justice/fairness executed by faculty and staff, and

the extent to which the students feel that they share the values of the dentistry programme. In the web-survey we used the Dental School Learning Environment Survey (DSLES) (Henzi et al., 2005), see Appendix 3, section B, item 1-55, and the Swedish version of the Job Content Questionnaire (JCQ), available from www.jcqcenter.org, (ibid, item 71-98) as our measures of psychosocial work environment in general. The Shared Values scale (Appendix 3, section B, item 105-111) and the Perceived Justice scale (Appendix 3, section B, item 99-104) were used as measures of two specific aspects of psychosocial work environment not covered by the general instruments. Both the Shared Values scale and the Perceived Justice scale were preliminarily validated in Paper II.

Work-life interface: We have included share of household responsibilities, hours spent at sports activities or amount of leisure time, which is represented by hours spent on leisurely activities including sports (described in the Methods section in Paper II and III as well as in Appendix 2, Table 1) to explore some of the aspects of the interface between "work" and "life."

Aches and fatigue: We distinguish between two forms of aches/tiredness. The first is regards tiredness in neck and shoulders directly related to clinical training (Appendix 3, section B, item 64). The second is related to musculo-skeletal problems, headache, and corporal fatigue that limit what the students manage in their leisure time (Appendix 3, section B, items 67, 68, 70).

Perceived stress: We have operationalised perceived stress as overall stress, not specifically related to the context of the dentistry programme. The Perceived Stress Scale (Appendix 3, section D, item 22-35) covers general stress in life, and is validated in a Swedish version (Eskin & Parr, 1996).

Student satisfaction: We operationalised satisfaction as the students overall satisfaction with the dentistry programme and the own choice to enter the dentistry programme. We adjusted the Swedish version (Tafvelin, Westerberg, & Armelius, submitted) of Quinn and Shepard's (1974) facet free job satisfaction scale to students (Appendix 3, section C, item 2-5) and also added the item "The programme I attend is close to the best dentistry education I can imagine" (ibid, item 1).

Quantitative analyses

The quantitative data were prepared using PASW 18 and Excel 2007. These programs were also used for *t*- and χ^2 tests as well as ANOVAs. The level of significance was set at $p = 0.05$ and only differences with large effect sizes (Cohen, 1988), Cohen's $d \geq .80$, are reported. AMOS 18 was used for the *SEM* analyses. The model was estimated with the Maximum likelihood method, and all factor loadings were standardised in order to facilitate comparison (for a comprehensive description of how we conducted the *SEM* analyses see Paper II). For the cluster analysis (comprehensively described

in Paper III) we used the SLEIPNER free-ware presented in, for example, Bergman et al. (2009, Chapter 8).

Missing values analysis
We began by excluding five cases, four women and one man, who had not answered any of the questions on stress and satisfaction. We then split the file by sex so that potentially gendered patterns would be kept as intact as possible when the missing values were computed and then used the Expectation-Maximisation algorithm (Scheffer, 2002) to replace missing values. As this algorithm should not be used on samples with more than 5% non-random missing data (ibid), we excluded four items from the data set in order to ensure that all subscales of the DSLES remained within the acceptable 5% range.

Ethical Considerations
The studies were designed in accordance with the ethical principles of the Helsinki declaration and were approved by the Regional Ethical Review Board in Umeå. Written instructions informed the students about the studies' design and aims. The students were notified that by submitting the web survey they consented to participate in the studies, and allowed us to use the data for research purposes.

On the mixed methods approach

Epistemological pragmatism
The pragmatism of the researcher(s) has influenced the epistemological stance in this thesis project. From the onset of the project constructionism (e.g. Burr, 2007) has been seen as the common ground where psychology and gender research could meet and mingle epistemologically and theory wise. In a loose sense the bulk of contemporary research in psychology tends to be post-positivist and to an increasing amount constructionist, while the bulk of gender research in psychology leans towards and beyond constructionism (e.g. Magnusson & Marecek, 2010). My personal relation to this stance has also been pragmatic, and the reader will probably recognise both post-positivist and post-structural elements in the texts that comprise this thesis as I have not wanted to exclude theory or empery that I felt could contribute to my understanding and texts. And to be honest, not all transgressions were intentional or noted.

Our choice of methods has primarily been guided by our research questions, and in the very beginning our reluctance to specify research questions. There has been so little research done on dental students especially from a gender perspective that we decided to start with an

exploratory approach. The specific choice of GT for the initial qualitative study was rather pragmatic; we were all familiar with the method and agreed that a GT model would be a good starting point for the quantitative studies. The use of standardised questionnaires cannot be said to be constructionist. The constructs measured can be considered constructed but the standardised instruments and norm data rests within the post-positivist realm, as do statistical analyses. Nevertheless, the results of such measures and analyses can be discussed within a constructionist framework; differences between men and women can be ascribe to how gender is constructed rather than ascribed to sex differences (e.g. Unger, 1996).

Experiences filtered through interviews and self-reports

An individual does not consist only of inner/internalised qualities, experiences and observable behaviour, but also the interaction between the inner qualities, experiences and the context. The inner qualities and experiences cannot be studied isolated from the context as it is in the interaction between an individual, through her actions, and the context that her experiences emerge. An experience which in turn is added to the individual's aggregated experiences, and contributes to confirm or change her inner qualities, such as self-image, and the experience can also affect her behaviours and perceptions of, for example, stress. Consequently, when we use questionnaires developed to evaluate the context as such we consider the answers a result of an experience grounded in the interaction between an individual and the context, framed by and limited in scope by interview guides, questionnaire items and Likert scales.

All methods used in this thesis project allow for individual variation, though group mean comparisons and χ^2 tests are sometimes used. The qualitative material does to a great extent contain contradictory narratives; what some students see as a problem others find unproblematic. We have tried to maintain this span in our GT (Charmaz, 2006) as well as content analysis (Patton, 2002). In the *SEM* analysis, the combined mass of all answers on all items, subscales and scales formed the overall pattern (Maruyama, 1998). All our respondents, regardless of how they rated each single item, contributed to the model and the explained variances of our outcome variables. As long as their answers roughly followed the overall pattern model fit was increased, while the respondents with deviant patterns weakened and diminished the model fit. The cluster analysis allowed for groups based on similarities between individual answers on multiple questionnaires, rather than predefined groups based on one or more background variables (Bergman et al., 2003, 2009), thus reflecting some of the heterogeneity in the student population.

Researcher reflexivity in relation to the qualitative study

The appearance, gender, and position of the researcher

Our informants have encountered a Caucasian bespectacled brunette around 40 years of age. One possible advantage of being a woman interviewer is that women are commonly seen as the listeners, especially when it comes to emotional matters such as feeling stressed or helpless. From a power perspective, for a man to talk about his weaknesses to woman is probably less threatening than to express them to a man. Considering women stereotypes, a man interviewed by a woman may not expect her to understand everything about his experiences, but is likely to expect her to be understanding. A woman talking to a woman is likely to expect more understanding from her than from a man. The semi-structured form and a woman interviewer who could be stereotypically casted as a good listener may have helped to create an atmosphere where it was okay for our informants to talk about feelings, stress and frustration. More than one student stated in the interviews that they would have liked to have access to a neutral person to talk to about their problems at the dentistry programme, and stated that they were reluctant to vent issues with their teachers as the teachers also grades exams and assesses performance. In this regard my affiliation with the Department of Psychology, and neutrality in relation to the dentistry programme, may have made some of our informants speak more freely.

I included but did not particularly stress the gender perspective in the interviews. I felt that the best I could do, or what fitted my interview style best, was to raise gender related issues but not press for answers. Instead I relied on the fact that with my initial gender related questions I had declared the interview to have room for gender issues, and that this would make my informants feel free to talk about discrimination and related subjects if they had any on their mind.

What might I have missed by being me? For one, things that the informants did not think I would have understood or were interested in as I am not a dentist or affiliated to the Department of Odontology. What if I had been a man? There are men who are cast in the role of listener, and psychologist is one such role. You talk to your psychologist and, psychologists or not, the halo-effect could cast doctoral students at the Department of Psychology as good listeners. It cannot be ruled out that same-sex dialogues benefit and other-sex dialogues suffer; neither can it be ruled out that less is taken for granted and implicit in other-sex dialogues which would increase the amount of explicit statements and explanations from the interviewee's part and the explicit questions from the part of the interviewer.

Processes and pre-understandings in the interaction with informants and data

After the first three or four student interviews I began to feel rather uncomfortable about the way I identified with what I perceived as the plight of my female informants. My understanding of what my informants said, the follow-up questions I asked that were in part influenced by my own (student) experience, as well as the memos I wrote were far from the objective researcher ideal I have been trained to adhere to. My constructionist approach was, to be honest, of little comfort. I still felt like a really bad scientist, wondering if I could or should go on when I obviously mixed my own experience with that of my informants. Almost wanting to cry while you write memos simply has to be unprofessional. Fortunately I spoke to my supervisor about my feelings, and he basically said something along the lines of it being only natural to recognise something of yourself in your informants, it might even help your research. He concluded with "What you have to remember as a researcher is that your informants are not you," which I now carry in mind. On the whole I believe that my own experiences of higher education and stress have sensitised me to the data without distorting my interpretation.

When it comes to the quantitative studies in the project, the researcher subject (i.e. I) is not as explicitly the instrument for gathering and analysing data but rather the person who operationalises concepts, constructs the design and interprets the results with the help of theories. The decisions and discussions on the decisions and their consequences will therefore be found where they are traditionally located, in the Methods and Discussion sections.

Results

How is gender and ethnicity constructed in the context of the Umeå dentistry programme, and how do these constructions relate to the expectations on and power of the students? (A content analysis)

These results are a re-analysis, described in the Methods section, of our qualitative material. The re-analysis resulted in three categories: "Notions of inequalities," "Gendering," and "The student position." The codes on which these categories are built are described in Table 2 below.

