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Dental hygiene students' part-time jobs in dental practices in the Netherlands

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Abstract: *Objectives:* Many students have paid employment while studying. In the Netherlands, the Individual Health Care Professions Act (IHCP Act) allows dental hygiene students to work under certain conditions in a dental practice. The aim of the study was to determine how many dental hygiene students have part-time job employment in dental practice and which professional tasks they carry out. We also asked the dental hygiene students their opinion of the IHCP Act. *Methods:* All the enrolled dental hygiene students ($n = 341$) at a School of Health in the Netherlands received a questionnaire by email. *Results:* The response was 52% (176 students). Of the responding students, 75% had paid employment in addition to their study. A proportion of the students (35%) worked in a dental practice. The median number of hours worked per week was eight. Study year, age and prior education were positively related to working part-time in dental practice. Activities frequently performed were giving oral hygiene instruction, fluoride applications, scaling and root planning, providing chair side assistance and giving local anaesthesia. Although the self-reported knowledge about the IHCP Act was high, almost half of the students expressed the need for more detailed legal information. *Conclusions:* Many dental hygiene students work in a dental practice, taking over a number of tasks usually performed by the dentist. More information in the dental hygiene curriculum about the requirements of the IHCP Act seems desirable.

Key words: dental hygiene; legislation; part-time job; students

Introduction

In the Netherlands, nine out of ten students have paid work in addition to their study. On average, university students spend 10 h a week in part-time employment (1). Medical and dental students and also dental hygiene students have a high work load. Dental hygiene student have 1680 study hours per year. Students with many study hours are supposed to have less time for an additional job (2).

In the USA, being in part-time employment in addition to being a medical student is an issue of debate (3). Especially students working part-time in casualty departments claim to benefit in their study from employment. Gaining additional experience and financial benefits are the most important reasons to take a part-time job. Half of the staff of hospital casualty departments are medical residents, having an additional paid job (4).

In the Netherlands, the Individual Health Care Professions Act (IHCP Act) was introduced in 1997 (5). Based on this law, doctors, midwives and dentists have an independent competency. When qualified, they are authorized to perform so-called reserved procedures, e.g. oral surgery, taking X-rays, administration of anaesthetics and cavity preparations. Under certain conditions, other members of the medical or dental team may perform reserved procedures on the orders of the doctor or dentist. The doctor or dentist should be in a position to supervise and be prepared to intervene when necessary. Furthermore, the medical or dental practitioner and the team member are jointly responsible to ensure that the team member is competent to perform the reserved procedure (6, 7).

According to the IHCP Act, graduated dental hygienists have a so-called functional autonomy. This means that they can carry out some reserved procedures on the orders of a dentist without supervision (7).

It may not always be clear to team members that reserved procedures may only be performed if ordered by an authorized professional. This is illustrated by a recent study among physicians and nurses. This showed that almost all of them were aware of the independent competencies of the physician. However, half of them were not aware of the fact that nurses are not allowed to perform reserved procedures independently. Some (17–53%) of the nurses performed reserved procedures on their own initiative (5).

Whether dental hygiene students and the dental team are aware of the demands of the IHCP Act with regard to supervision, and whether this is met in the dental practice is not known. The research questions of this study were (i) what proportion of Dutch dental hygiene students have part-time paid

employment in a dental practice? (ii) which professional tasks are performed? (iii) what are the views of dental hygiene students on the IHCP Act?

Materials and methods

A questionnaire was distributed among all the students ($n = 341$) enrolled in the Dental Hygiene Program, School of Health, Holland University for Professional Education, Amsterdam, The Netherlands.

The questionnaire contained 16 dichotomous and multiple choice questions. The total number of questions answered depended on the student's individual situation. The questions were entered in the Internet survey program examine (8). A web link to the questionnaire was sent by email to all the students. By clicking on a link, the questionnaire was activated and could be filled in. The option to change previous answers was switched off.

After one month, 176 (52%) of the approached 341 students had completed the questionnaire. Four students (1%) did not complete the questionnaire and their results were removed from the analyses. Eight students (2%) read the introduction of the survey but did not start answering the questions.

Data were entered in an Excel spreadsheet and analysed with Chi-squared tests, using the statistical software package SPSS version 15.0 for Windows (SPSS Inc., Chicago, IL, USA). All levels of significance were set at $P < 0.05$.

Results

Three quarters of the responding students ($n = 132$) have in addition to their study a paid job. Students in the age category of 21–25 years had more often a paid part-time job than younger and older students (χ^2 : 6.83, $P < 0.05$). As students progress in their study, they more frequently have a job next to their educational programme (χ^2 : 12.51, $P < 0.01$). The median time students were employed was 8 h a week, but quite a few even worked 16 h or more (Fig. 1).

Sixty-two students (47% of those with an additional job) work in dental practice, which means that 35.2% of all respondents work in a dental practice in addition to their study. The percentage of dental hygiene students that work in a dental practice increases with age. Dental hygiene students, previously trained as a dental assistant, were more likely to have part-time work in a dental practice ($\chi^2 = 10.72$, $P < 0.05$).