Notions of inequalities

The category Notions of inequalities is based on the codes "Ethnicity based" and "Gender based." Students and teachers alike mentioned instances where male and female students were systematically treated differently by faculty and staff. Their statements also indicated that male students of foreign

descent were more likely than other students to be construed as problem students. If commented on at all, the gendered based inequalities were referred to as sociocultural, or as one female student put it: “the way society is.” Another female student said that “it has always been the [female] dental nurse who has cleared up and fixed [stuff] so it is sort of taken for granted that when another woman arrives she performs the same tasks,” implying that the task rather than the subordinate position was gendered. Whether grounded in the medical hierarchy or social gender power relations, the female students appear to be constructed as subordinate in relation to their male peers.

What could have been referred to as ethnicity issues, namely the “issues” some teachers were said to have with male students of foreign descent, and vice versa, was explained by our informants in terms of cultural clashes, miscommunications, thoughtlessness, or misunderstandings. Nevertheless “problem students” were almost exclusively presented as male and quite often referred to as non-Swedish. One of the teachers who talked about problem students began by saying that there were problem students of all kinds but concluded by saying that “there still is an overrepresentation of men. And [it is] an ethnicity issue.”

Gendering

This category contains the codes “Gendered notions” and “Gendered demands and expectations.” The informants presented the notion that male and female students are equally well suited for the profession, but might have different approaches to dentistry and/or pursue different career paths. Our informants related the differences in approach mainly to the stereotyped notion of the caring woman. Female students tended to relate to this stereotype either by conforming to it, thereby presenting themselves as a different type of dentist in relation to the male norm, or by transgressing the stereotype, for example, by aspiring to specialise in oral surgery, a career path still dominated by men.

Our informants also presented men and women as different kinds of students, though the male students stressed these differences the least. Female students talked about male students being less stressed than female students due to a different “mindset” that made them take things more lightly. A female teacher commented on what could be the other side of this “masculine mindset” like this: “... It’s not easy to know if the guys ... don’t dare or want to contact their teachers when they feel unsure or insecure. It’s more often girls that [contact us]. It could also be a man thing.” Especially our female student informants also talked about something like “feminine mindsets”: conscientious girls with high inner demands. As one female student put it: “Girls are often more conscientious and such, generally way

Table 2

Categories, codes, and descriptions of the codes used in the content analysis

Category	Code	Description
Notions of inequalities	Ethnicity based	Male students of foreign descent risked being construed as problem students. Teacher behaviour that could be construed as ethnical discrimination tended to be described by the students as cultural clashes, misunderstandings, and miscommunications.
	Gender based	Gender inequalities, if mentioned, tended to be explained by the gender-power structure in the Swedish society.
Gendering	Gendered notions	Students had a notion of a primarily mindset with primarily female connotations centred on high inner demands. Female students had notions of a more easygoing mindset with male connotations. Female students had a notion that male students and teachers were given more leeway. The informants in general mentioned the notion of the caring woman.
	Gendered demands or expectations	Female students said they were expected to be more orderly and hardworking than male students. Female students also said that they were expected not to add to the work burden of the dental nurses, but that the male students could get away with it.
The student position	Medical/educational hierarchy	Students mentioned lack of respect for their complaints, their time and deadlines, and their total workload. Students also mentioned that they sometimes felt insensitively overruled in matters regarding the treatment of their patients, and that feedback on their clinical performance was given insensitively.
	Notions on select teacher benevolence	Students suspected that teachers gave leeway to students as well as assessed their performance based on the student-teacher relation rather than formal criteria.

back in the lowest grades while boys are more like prankish and such." Their male peers on the other hand could relate to the "female mindset" but tended to talk about a more general "upper-secondary school mentality comprised of being competitive and focused on academic achievement. Our informants believed this mentality to be more common among those who had entered the dentistry programme directly after finishing upper secondary-school and also that it increased stress in both male and female students.

Female students were also presented as having different relations to faculty and staff than their male peers. Female students said that their male peers were given more leeway and could "get away with a joke." They also believed that female students were expected to be more orderly and hardworking in general. Moreover, female students mentioned that they believed that they had a different relation to the dental nurses than their male peers had. One of the teachers concurred that "the dental nurses acknowledge the male students in a completely different way than they do the female students." Students also mentioned that occasionally male teachers were more helpful to (young) female students, and that sometimes female teachers were more helpful to male students.

The student position

Student position was based on the codes "Medical/educational hierarchy" and "Select teacher benevolence." Our student informants tended to talk about themselves as standing on the lowest rung of the hierarchical ladder of the dentistry programme. One male student said: "sometimes you can be treated in ways you never would have accepted in ... a normal context, in the company of other [people], or in the working life." The students' subordinate position seemed to be at the most salient in the context of the student driven dental clinic. Though in some sense they assume the role of the dentist responsible for the treatment, students' decisions can at any time be (insensitively) overruled by their supervisors. Students also perceived that their time and the time of their patients were not respected; that they had to wait for their assessment due to suboptimal organisation and lack of resources and would end up running out of time for reasons beyond their own control.

Our student informants in general found resistance hard, and that the organisation of the programme or the curriculum did not change despite their protests; in some cases despite years of successive complaints. Most of the students said that they felt that it was hard to complain, that their complaints were not met with sympathy and some of them found it difficult to find someone neutral to present their complaints to.

Students felt dependent on their teachers' benevolence in relations to assessments and exceptions from the strict rules on how many procedures of a specific kind they had to perform. One opinion was that the teachers used

their power to make exceptions as well as to make subjective assessments of the student's performance. This subjectivity was said to be based on "personal chemistry" and/or the verbal skills of the students. In the statements, "chemistry" or favouritism appeared to be completely unrelated to gender and ethnicity, and interviewed male students of Swedish decent talked freely about the risk of getting off on the wrong foot with a teacher. A Swedish male student said: "It feels as if my whole life is at stake and it could all come to nothing because of ... the personal chemistry between me and the supervisor." These suspicions seem to cause stress primarily in regard to feed-back and the assessment of clinical performance. Our student informants said that different teachers may give contradicting advice and opposing assessments, and they also found it hard to discern what it was in their performance and in the performance of their peers that lead to positive assessment. The extent to which the students fail to find patterns related to (their own) actual achievement appears to result in the students doubting the fairness of these assessments and their own ability to affect the outcome.

How does gendered experiences of the work environment relate to the stress and satisfaction of dental students in Sweden? (Paper II - III)

The psychosocial work environment was significantly related to the perceived stress and satisfaction of the students at the Swedish dentistry programme. No large gender differences were found in the quantitative data material, but gendered patterns were apparent. Somewhat different factors relate to the perceived stress of the women than to the stress of the men, with psychosocial work environment playing a larger role for the stress of the women (Paper II). Additional analyses showed that the relations between general psychosocial work environment, perceived justice, and the extent to which the students share the values of the dentistry programme also differed between male and female students (see Figure 1 below), Model fit: χ^2 = 540.779, df = 3664, $p < 0.001$, Normed χ^2 = 1.478, RMSEA = 0.039, CFI = 0.97. Most notably, perceived justice for the women is not related to any of our other variables. Perceived justice and share values only relate indirectly to the stress and satisfaction of the students, but these indirect relations would be gendered along the same lines.

SEM analyses (Paper II) showed that psychosocial work environment in general (as measured by either the DSLES or the JCQ) accounted for all of the explained variance in student satisfaction in the model for both men and women, about 70%. Psychosocial work environment also accounted for almost all of the explained variance in perceived stress for the female students, about 40% (see Paper II, Figures 2 and 3) but only half of the variation in perceived stress for the male students, about 20% (ibid). For the men, the other half of the explained variance in perceived stress was

Figure 1. The relations between psychosocial work environment, tolerance for ambiguity, perceived justice, shared values, perceived stress, and satisfaction

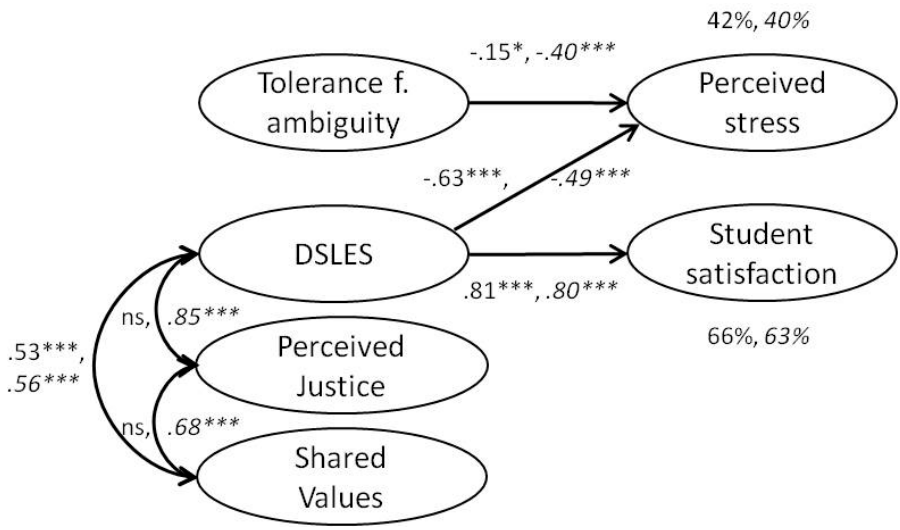
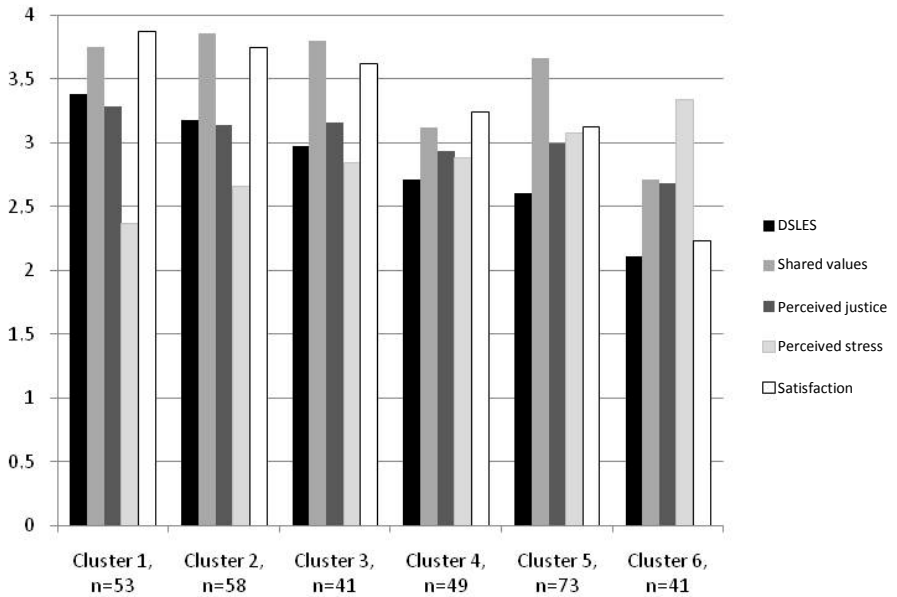


Figure 1. Regression weights and explained variance for women are shown in plain text, and for men in italics. Tolerance for ambiguity = MAT-50, Measurement for Ambiguity Tolerance, subscale Problem-Solving; Perceived stress = Perceived Stress Scale; DSLES = Dental School Learning Environment Survey; Student satisfaction = Facet Free Education Satisfaction scale
* $p < .05$; *** $p < .001$

explained by their tolerance for ambiguity. In all, the psychosocial work environment appears to have a more substantial impact on the perceived stress of the female students than on that of the male students.

For the present research question both the general and specific aspects of psychosocial work environment are of interest. The correlations between general psychosocial work environment (as measured with the DSLES and the JCQ), perceived stress and student satisfaction can be found in Paper II, Table 3. Perceived organisational justice, a specific aspect of psychosocial work environment, does not correlate with any of our other variables for the women. For the men perceived justice correlates considerably with both DSLES, $r = .77$; $p \leq .01$, JCQ, $r = .68$; $p \leq .01$, and shared values, $r = .62$; $p \leq .01$. The extent to which the students shared the values of the dentistry programme correlates moderately with DSLES, $r = .52$; $p \leq .01$, and JCQ, $r = .44$; $p \leq .01$, for women. The same pattern was found for the men, $r = .56$; $p \leq .01$ and $r = .48$; $p \leq .01$, respectively. *t*-tests showed that there are no

Figure 2. Abbreviated cluster profiles



statistically significant mean group differences of large effect size, $d \geq 0.80$ (Cohen, 1988), between how the male and female students rated shared values and perceived justice, and no other large gender differences in rating were found in this population (Paper II).

Two interesting patterns of gender differences in relation to perceived justice and shared values were found in the cluster analysis (Paper III, abbreviated cluster profiles are shown in Figure 2 above). First, an intracluster ANOVA (Paper III) showed that the men in Cluster 6, the cluster in which the students report the worst work environment and the most stress, rated perceived justice 0.98 units lower than the women of that cluster, $p < 0.001$; Cohen's $d = 1.6$. Second, in almost all clusters shared values is rated notably higher than DSLES, but this relation appears to be different in clusters 4 and 6, possibly indicating a breaking point where the relation between the two variables change. Cluster 5, where women are overrepresented (80% rather than the expected 68%) either contradicts the notion of a breaking point or represents yet another relation between DSLES and shared values. Our cross-sectional data do not allow for any certain conclusions, but it should perhaps be noted that students from years 4 and 5 of the programme are overrepresented in clusters 4, 5, and 6. This trend is further complicated by the fact that clinical practice begins in different years at different study venues, and that some years are proportionally underrepresented for some study venues in our material (Paper III, Table 2).

Discussions

On the results

How is gender and ethnicity constructed in the context of the Umeå dentistry programme, and how do these constructions relate to the expectations on and power of the students? (A content analysis)

The construction of women as a more caring kind of dentist appeared to be connected both to several dimensions of gender relations in general (e.g. Connell, 2009a) and the medical hierarchy specifically (e.g. Davies, 2001). Unequal treatment due to foreign descent was chiefly attributed to misunderstandings, cultural as well as linguistic. One opinion was that male students of foreign descent were cast as "somewhat more problematic." This could be interpreted as an example of discursive power. A discourse can be seen as a specific way of repeatedly referring to a specific group that regardless of intent reproduces the discourse each time it is retold (Connell, 2009a). Over time it makes alternative ways of referring to the specific group less likely to be voiced as often as the dominant discourse. Should the notion of male students of foreign descent being more likely to be constructed as problem students become a discourse, male students of foreign descent would risk being stereotyped as problem students. A qualitative study cannot answer the question how common this notion is, nor the extent to which male and female students/dentists are constructed as different, but these issues do appear to merit further research.

A construction of gender in our interviews was that female students were expected to be more orderly and hardworking than their male peers. In the gendered educational discourse, girls and young women in the Western world tend to be casted as hardworking, conscientious (but not necessarily talented) students who abide the rules (e.g. Epstein, Elwood, Hey & Maw, 1998; Lucey & Walkerdine, 1999), which appears to be in line with what our female student informants said was expected of them. Men and boys are more or less expected to deviate from the (female) good student norms and succeed out of talent (or gravy) rather than hard work (Epstein et al., 1998; Lucey & Walkerdine, 1999). The female students' notion that their male peers take things more lightly and are less stressed can also be seen as part of this educational discourse. It should also be noted that the female students believed their male peers to be able to wield discursive powers; for example, to answer a question or a reprimand with a joke is a move that implies that the joker has the power to alter the meaning of the situation.

In the case of the medical hierarchy and production relations, our data indicate that female students neither are expected to execute the authority

that is the norm for male doctors and dentist nor can expect the same service form nurses during their education. Moreover, keeping things orderly appears to have double female connotations; both traditional relations to household tasks (e.g. Connell, 2009a) and in relation to the medical hierarchy where these tasks traditionally are performed by (female) nurses (e.g. Davies, 2001). Previous research implies that male peers and nurses alike expect female doctors to adhere to traditional female norms that stand in direct opposition to the norms of medical doctors, for example, ask nicely rather than demand, fetch things themselves rather than call for nurses, and tidy up rather than leave the mess for the nurses to take care of (e.g. Cassell, 1997; Davies, 2001; Eriksson, 2003, Gamarnikow, 1978). The ways gender was constructed according to our analysis of the interview data leaves the female students on a half-rung of the hierarchical ladder, reproducing both the medical hierarchy (e.g. Davies, 2001) and traditional gendered production relations (Connell, 2009a).

Students talked about occasions where teachers would give more help to students of the opposite sex, which might imply that emotional gender relations (Connell, 2009a) are at play. Teacher benevolence was however more often associated with "personal chemistry" than gender relations in the students' statements. Personal chemistry in this case could be understood as a way for students to make sense of how power is enacted in teacher-student interactions. The "chemistry" notion also allows the students to resist the assessment of teachers; it enables them to write off negative feedback as "bad chemistry" rather than having to believe that they themselves or their peers lack in skill or knowledge. On the other hand, the personal chemistry notion provides students with few resources within each teacher-student dyad to shift the power balance or rise to a higher status in the relation as chemistry is both elusive as a notion and often construed as static compared to skill and knowledge that may wax or wane.

An opinion among the dental students interviewed was that faculty and staff at the dentistry programmed lacked respect for their' time, their effort, their skills and for their knowledge, which may be interpreted as a perceived power asymmetry. Though this asymmetry could be associated with any traditional educational setting, students in dentistry (as well as students in other medical settings) also encounter the medical hierarchy. Maintaining the power asymmetry can be seen as a process that is aimed to protect the traditional hierarchy, power being a process rather than a fixed entity. As the traditional medical hierarchy is gendered (e.g. Davies, 2001) this process is also likely to reproduce the structural gender power relations, and to produce somewhat different and differently positioned male and female dentists and dental students. The way dental students are constructed as somewhat differently can be expected to relate to how they perceive themselves as students and dentists to be. It can be expected to influence

how they relate their self-image to what they perceive to be the student and dentist ideals or norms, and the extent to which they feel that they are expected to balance the expectations related to the student or dentist norms with the norms of sociocultural gender power relations. Any discrepancies can be expected to increase the students' perceived role-ambiguity.

How does gendered experiences of the work environment relate to the stress and satisfaction of dental students in Sweden? (Paper II - III)

The results from our qualitative re-analysis suggest that the female students are constructed as more orderly, responsible, and caring than their male peers, which appeared to make them co-responsible for the psychosocial work environment of the dentistry programme. The male students on the other hand were constructed as supposed to be in control, yet voiced feelings of uncertainty. Their uncertainty appeared to relate to the way they perceived the rules for assessment to be ambiguous as well as to their subordinate student position. The ways men and women were constructed as different kinds of students and/or dentists was reflected in the gender differences found in the relations between psychosocial work environment and perceived stress (Paper II and III). It may also relate to the way perceived justice is unrelated to all our other variables for the women but not for the men. Ultimately the gender differences appear to reflect the gender power relations and the (male) medical hierarchy of the dentistry programme.