Professional activities that dental hygiene students frequently performed in the dental practice were giving oral hygiene instruction, fluoride applications, scaling and root plan-

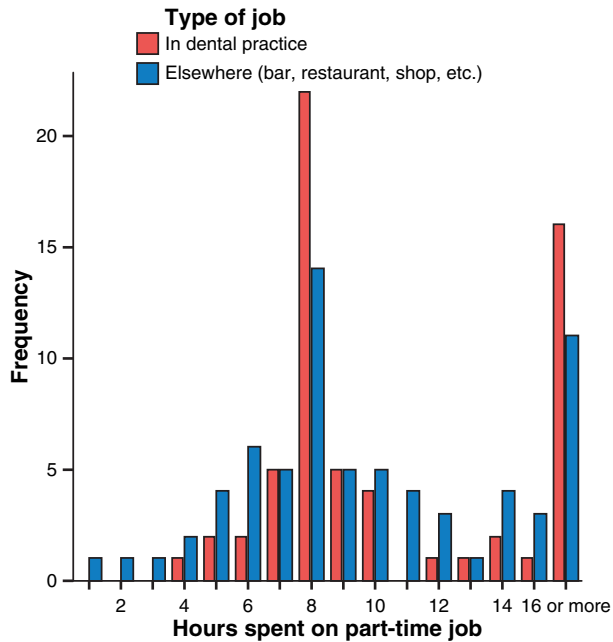


Fig. 1. Hours per week spent on part-time employment by dental hygiene students working in dental practice ($n = 62$) or outside dental practice ($n = 70$).

ning, providing chair side assistance and giving local anaesthesia (Table 1). The students working in a dental practice were usually addressed as dental hygienists in training (39%), dental hygienists (27%) or assistants (24%).

Most of the respondents (79%) claimed to be aware of the requirements of the IHCP Act with regard to delegation in the dental practice. This self-reported knowledge was not related to the number of years of study.

The majority of the students working in a dental practice (65%) were not informed by their employer about the requirements of the IHCP Act concerning the delegation of reserved

procedures. Most students (77%) thought that the dental practice where they were employed met the requirements of the IHCP Act. However, half of the students would still welcome more information about this topic.

Discussion

Students with many study hours, like those studying medicine and dentistry, are supposed to have limited time available for an additional job. Considering their intensive study programme, this also would seem to apply to dental hygiene students in The Netherlands. However, this study shows that 75% of the respondents have part-time employment and that 35% of all students work in a dental practice.

The proportion of dental hygiene students that work in a dental practice is positively correlated with age. This may be because the older the dental hygiene student is, the less likely they are to qualify for a government grant to support their study. Another fact is that the older students were more likely to be qualified and to have worked previously as a dental assistant.

A positive correlation was found between students working in a dental practice and their progress in the Dental Hygiene Program. A similar trend has been reported for medical students in part-time employment (9). Perhaps progress in the Dental Hygiene Program resulted in increased levels of skill and knowledge, which lead to improved chances of employment in a dental practice.

The types of professional activities that dental hygiene students perform in dental practice are presented in Table 1. Most of these professional activities are taught as part of the regular dental hygiene curriculum in The Netherlands. However, two fourth year dental hygiene students reported performing dental extractions, a reserved procedure which is not part of the dental hygiene curriculum.

Over 90% of the students working in dental practice felt very or moderately confident about performing the professional tasks in the dental practice. The students working in dental practice claim to have more knowledge about the requirements of the IHCP Act than the students with a job outside the dental practice or those without an additional job. The self-reported knowledge of the IHCP Act does not correlate with the year of study.

Information about the IHCP Act is included in the first and second year of the dental hygiene curriculum at the in Holland University. It is part of the teaching on ethics, quality and legal aspects. The amount of time devoted to these topics is 18 h of theory and 24 h of self-study, including a seminar and

Table 1. Professional tasks performed by dental hygiene students working in dental practices ($n = 62$)

| | Frequency | Percentage |
|--|-----------|------------|
| Oral hygiene instruction | 49 | 79.0 |
| Scaling and root planning | 43 | 69.3 |
| Chair side assistance | 38 | 61.2 |
| Fluoride application | 43 | 59.3 |
| Giving local anaesthesia | 29 | 46.8 |
| Office cleaning | 28 | 45.1 |
| Dental practice administration | 23 | 37.1 |
| Dental restorations | 14 | 22.6 |
| Extractions | 2 | 3.2 |
| Other activities (including placing sealants, tooth whitening, dental check-ups, making X-rays) | 11 | 12.8 |

doing an assignment. Despite this considerable amount of time, almost half of the students working in a dental practice still expressed a need for further information about the demands regarding delegation of reserved procedures.

One of the requirements of the IHCP Act is the supervision of the dental hygiene student while performing a reserved procedure. From our study, it is not clear whether the dentist is indeed supervising the student and is capable of intervening when necessary. Furthermore, it is not clear whether both dentist and student have determined whether the dental hygiene student is competent to perform a reserved procedure, e.g. the administration of a local anaesthetic.

A limitation of this study is that it did not explore the reason the dental hygiene students took a paid part-time employment. For medical students, the major reasons for taking on a part-time job are to supplement their income and the positive educational experience. The amount of study debt has been correlated in other studies with part-time employment (4, 10–12). Subsequent studies should therefore explore student study debt and the socioeconomic status of the dental hygiene students.

In summary, this study shows that many dental hygiene students from the InHolland University work in dental practice. They perform a wide variety of professional tasks, including the so-called reserved procedures. Among these students, and probably also among dentists and graduated dental hygienists, there is still a lack of clarity with regard to the implications of the IHCP Act. More information in the dental hygiene curriculum and more education of the employers about the requirements of the IHCP Act seem desirable.

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