Our results indicate that student satisfaction is significantly related to the psychosocial work environment of the dentistry programme for both male and female students. (Job-)satisfaction has been shown in previous research to affect academic performance (Cotton et al., 2002), which implies that improved psychosocial work environment would indirectly improve student performance. The relations between psychosocial work environment and satisfaction do not appear to be gendered in the present population, as this is a cross-sectional study we cannot rule out that the relations between satisfaction and wellbeing as well as performance are gendered. We argue, as we have also done in Paper II, that the reason why the psychosocial work environment affects the stress of the female students more than the male students is that girls and women are made (co-)responsible for the psychosocial work environment of classrooms and workplaces, and that being (co-)responsible becomes part of how they construct themselves as (caring) women (e.g. Kram & McCollom Hampton, 2004; Magnusson, 1997). In her thesis, Due (2009) found that when upper secondary school pupils worked together in small groups the position of being irresponsible was not available for girls; the position of being irresponsible could only be held by boys. Women may benefit from their relational work in organisations by way

of the chance of receiving social support in return, but the relational work may just as well become a burden added to the work these women are formally required to do. Not performing the relational work they are expected to do may on the other hand result in critique, or not being seen as real women by nurses, staff, and peers (e.g. Cassell, 1997; Davies, 2001; Eriksson, 2003). That the stress of the male students is to a lesser degree affected by the psychosocial work environment would be a consequence of them not being made (co-)responsible the way their female peers are, but it does not explain why tolerance for ambiguity significantly moderates the stress of male students. In Paper II we discussed the finding that tolerance for ambiguity moderated the stress of male students in terms of men doing gender by being or staying in control of themselves and their environment, in other words doing power (Connell, 2009a, 2009b).

For the male students psychosocial work environment and perceived justice correlate significantly, and perceived justice correlates with shared values. For the female students justice appears unrelated to shared values as well as psychosocial work environment. This implies that the women could be more prone to consider an action just whether or not they share the values of the organisation that executes the justice, while the men may be more prone to share the values of an organisation they consider just or vice versa. Interpreted within Connells theory about gender relations (2009a), this implies that men are less inclined to put themselves in a subordinate position in terms on sharing the values of a (justice) system from which they may not benefit. If perceiving teachers and staff to be just makes male students more prone to accept the subordinate student position in the medical hierarchy, this might imply that they consider temporary subordination the price they are expected to pay for becoming a dentist and an opportunity to position themselves higher up in the medical hierarchy. It is possible that the men in Cluster 6, who rate perceived justice lower than both the women in the same cluster and the students of all other clusters, illustrate men who have come to consider the price too high or the perceived injustice too great. In this cluster, students with more than three years of working life experience are overrepresented, and it is possible that returning to the subordinate student position affects how these men perceive the justice and their position in the medical hierarchy.

The profiles of Clusters 4 and 6 (Figure 2 above, but also Paper III) indicates that there is a point beyond which the psychosocial work environment is perceived as so bad that the extent to which the students share the values of their organisation drops conspicuously; or a point beyond which students share so little of their organisations values that it affects how they rate and perceive their work environment. In Cluster 5 however, the largest of all clusters containing only 17 students less than Clusters 4 and 6 together and the only cluster were women are proportionally over-

represented (see Paper III, Table 4), this shift in the relations between shared values and work environment does not seem to occur. A tentative explanation may be that the students in this cluster are inclined to relate to their choice of profession as a calling where the care of the patients is what matters rather than the work environment of the convenience of the practitioner, which could help keep their shared values rating high even under adverse circumstances. This would parallel the caring which women seem to be expected to bring with them into the medical profession (e.g. Davies, 2001), a caring that traditionally implies an element of selflessness, perhaps ultimately related to the social construction of the selfless mother. In all, our cluster analysis contributes to the pattern that has emerged thorough our results; though work environment stands out among the factors that relate to the students wellbeing and satisfaction, the student group is heterogeneous and the ways they perceive their work environment relate to different processes and experiences.

On the methods

Strengths and limitations of the qualitative analyses

The strength of the GT study is that it focuses on students' experiences and interpretations of their educational context. In showing how experienced ambiguity makes it difficult for students to establish whether they have performed "enough" and when it is time to say "no" or harness their ambition, we have established a line of questioning that not only focuses on a required high minimum effort but also on psychological factors that influence how this minimum is experienced and legitimised. A possible limitation of the material is that the interviews with the female students were completed by the time we began interviewing the male students, which implies that our female informants could perhaps have added further dimensions to concepts that emerged late in the GT cycle. One general limitation of the qualitative material is that our data gathering was restricted to relatively few informants at the Umeå dentistry programme.

We have attempted to keep our qualitative analyses transparent so that other researchers can deduce that no preconceptions were imposed on the data and that the analyses have added to our understanding of the data without distorting them (e.g. Hamberg, Johansson, Lindgren, & Westman, 1994), in this case primarily the description of the GT coding and analysis in Paper I and the use of direct quotes in the content analysis. In qualitative studies the researcher tends to act as her own instrument, which means that how the researcher is perceived by her informants as well as her ability to pose relevant questions influence the validity of the results and that readers are entitled to insights in these matters so that they can form an opinion on the validity of the results (ibid). Researcher reflexivity is therefore an

important aspect of the validity in qualitative research and also presented in a separate section above.

Generalisability of the qualitative results

The generalisability of the results from our qualitative studies relies on three criteria: the level of abstraction in the analysis, the relation between our results and established theories and models and quantitative follow-up studies. Regarding the first criterion our GT analysis resulted in a tentative model (Paper I), while the strength of the categories of the content analysis relies on their relation to gender power relation theory rather than abstraction. Our theoretical framework that encompasses theories of gender power relations as well theories of work and organisations has provided valuable bases for both our qualitative analyses, and also positions our results in a larger context. We prefer not to speculate about the extent to which these results are transferable to related contexts, but the similarities with the results of studies by Henzi et al. (Henzi, Davis, Jasinevicius, Hendricson, Cintron, & Isaacs, 2005; Henzi et al. 2006; Henzi, Davis, Jasinevicius, & Hendricson, 2007) seem to vouch for the applicability of our model outside the narrow context of the Umeå dentist programme.

We have tested part of our GT model quantitatively, mainly the "Experiencing pressure and stress" category and the "Experiencing ambiguity" core category. In our GT analysis we related the students' perceived stress both to their psychosocial work environment and the ambiguity or lack of control they perceived. Our quantitative results indicate that the students' perceived stress appears to be related to their psychosocial work environment, but the results relating to ambiguity and perceived lack of control were somewhat inconclusive. We believe that job-ambiguity as well as perceived control need to be explicitly measured rather than assumed or theorised in order to test the GT model more accurately.

Strengths and limitations of the web-survey studies

A (web-)survey that incorporates multiple theories and intends a multi-faceted approach to the quality of life as a dental student will automatically include multiple scales, which expands the survey. The relatively high number of items in the survey may have contributed to the moderate response rate. In order to keep the survey as brief as possible we strived to use scales with relatively few items, which has its drawbacks. For example, instead of measuring the four dimensions of organisational justice (Colquitt, 2001) separately, we constructed a measure based on our own first study that includes all four dimensions with a slight stress on procedural justice. Though our Perceived justice scale shows sufficient reliability (Cronbach's alpha .85), it remains unidimensional. However, the very scope of the web-survey is also its strength as we have been able to incorporate several

different elements of the students work environment, work-life interface, and otherwise related to their wellbeing.

A possible critique of our stress measure, the Perceived Stress scale (Eskin & Parr, 1996), is that it does not explicitly cover externalised stress. Research suggests that problems related to psychological wellbeing and health can be either internalised or externalised (e.g. Rosenfield, Lennon, & Raskin White, 2005), in the latter case, for example, in the form of substance abuse or antisocial behaviour. Assuming that this is the case for perceived stress and not only anxiety and distress means that the lack of externalisation items in line with "kicked a pet" or "yelled at a loved one" in the instruments designed to measure stress will lead to underreported stress in individuals that tend to externalise their stress. We also did not ask about the use of, for example, alcohol, which may well have added nuances to the picture of the stress of dental students in Sweden. As for our other main outcome variable, (job-) satisfaction, it is possible that the satisfaction of the dental students is inflated. It is a known phenomenon that informants/respondents tend to report greater satisfaction when asked a direct question about their overall satisfaction, compared to the dissatisfaction they express when relating to specific events (e.g. Kelle, 2006). As our satisfaction questions were general, we expect the satisfaction in our web-survey to be somewhat inflated, as well as the differences in student satisfaction between the qualitative and quantitative studies.

Generalisability of the quantitative results

The present study has a 40% response rate, which is by no means unusual in behavioural research. In order to generalise the findings there is a need for an analysis of non-responders. The only information available about the non-responders is sex, age and study venue. Our analyses show that the respondents do not differ from the population in regard to sex and age (Paper II), but the participant/non-participant ratio differed between the four study venues (see Table 1 above). Other differences between our respondents and the population cannot be ruled out. Therefore, our results should be interpreted with caution and the generalisability is limited.

Conclusions

We conclude that the (psychosocial) work environment of the dentistry programme relates significantly to the wellbeing, satisfaction, and consequently the performance of dental students in Sweden, and that improving the work environment would in turn improve these outcomes. We suggest that the ways gender and ethnicity appear to be constructed in relation to the sociocultural gender power relations as well as the (traditional) medical hierarchy could be of importance for how the students'

experience the psychosocial work environment and consequently for their wellbeing and performance.

Next step

The next step would be longitudinal studies, as well as to include students in the preclinical years, in order to explore how the students experience of their psychosocial work environment and its consequences develop over the course of the programme and their first years as practising dentists. These longitudinal studies should incorporate further research on how gender and ethnicity are constructed in the context of the dentistry programme and the processes by which students internalise or resist these constructions. Cluster analyses on the longitudinal material can be expected to shed light whether, and under which circumstances, students progress from clusters characterised by low stress and high satisfaction to clusters characterised by the opposite. We firmly believe that the use of the presented model to further study the experience of dental, as well as medical students, nationally and internationally will yield valuable insight on what changes in praxis and curricula will be beneficial to the students' wellbeing. With deliberate use of standardised instruments these future studies should also give ample opportunities to compare dental students to other student groups as well as professionals. An important methodological aspect would be to increase the participation rate.

We also believe that research on university students can contribute to work and organisational psychology, not only the other way around. There are at least two reasons: firstly, future longitudinal studies can shed valuable light on how the psychosocial work environment and stress levels at university programmes affects the graduates attitude towards stress in the workplace and vulnerability to stress in their working life, secondly, within at least some programmes men and women are at the same formal hierarchical level and share the same context over several years, a situation still rare in the working-life where horizontal and vertical segregation is the rule rather than the exception (Riska, 2008; Wharton, 2005).

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Appendix 1 – Interview guides

The guide for the three initial teacher interviews and the first (version 1) and last (version 5) interview guides used in the interviews with students in Study I.

Frågor lärare

Vad upplever du får studenter att välja att utbilda sig till tandläkare?

- Upplever du att det finns något samband mellan anledningen till att man väljer att bli tandläkare och bakgrund eller kön? Vad skulle det kunna bero på tror du?

Skulle du säga att tandläkare är ett mansyrke eller ett kvinnoyrke?

- Är det något särskilt du tänker på när du gör den bedömningen? Tror du att detta kommer att förändras? Vad tror du det skulle kunna innebära?
- Hur tror du det kan komma att påverka tandläkarutbildningen?

Vilka förväntningar upplever du studenterna har på utbildningen?

- Har dessa förväntningar förändrats över tid? På vilket sätt har de förändrats? Finns det något särskilt som du tror bidragit till denna förändring? Positivt/negativt?
- Upplever du att det finns något samband mellan de förväntningarna och studentens bakgrund eller kön? Vad skulle det kunna bero på tror du?

Vilka förväntningar upplever du finns på dagens studenter? Vilka förväntningar har du själv på dina studenter?

- Varifrån kom de förväntningarna? Fanns det några förväntningar du särskilt har funderat över?
- Upplever du att det finns något samband mellan de förväntningarna och studentens bakgrund eller kön? Vad skulle det kunna bero på tror du?

Hur upplever du kraven på tandläkarutbildningen?

- Hur upplever du studenternas förmåga att nå upp till kraven?
- Hur tuff är utbildningen: enligt studenterna, enligt de andra lärarna, enligt dig?
- Vilka råd skulle du ge till en annan student som har svårt att orka med?
- Skulle de råden se olika ut beroende på studentens bakgrund eller om det är en man/kvinna? Vad skulle det kunna bero på tror du?

Finns det outtalade krav, sådana som inte står i kursplanen men som du ändå känner av finns?

- Finns det något av kraven du upplever är extra starkt? Varför?
- Upplever du att de kraven är lika för alla? På vilket sätt kan de vara olika?

Hur känner du inför de studenter som snart är färdiga tandläkare?

- Finns det något du särskilt känner dig hoppfull över? Finns det något som oroar dig?

Frågeguide studenter version 1

Vad fick dig att välja att utbilda dig till tandläkare?

- Var någon av anledningarna särskilt stark? Kan du berätta mer om just [den anledningen]? Vad tror du gjorde att den anledningen blev extra stark?
- Upplever du att det finns något samband mellan den anledningen och din bakgrund eller att du är man/kvinna? Vad skulle det kunna bero på tror du?

Skulle du säga att tandläkare är ett mansyrke eller ett kvinnoyrke?

- Är det något särskilt du tänker på när du gör den bedömningen? Tror du att detta kommer att förändras? Vad tror du det skulle kunna innebära?
- Hur tror du det kan komma att påverka dig?

När du påbörjade utbildningen till tandläkare, hur skulle du beskriva dina förväntningar på utbildningen?

- Har dina förväntningar förändrats under utbildningens gång? På vilket sätt har de förändrats? Finns det något särskilt som du tror bidragit till denna förändring? Positivt/negativt?
- Tror du att det finns något som skulle sett annorlunda ut om du haft en annan bakgrund eller om du varit man/kvinna?

Vilka förväntningar upplevde du fanns på dig när du precis börjat utbildningen?

- Varifrån kom de förväntningarna? Fanns det några förväntningar du särskilt har funderat över? Hur upplevde du de förväntningarna då? Hur upplever du de förväntningarna nu?
- Har det tillkommit andra förväntningar sedan du började på utbildningen?
- Upplever du att det finns något samband mellan de förväntningar du mött och din bakgrund eller att du är man/kvinna? Vad skulle det kunna bero på tror du?

Hur har du bemött eller hanterat förväntningarna? Hur tycker du det fungerat?

Hur upplever du kraven på tandläkarutbildningen?

- Hur upplever du din egen förmåga att nå upp till kraven? Hur har du bemött eller hanterat kraven? Hur tycker du det fungerat?
- Hur tuff är utbildningen: enligt lärarna, enligt andra studenter, enligt dig. Vilka strategier använder du för att orka med? Hur tycker du att de fungerar? Vilka råd skulle du ge till en annan student som har svårt att orka med?
- Skulle de råden se olika ut beroende på den andra studentens bakgrund eller om det är en man/kvinna? Vad skulle det kunna bero på tror du?

Finns det outtalade krav, sådana som inte står i kursplanen men som du ändå känner av finns?

- Upplever du att de kraven är lika för alla? På vilket sätt kan de vara olika?
- Vilka av de kraven upplever du starkast själv? Hur tror du det kommer sig?
- Hur har du bemött eller hanterat kraven? Hur tycker du det fungerat?
- Tror du att det finns något som skulle sett annorlunda ut om du haft en annan bakgrund eller om du varit man/kvinna?

Hur känner du inför att snart vara färdig tandläkare?

- Finns det något du särskilt ser fram emot? Finns det något som oroar dig?
- När du ser tillbaka på din utbildning och det som hänt under de åren, finns det något särskilt som påverkat hur du ser på dig själv i din framtida yrkesroll.
- Tror du att det finns något som skulle sett annorlunda ut om du haft en annan bakgrund eller om du varit man/kvinna?

Frågeguide studenter version 5

- Vad innebär det att vara en bra tandläkare för dig?
- Förebild?
  (om inte innan, relatera sig själv till detta)
- Hur upplever du kraven på tandläkarutbildningen?
- Hur påverkade det när ni fick kliniska moment förutom de teoretiska?
  (om inte tidspress/uppbokning nämnts, fråga)

- Respons/feedback?
- Upplever du att det finns en allmänt accepterad inställning till vad man som student ska orka med, hur självständig man ska vara och sådana saker?
- Fysisk arbetsmiljö, ergonomi, axlar nacke?
  (om inte kommit upp, utrymme att inte orka med/säga att man inte orkar med)
- Hur ser de krav som ställs på dig ut i jämförelse med de krav du ställer på dig själv?
  (olika olika studenter)
- Påverkas detta av vad man gjort innan man påbörjade sina tandläkarstudier?
- Upplever du att det kan finnas fördelar eller nackdelar med att vara kvinna eller man på tandläkarutbildningen?
- Vad är det främsta du kommer att ta med dig från tandläkarutbildningen?
- Hur känner du inför att snart vara färdig tandläkare?
- Är det något du tycker att jag glömt fråga om?

Appendix 2 – An overview of the instruments used in the web-survey

Table 1

Scales, background variables and composite scores including examples of items.

Note that (sub)scales/items included in the web-survey (Appendix 3) but not used in analyses above or in Paper II-III are not included in the table below.

	Scale, background variable (BV) or composite score (CS)	No of items	Range	Example item (R = reversed)	Note
WHAT characterises					
Psychosocial work environ-ment	Dental School Learning Environment Survey (DSLES)	55	1–4	Faculty are reserved and distant with students. (R)	1=not at all, 4=agree completely
	Job content questionnaire (JCQ), wording adjusted to a student population	28	1–4	My teachers listen to what I have to say.	1=do not agree at all, 4=agree completely
Shared Values	Shared Values scale	7	1–4	I support the official view on patients.	1=not at all, 4=agree completely
Perceived Justice	Perceived Justice scale	6	1–4	All exceptions from the rules are well motivated and fair.	1=not at all, 4=agree completely

Table 1, continued

	Scale, background variable (BV) or composite score (CS)	No of items	Range	Example item (R = reversed)	Note
Ergonomics	The extent to which students can adjust and organise the clinical work-space and the extent to which assistance is available, CS	3	1–4	During clinical training I can adjust my physical work environment so that I can work comfortably, e.g. don't have to keep my back bent.	1=not at all, 4=agree completely
Time for rest and recovery	The time students can rest between and after treating patients, CS	2	1–4	After clinical training there is time for rest and recovery.	1=not at all, 4=agree completely
Household responsibilities	Whether a student with partner has more or less than half of the household responsibility, BV		1, 0, -1		1=more than half, 0=equally shared -1=less than half
Leisure time	Hours spent on sports or leisurely activities, BV		1, 0, -1		1= > 15 hours, 0= 4 to 15 hours, -1= ≤ 3 hours

Table 1, continued

	Scale, background variable (BV) or composite score (CS)	No of items	Range	Example item (R = reversed)	Note
Sports activities	Hours spent specifically on sports activities, BV		1, 0, -1		1= > 8 hours, 0= 4 to 7 hours, -1= ≤ 3 hours
WHERE are					
Year at progr.	BV		Year 1-5		See Table 2, Study III
WHO are					
Gender	BV				See Table 2, Study III
Born	Year of birth, BV				
Family Education	Do parents and/or siblings have higher education (HE), BV				0=none, 1=at least one sibling, 2=one parent, 3=two parents/ one parent and one sibling
Working-life experience	Years of working-life experience, BV		1-3		1= < 1 year, 2= 1-3 years, 3= > 3 years

Table 1, continued

	Scale, background variable (BV) or composite score (CS)	No of items	Range	Example item (R=reversed)	Note
CONSEQUENCES					
Perceived Stress	Perceived Stress Scale (PSS)	14	1–5	In the last month, how often have you felt that things were going your way?	1=never, 5=very often
Student Satisfaction	Facet-free Educational Satisfaction scale (FFES)	5	1–4	On the whole, I am satisfied with the dentistry programme at my study venue.	1=not at all, 4=agree completely
Tired in neck and shoulders	Tiredness in neck and shoulders directly related to treatment of patients at the clinic, CS	1	1–4	After a shift at the student driven clinic I am tired in primarily neck and shoulders.	1=not at all, 4=agree completely
Aches and limiting fatigue	Headaches, and aches or tiredness of body that limits what respondents manages, CS	3	1–4	Once a week or more I have had headaches that limited what or how much I managed to do.	1=not at all, 4=agree completely

Appendix 3 – The web-survey

A. Bakgrundsfrågor

1. Vilken ort studerar du på?

○ Göteborg ○ Malmö ○ Stockolm ○ Umeå

2. Vilken termin går du på?

○ T 1 ○ T 2 ○ T 3 ○ T 4 ○ T 5 ○ T 6
○ T 7 ○ T 8 ○ T 9 ○ T 10

3. Har du under denna och/eller tidigare terminer fått träna procedurer på patienter?

○ Ja ○ Nej

4. Har du haft rak studiegång (d.v.s. inte gjort studieuppehåll eller gått om kurser/moment)?

○ Ja ○ Nej

5. Är du

○ Man ○ Kvinna

6. Vilket år är du född? (fyra siffor)

7. Hur lång arbetslivserfarenhet hade du innan du påbörjade tandläkarprogrammet?

○ mindre än 1 år ○ 1-3 år ○ mer än 3 år

8. Har någon av dina föräldrar eller syskon högskoleutbildning (både avslutad och pågående räknas).

Du kan kryssa i mer än ett alternativ.

☐ Ja, båda mina föräldrar
☐ Ja, en av mina föräldrar
☐ Ja, ett eller flera av mina syskon
☐ Nej

9. Hur bor du?

○ Tillsammans med partner och barn (även delad vårdnad) ○ Tillsammans med partner ○ Ensam med barn (även delad vårdnad)
○ Ensam men i korridor/kollektiv ○ Jag bor ensam

11. Hur stor del av ansvaret för hem- och hushållsarbetet har du?

○ Inget ○ Mindre än hälften ○ Hälften ○ Mer än hälften ○ Hela

The web-survery, continued.

12. Hur använder du en normal vecka den tid som inte är schemalagd eller avsatt för självstudier?

	Ingen tid	< 1 timme	1-3 timmar	4-7 timmar	8-14 timmar	15-21 timmar	22-35 timmar	> 35 timmar
Studier eller studierelaterad administration	○	○	○	○	○	○	○	○
Arbeta extra	○	○	○	○	○	○	○	○
Omvårdnad/tillsyn av barn	○	○	○	○	○	○	○	○
Hjälpa släkt och vänner	○	○	○	○	○	○	○	○
Hemarbete (städa, laga mat, tvätta m.m.)	○	○	○	○	○	○	○	○
Underhåll, reparationer av bostad	○	○	○	○	○	○	○	○
Skötsel av bil, mc m.m.	○	○	○	○	○	○	○	○
Handla mat	○	○	○	○	○	○	○	○
Motion, idrott	○	○	○	○	○	○	○	○
Andra intressen än motion	○	○	○	○	○	○	○	○

B. Frågor kring lärandemiljön på din utbildning

Människor har ofta olika uppfattning om hur en organisation "verkligen" är. I frågorna nedan ber vi dig ge din egen uppfattning om utbildnings- och studiemiljön på din tandläkarhögskola. Frågorna tar upp hur du uppfattar studenter och lärare, den fysiska miljö, policies och procedurer kring kursplaner och administration, värderingar, attityder, traditioner m.m.

Läs igenom varje fråga noggrant och fundera över i vilken utsträckning du upplevt att beteendet, attityden eller policien som beskrivs i frågan förekommer. Markera det svarsalternativ som bäst stämmer överens med din egen uppfattning.

Skalan går från 1-4 där 1 på skalan motsvarar "Instämmer inte alls" och 4 motsvarar "Instämmer helt".

	1	2	3	4	Saknar info
1. Lärarna provar nya undervisningsmetoder och undervisningsmaterial.	○	○	○	○	○
2. Studenter kan anpassa sin utbildning/utbildningsgång så att det passar deras individuella behov och preferenser.	○	○	○	○	○
3. Grundläggande beteendevetenskaplig kunskap ses som en viktig del i en tandläkares utveckling.	○	○	○	○	○
4. De kliniska lärarna ger en översikt över kursmålen i början av sina kurser och moment.	○	○	○	○	○
5. Lärupplevelsen (d.v.s. det studenter ska lära sig, sättet det lärs ut på och den psykosociala miljön för lärandet) på tandläkarprogrammet gör att studenter känner sig nedslagna.	○	○	○	○	○
6. Den tonvikt som läggs på ett specifikt kunskapsområde i undervisning eller examination står i proportion till hur starkt den specifika kunskapen betonas i kursplanen.	○	○	○	○	○
7. Studenter på tandläkarprogrammet är reserverade mot varandra.	○	○	○	○	○
8. Lärarna betonar de mänskliga såväl som de tekniska aspekterna av hälsovård.	○	○	○	○	○
9. Studenter känner att de lär sig det som de behöver lära sig för att bli kompetenta tandläkare.	○	○	○	○	○
10. Kurser och moment byggs på och utvecklas systematiskt över tid.	○	○	○	○	○

The web-survery, continued.

Skalan går från 1-4 där 1 på skalan motsvarar "Instämmer inte alls" och 4 motsvarar "Instämmer helt".					
	1	2	2	4	Saknar info
11. Lärarna är reserverade och distanserade gentemot studenter.	○	○	○	○	○
12. Examinationer betonar förståelse av koncept snarare än utantillkunskap.	○	○	○	○	○
13. Studenter tvekar att uttrycka sina åsikter och idéer inför lärarna.	○	○	○	○	○
14. Instruktionerna för inlämningsuppgifter är vaga och mångtydiga.	○	○	○	○	○
15. Studenterna på tandläkarprogrammet lär känna varandra väl.	○	○	○	○	○
16. Miljön på tandläkarprogrammet tillåter intressen utanför odontologin.	○	○	○	○	○
17. Lärupplevelsen (d.v.s. det studenter ska lära sig, sättet det lärs ut på och den psykosociala miljön för lärandet) på tandläkarprogrammet tenderar att göra att studenter känner att de har åstadkommit något.	○	○	○	○	○
18. Kursrelaterade och administrativa riktlinjer är oflexibla.	○	○	○	○	○
19. Det krävs av studenter att de aktivt tillämpar metoder och idéer i nya situationer.	○	○	○	○	○
20. Lärare och administratörer ger personlig hjälp till studenter som har problem med sina studier eller studieresultat.	○	○	○	○	○
21. Lärarna förklarar vad studenterna ska få ut av deras kurser eller moment och varför materialet är viktigt.	○	○	○	○	○
22. Studenter deltar tillsammans i informella aktiviteter.	○	○	○	○	○
23. Lärupplevelsen (d.v.s. det studenter ska lära sig, sättet det lärs ut på och den psykosociala miljön för lärandet) på tandläkarprogrammet gör studenter arga.	○	○	○	○	○
24. Sambandet mellan teori och klinik är inte klart och tydligt.	○	○	○	○	○
25. Studenter har svårt att integrera kursmaterialet till en sammanhängande helhet.	○	○	○	○	○
26. Klagomål från studenter möts med meningsfulla åtgärder.	○	○	○	○	○
27. Studenters oro eller ängslan hindrar dem från att uppnå sin fulla potential.	○	○	○	○	○
28. Lärarna uppvisar entusiasm för det ämnesområde som är deras specialistområde.	○	○	○	○	○
29. Från tandläkarprogrammet sida visar man intresse för studenternas personliga välfärd.	○	○	○	○	○
30. Instruktioner för inlämningsuppgifter delas ut i god tid i förväg så att studenter kan planera sin tid.	○	○	○	○	○
31. Studenter ägnar tid åt att hjälpa varandra.	○	○	○	○	○
32. Lärarna försöker göra studenterna intresserade av den breda sociala kontexten kring tandvård.	○	○	○	○	○
33. Studenter pratar om att hoppa av tandläkarprogrammet.	○	○	○	○	○
34. Studenter har svårt att hitta tid för sin familj och sina vänner.	○	○	○	○	○
35. Kurser betonar utantillärande av smådetaljer.	○	○	○	○	○
36. När de ger kritik eller besvarar en fråga är lärarna genuint intresserade av att hjälpa studenten.	○	○	○	○	○
37. Studenter kan se sambandet mellan det de studerar och de olika vårdssituationer de kommer att möta efter sin examen.	○	○	○	○	○
38. Studenter är så upptagna med sina studier att de saknar tid för vila och återhämtning.	○	○	○	○	○
39. Studenter deltar i beslut som påverkar deras akademiska liv på tandläkarprogrammet.	○	○	○	○	○

The web-survery, continued.

Skalan går från 1-4 där 1 på skalan motsvarar "Instämmer inte alls" och 4 motsvarar "Instämmer helt".					
	1	2	2	4	Saknar info
40. Kurser betonar det ömsesidiga beroendeförhållandet mellan fakta, koncept och principer.					
41. Studenter känner sig obekväma i lärarnas närvaro.					
42. Studenter är osäkra på vad som kommer att förväntas av dem vid examinationer.					
43. Betygs- eller poängjakten är intensiv.					
44. Kurserna utvecklar studenternas skicklighet i att formulera och testa hypoteser och dra slutsatser.					
45. Kurserna är tråkiga och långrandiga.					
46. Lärupplevelsen (d.v.s. det studenter ska lära sig, sättet det lärs ut på och den psykosociala miljön för lärandet) gör studenter oroliga eller ängsliga.					
47. Lärare är hjälpsamma mot studenter som ber om råd som inte direkt hänger samman med akademiska frågor.					
48. Det finns spänningar mellan studenter som stör lärandet.					
49. Lärare ser sin undervisningsskyldighet som en börda.					
50. Lärupplevelsen (d.v.s. det studenter ska lära sig, sättet det lärs ut på och den psykosociala miljön för lärandet) på tandläkarprogrammet gör att studenterna värdesätter sig själva.					
51. Examinationerna utgör ett rättvist mått på vad studenter uppnått.					
52. Studenter tvekar att dela med sig av sina problem till andra.					
53. Lärare fostrar till en förståelse av den psykologiska dynamiken i att vara sjuk.					
54. Det finns en bristande överensstämmelse mellan fastslagna kursmål och det som faktiskt lärs ut.					
55. Lärupplevelsen (d.v.s. det studenter ska lära sig, sättet det lärs ut på och den psykosociala miljön för lärandet) tenderar att göra att studenter känner sig säkra på sin akademiska förmåga.					
56. Lärupplevelsen (d.v.s. det studenter ska lära sig, sättet det lärs ut på och den psykosociala miljön för lärandet) gör studenter allt mindre studiemotiverade.					

The web-survery, continued.

B. Frågor kring lärandemiljön på din utbildning, kompletterande frågor
Nedan följer några kompletterande frågor kring hur du uppfattar den fysiska lärandemiljön på din utbildning. Tänk tillbaka på de tre senaste månaderna. Läs igenom varje fråga noggrant och fundera över hur väl du tycker att påståendet stämmer.

Markera det svarsalternativ som bäst stämmer överens med din egen uppfattning.

Skalan går från 1-4 där 1 på skalan motsvarar "Instämmer inte alls" och 4 motsvarar "Instämmer helt".

Fråga 57-64 besvaras enbart av dig som under denna och/eller tidigare terminer deltagit i kliniska undervisningsmoment

	1	2	3	4
57. Under kliniska pass får jag nog med assistans av sköterskor eller andra studenter för att inte behöva sträcka mig eller böja mig i obekväma ställningar.	○	○	○	○
58. Under kliniska pass kan jag justera min fysiska arbetsmiljö så att jag får en bekväm arbetsställning, så att jag t.ex. inte behöver stå krokigt.	○	○	○	○
59. Under kliniska pass kan jag organisera min fysiska arbetsmiljö så att jag får en bekväm arbetsställning, så att jag t.ex. inte behöver sträcka mig.	○	○	○	○
60. Under kliniska pass väljer jag självmant en mindre bekväm arbetsställning för att göra det mer bekvämt för min patient.	○	○	○	○
61. Under kliniska pass störs jag av spring, prat och störande ljud från andra.	○	○	○	○
62. Under kliniska pass finns det tid för att vila och återhämtning.	○	○	○	○
63. Efter kliniska pass finns det tid för att vila och återhämtning.	○	○	○	○
64. Efter ett kliniskt pass är jag trött i framförallt nacke och axlar.	○	○	○	○

Fråga 65-70 besvaras av samtliga.

	1	2	3	4
65. Jag har stundtals oroat mig för att jag ska utveckla varaktiga besvär i muskler och leder redan under min studietid.	○	○	○	○
66. Jag har stundtals oroat mig för att jag ska utveckla varaktiga besvär i muskler och leder i mitt framtida yrkesliv.	○	○	○	○
67. Vid ett eller flera tillfällen i veckan har jag haft sådana besvär i muskler eller leder att det begränsat vad jag kunnat göra eller hur mycket jag orkat.	○	○	○	○
68. Vid ett eller flera tillfällen i vecka har jag haft sådan huvudvärk att det begränsat vad jag kunnat göra eller hur mycket jag orkat.	○	○	○	○
69. Jag har (regelbundet) ägnat mig åt fysisk aktivitet för att undvika att utveckla besvär i muskler och leder.	○	○	○	○
70. En eller flera kvällar i veckan har jag varit så trött i kroppen när jag lämnat skolan att jag inte orkat med ytterligare fysisk aktivitet.	○	○	○	○

B. Frågor kring lärandemiljön på din utbildning, kompletterande frågor
Nedan följer några kompletterande frågor kring hur du uppfattar krav, kontroll och socialt stöd på tandläkarprogrammet.

Markera det svarsalternativ som bäst stämmer överens med din egen uppfattning.

Skalan går från 1 till 4 där 1 på skalan motsvarar "Instämmer inte alls" och 4 motsvarar "Instämmer helt".

	1	2	3	4
71. Min utbildning kräve	○	○	○	○
72. Min utbildning inneb	○	○	○	○
73. På min utbildning må	○	○	○	○
74. I min utbildning får j	○	○	○	○
75. Min utbildning kräve	○	○	○	○

The web-survery, continued.

Skalan går från 1 till 4 där 1 på skalan motsvarar "Instämmer inte alls" och 4 motsvarar "Instämmer helt".

	1	2	3	4
76. Jag har mycket lite fri upp.	○	○	○	○
77. Jag har mycket lite fri (besvaras endast av dig	○	○	○	○
78. Jag får göra många o	○	○	○	○
79. Jag har mycket att sä utbildning.	○	○	○	○
80. Jag har möjlighet att	○	○	○	○
81. Min utbildning kräver	○	○	○	○
82. Min utbildning kräver	○	○	○	○
83. Man kräver inte för st	○	○	○	○
84. Jag har tillräckligt me	○	○	○	○
85. Jag har tillräckligt me endast av dig med erfare	○	○	○	○
86. Jag slipper motstridig	○	○	○	○
87. I min utbildning krävs uppgiften.	○	○	○	○
88. Jag avbryts ofta i de måste senare ta itu med	○	○	○	○
89. Min utbildning är myc	○	○	○	○
90. Jag måste ofta slå av andra ska bli klara med s	○	○	○	○
91. Mina lärare bryr sig o	○	○	○	○
92. Mina lärare lyssnar p	○	○	○	○
93. Mina lärare hjälper m	○	○	○	○
94. Mina lärare är bra på	○	○	○	○
95. Mina studiekamrater	○	○	○	○
96. Mina studiekamrater	○	○	○	○
97. Mina studiekamrater	○	○	○	○
98. Mina studiekamrater	○	○	○	○

The web-survery, continued.

B. Frågor kring lärandemiljön på din utbildning, kompletterande frågor
Nedan följer några kompletterande frågor kring hur du uppfattar attityder, värderingar och bemötande på din utbildning. Läs igenom varje fråga noggrant och fundera över hur väl du tycker att påståendet stämmer.

Markera det svarsalternativ som bäst stämmer överens med din egen uppfattning.

Skalan går från 1 till 4 där 1 på skalan motsvarar "Instämmer inte alls" och 4 motsvarar "Instämmer helt".

	1	2	3	4
99. Alla regler tillämpas lika för alla studenter.	○	○	○	○
100. Alla undantag från regler är väl motiverade och rättvisa.	○	○	○	○
101. Studenter bemöts respektfullt av lärare, sköterskor och övrig personal.	○	○	○	○
102. Studenters teoretiska kunskaper bedöms rättvist.	○	○	○	○
103. Studenters kliniska kunskaper bedöms rättvist.	○	○	○	○
104. Förekomsten av orättvisor och dåligt bemötande gör att jag känner mig utanför på tandläkarprogrammet.	○	○	○	○
105. Jag ställer mig bakom de värderingar kring vad en tandläkare är och ska stå för som förmedlas officiellt.	○	○	○	○
106. Jag ställer mig bakom de värderingar kring vad en tandläkare är och ska stå för som förmedlas inofficiellt eller genom praktisk handling.	○	○	○	○
107. Jag ställer mig bakom den patientsyn som förmedlas officiellt.	○	○	○	○
108. Jag ställer mig bakom den patientsyn som förmedlas inofficiellt eller genom praktisk handling.	○	○	○	○
109. Jag känner att jag måste gå emot mina egna värderingar för att bli godkänd i den teoretiska undervisningen.	○	○	○	○
110. Jag känner att jag måste gå emot mina egna värderingar för att genomföra (tillräckligt många) behandlingar för att bli godkänd i den kliniska undervisningen.	○	○	○	○
111. Förekomsten av värderingar jag inte delar gör att jag känner mig utanför på tandläkarprogrammet.	○	○	○	○

C. Hur nöjd är du med din utbildning?
Nedan följer några frågor kring hur nöjd du är med din utbildning. Läs igenom varje fråga noggrant och fundera över hur väl du tycker att påståendet stämmer.

Markera det svarsalternativ som bäst stämmer överens med din egen uppfattning.

Skalan går från 1 till 4 där 1 på skalan motsvarar "Instämmer inte alls" och 4 motsvarar "Instämmer helt".

	1	2	3	4
1. Den utbildning jag går nu ligger nära den bästa tandläkarutbildning jag kan tänka mig.	○	○	○	○
2. Om en vän berättade att han/hon var intresserad av att gå tandläkarprogrammet på min studieort skulle jag rekommendera honom/henne att söka.	○	○	○	○
3. Normalt sett kommenterar jag tandläkarutbildningen på min studieort i positiva ordalag inför vänner och bekanta.	○	○	○	○
4. Sammantaget är jag nöjd med tandläkarprogrammet på min studieort.	○	○	○	○
5. Generellt så motsvarar tandläkarprogrammet vid min studieort den utbildning jag önskade när jag tackade ja till min utbildningsplats.	○	○	○	○

The web-survery, continued.

D. Att möta utmaningar eller problem

Nedan följer några frågor kring hur du upplever eller möter utmaningar och problem. Läs igenom varje fråga noggrant och fundera över hur väl du tycker att påståendet stämmer.

Markera det svarsalternativ som bäst stämmer överens med din egen uppfattning.

Skalan går från 1 till 5 där 1 på skalan motsvarar "Instämmer inte alls" och 5 motsvarar "Instämmer helt".

Livsfilosofi

	1	2	3	4	5
1. Nästan alla problem har en lösning.	○	○	○	○	○
2. Jag gillar att leka med nya idéer även om de är totalt bortkastad tid.	○	○	○	○	○
3. Inget åstadkoms i den här världen om man inte håller sig till vissa grundläggande regler.	○	○	○	○	○
4. Jag tror inte att det är någon påtaglig skillnad mellan rätt och fel när allt kommer till kritan.	○	○	○	○	○
5. Vanligtvis är det så att ju mer väldefinierade regler det finns i ett samhälle, desto större är välfärden.	○	○	○	○	○
6. Personligen brukar jag tycka att det finns ett rätt sätt och ett fel sätt för att göra nästa allting.	○	○	○	○	○
7. Jag tycker att det känns bäst att alltid behålla min självkontroll.	○	○	○	○	○

I en jobbsituation

	1	2	3	4	5
8. Jag fungerar väldigt dåligt så fort det finns stora brister i kommunikationen i en jobbsituation.	○	○	○	○	○
9. I en situation där andra personer bedömer mig känner jag ett stort behov av klara och tydliga utvärderingar.	○	○	○	○	○
10. Om jag är osäker på vilka mina ansvarsområden är i en jobbsituation blir jag väldigt stressad.	○	○	○	○	○
11. Om jag vore en vetenskapsman skulle jag kunna bli väldigt frustrerad eftersom mitt arbete aldrig skulle vara färdigt (det kommer hela tiden att göras nya vetenskapliga upptäckter).	○	○	○	○	○
12. Om jag vore en läkare skulle jag föredra osäkerheten inom psykiatrin framför det väldefinierade och klart avgränsade arbete som t.ex. en kirurg eller röntgenläkare utför.	○	○	○	○	○

Vid problemlösning

	1	2	3	4	5
13. När jag väl påbörjat en uppgift tycker jag inte om att börja på något nytt innan jag slutfört den första uppgiften.	○	○	○	○	○
14. Inför varje viktig uppgift måste jag veta hur lång tid den kommer att ta.	○	○	○	○	○
15. I en grupp som arbetar med att lösa ett problem är det alltid bäst att angripa problemet systematiskt.	○	○	○	○	○
16. Ett problem lockar mig inte särskilt mycket om jag inte tror att det har en lösning.	○	○	○	○	○
17. Jag tycker inte om att påbörja grupprojekt om jag inte känner mig säker på att projektet kommer att bli framgångsrikt.	○	○	○	○	○
18. I en beslutssituation där det inte finns nog med information för att bearbeta problemet känner jag mig väldigt obekväm.	○	○	○	○	○
19. Jag tycker inte om att arbeta på ett problem om det inte är möjligt att komma fram till ett klart och otvetydigt svar.	○	○	○	○	○
20. Komplexa problem tilltalar mig endast om jag har en klar bild av problemets totala omfattning.	○	○	○	○	○
21. Ett gruppmöte fungerar bäst om det finns en klar och tydlig agenda.	○	○	○	○	○

The web-survery, continued.

E. Upplevd stress och kontroll
Frågorna nedan handlar om dina upplevelser, känslor och tankar under den senaste månaden. För varje fråga får du ange hur ofta du upplevt, tänkt eller känt på ett visst sätt. Vissa frågor kan verka likartade men du ska ändå behandla varje fråga för sig.

Markera det svarsalternativ du upplever stämmer bäst eller verkar rimligast.

Skalan går från 1 till 5 där 1 på skalan motsvarar "Aldrig" och 5 motsvarar "Mycket ofta".

Hur ofta har du under den senaste månaden ...					
	1	2	3	4	5
22. ... blivit upprörd över något som skett helt oväntat	○	○	○	○	○
23. ... känt att du inte haft kontroll över de viktiga faktorerna i ditt liv	○	○	○	○	○
24. ... känt dig nervös eller stressad	○	○	○	○	○
25. ... tagit itu med vardagligt förtret (strul) på tillfredsställande sätt	○	○	○	○	○
26. ... effektivt hanterat avgörande förändringar i ditt liv	○	○	○	○	○
27. ... känt dig säker på din förmåga att hantera personliga problem	○	○	○	○	○
28. ... tyckt att saker och ting utvecklat sig som du velat	○	○	○	○	○
29. ... känt att du inte kunnat hantera allt som måste göras	○	○	○	○	○
30. ... känt at du haft kontroll över irriterande moment i ditt liv	○	○	○	○	○
31. ... känt att du haft kontroll över saker och ting	○	○	○	○	○
32. ... blivit arg över saker som hänt och som låg utanför din kontroll	○	○	○	○	○
33. ... kommit på dig själv med att fundera över sker du måste utföra	○	○	○	○	○
34. ... kunnat bestämma hur du ska använda din tid	○	○	○	○	○
35. ... känt att problemen blivit så många att du inte kunnat bemästra dem	○	○	○	○	○

F. Positiv eller negativ särbehandling baserat på kön

Frågorna nedan handlar om hur du upplever att manliga respektive kvinnliga studenter bemöts på tandläkarprogrammet. Läs igenom varje fråga noggrant och fundera över hur väl du tycker att påståendet stämmer.

Markera det svarsalternativ som bäst stämmer överens med din egen uppfattning.

Skalan går från 1 till 5 där 1 på skalan motsvarar ”Instämmer inte alls” och 5 motsvarar ”Instämmer helt”.

Jag upplever att ...

	1	2	3	4	5	Ingen skillnad görs
1. ... manliga studenter gynnas av manliga lärare	○	○	○	○	○	○
2. ... kvinnliga studenter gynnas av manliga lärare	○	○	○	○	○	○
3. ... manliga studenter gynnas av kvinnliga lärare	○	○	○	○	○	○
4. ... kvinnliga studenter gynnas av kvinnliga lärare	○	○	○	○	○	○
5. ... manliga studenter får mer assistans av tandsköterskor	○	○	○	○	○	○
6. ... kvinnliga studenter får mer assistans av tandsköterskor	○	○	○	○	○	○
7. ... manliga studenter föväntas vara mer ordningsamma på kliniken	○	○	○	○	○	○
8. ... kvinnliga studenter förväntas vara mer ordningssamma på kliniken	○	○	○	○	○	○

Svara på en skala från 1 till 5 där 1 motsvarar "Aldrig" och 5 motsvarar "Mycket ofta".

Har du under din tid på tandläkarprogrammet upplevt att någon ...

	1	2	3	4	5
9. ... upprepade gånger berättat historier eller skämt av sexuell natur som du uppfattat som stötande.	○	○	○	○	○
10. ... behandlat dig ”annorlunda” på grund av ditt kön.	○	○	○	○	○
11. ... gjort ovälkomna försök att få dig med i en diskussion av sexuell natur.	○	○	○	○	○
12. ... gjort gester eller använt ett kroppsspråk av sexuell natur som gjort dig besvärad eller som du uppfattat som stötande.	○	○	○	○	○
13. ... gjort stötande uttalanden om ditt utseende, kropp eller sexuella aktiviteter.	○	○	○	○	○
14. ... visat, använt eller distribuerat sexistiskt eller tvetydigt material.	○	○	○	○	○
15. ... gjort sexistiska kommentarer som du uppfattat som stötande.	○	○	○	○	○
16. ... gjort ovälkomna försök att inleda ett romantiskt sexuellt förhållande med dig trots dina ansträngningar att avskräcka eller hindra detta.	○	○	○	○	○
17. ... kritiserat eller varit nedlåtande mot dig på grund av ditt kön.	○	○	○	○	○
18. ... fortsatt att försöka bjuda ut dig på en träff, ett glas, middag m.m. trots att du sagt ”Nej”.	○	○	○	○	○
19. ... rört vid dig på ett sätt som gjort dig illa till mods.	○	○	○	○	○
20. ... gjort ovälkomna försök att klappa, smeka eller kyssa dig.	○	○	○	○	○

The web-survery, continued.

F. Positiv eller negativ särbehandling baserat på kön, kompletterande frågor
Frågorna nedan handlar om ifall du någon gång upplevt att någon på tandläkarprogrammet "gått över gränsen" på ett sätt du inte uppskattat eller känt dig illa berörd av. För varje fråga får du ange hur ofta du uppfattar att något hänt. Vissa frågor kan verka likartade men du ska ändå behandla varje fråga för sig.

Markera det svarsalternativ du upplever stämmer bäst med din egen upplevelse.

Följdfrågor
Om du angett siffran 2 eller högre på någon av frågorna ovan ber vi dig besvara nedanstående följdfrågor, om inte avslutar du enkäten genom att skicka in den.

21. Vem/vilka utsatte dig för det du upplevt?
Svara genom att ange de frågenummer det gäller under den kategorin/kategorierna du upplever stämmer bäst.

En eller flera studenter

En eller flera patienter

En eller flera lärare

Annan personal vid tandläkarprogrammet

22. Har du rapporterat händelsen/händelserna och i så fall till vem?

Har du rapporterat händelsen/händelserna till någon?
○ Ja ○ Nej

Om du svarat nej på frågan ovan, varför har du valt att inte rapportera händelsen/händelserna?