

More than half of the medical students who apply for a dispensation drop out and need focused counselling

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ABSTRACT

INTRODUCTION: The Student Counselling Service at the Faculty of Health Sciences, Aarhus University, Denmark, has experienced an increase in medical students with poor mental well-being.

MATERIAL AND METHODS: This was a descriptive, retrospective survey of 1,056 medical students commencing their studies in the period from September 2003 to February 2006. The study had a four-year follow-up period. Demographics, delay, discontinuation and dispensations were determined. Each application was reviewed and the reasons why each student applied were recorded.

RESULTS: Applicants were significantly older than non-applicants. 90.9% of the dispensations were related to first-year examinations (50 students). A significantly higher number of dispensation applicants (58.2%) discontinued their studies (32 students) compared with dispensation non-applicants. 54.6% of the applicants (30 students) did not pass their first-year examinations. The study time was delayed by more than two years among 67.3% of the applicants (37 students). 27.3% of the applicants were students with a foreign qualifying exam (15 students). Females listed mainly emotional reasons in their applications. Such reasons included, among others, depression, stress and anxiety. In contrast, males listed study- and family-related issues.

CONCLUSION: Focused student counselling is recommended for all students of medicine, especially in the first year of their studies. Furthermore, lessons aiming to build study skills and teach students how to cope with study-related stress and exam-related anxiety are recommended. Particular attention should be given to foreign students. Each applicant should be advised individually.

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TRIAL REGISTRATION: not relevant.

In recent years, the Student Counselling Service at Aarhus University, Denmark, has experienced an increase in the number of medical students with poor mental well-being. This development has been paralleled by a rise in the number of applications for dispensation from the academic regulations due to lack of psychological well-being.

A Norwegian study showed that one third of students had suffered from mental health problems requiring professional treatment at some point during their initial three years as undergraduate students. Half of the

students had not sought professional help [1]. A survey documented an increase from 42 annual applications for dispensation in 2005 to 91 in 2009.

A dispensation is an exemption from the academic regulations. The majority of applicants are required to detail the reasons provided in their application when they attend a subsequent interview with the Dean of Education, the Secretary of the Study Committee and a student counsellor. If the application for dispensation is rejected, it will not be possible for the student to complete their studies. To examine the relevance of the planned survey, a pilot study was conducted with students who commenced medical school in September 2002 and February 2003 (356 students). In the pilot study 4.8% (17 students) had applied for a dispensation, 41.1% (seven students) of whom discontinued their studies. 52.9% (nine students) of the applications were related to first year examinations (FYE) including exams in genetics, microscopic- and gross anatomy. 34.5% of the reasons referred to mental health (depression, anxiety, exam-related anxiety and stress).

The main study aimed to clarify the students' motivation and background for applying for dispensation from the academic regulations and to determine delay in time of study and discontinuation of studies.

MATERIAL AND METHODS

This was a descriptive study including 1,056 medical students commencing medical school at Aarhus University in the period from September 2003 to February 2006. The study had a four-year follow-up. In Denmark, admission to university is through quota 1 (grade point average from qualifying exam) or quota 2 (grade point average and obtained points for qualifications or other experience). Data were collected from the Aarhus University data system and included dispensations and the students' demographic background, gender, age at admission, qualifying exam, grade point average and number of sabbatical years.

Furthermore, it was determined if the students had delayed their studies. This part was based on the European Credit Transfer and Accumulation System (ECTS) points achieved and their study time.

Dispensations may be granted in the following situations: a) extra attempts to pass an exam following three failed attempts, b) extension of the time limit (the

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 TABLE 1

Demographic data.

	Students with applications	Students without applications	p-value
n	55	1,001	
Female, n (%) [95% CI]	33 (60.0) [45.9-73.0]	652 (65.1) [62.1-68.1]	0.47
Age at commencement, years, median (10 percentile-90 percentile)	21.6 (20.0-30.3)	21.3 (20.0-24.0)	0.039
Sabbatical years, median (10 percentile-90 percentile)	2 (0.5-7)	1.5 (0.5-4)	0.90
Grade point average, median (10 percentile-90 percentile)	9.2 (6.6-10.2)	9.2 (8.2-10.4)	0.073
Foreign nationality, n (%) [95% CI]	15 (27.3) [16.1-41.0]	144 (14.4) [12.3-16.7]	0.17
Discontinuation, n (%) [95% CI]	32 (58.2) [44.1-71.4]	176 (17.6) [15.3-20.1]	< 0.001
<i>Qualifying exam, n (%) [95% CI]</i>			
Mathematics	27 (3.9) [2.6-5.6]	670 (96.1) [94.4-97.4]	
Linguistics	4 (3.7) [1.0-9.3]	103 (96.3) [90.7-99.0]	
HF	8 (13.8) [6.1-25.4]	50 (86.2) [74.6-93.9]	
HTX or HHX	1 (2.9) [0.1-14.9]	34 (97.1) [85.0-99.9]	
Swedish	3 (4.6) [1.0-12.9]	62 (95.4) [87.0-99.0]	
Norwegian	3 (7.9) [1.7-21.4]	35 (92.1) [78.6-98.3]	
Greenlandic	5 (41.7) [15.2-72.3]	7 (58.3) [27.7-84.8]	
Other foreign	4 (9.1) [2.5-21.7]	40 (90.9) [78.3-97.5]	
Unknown	0 (0)	6 (100)	

CI = confidence interval; HF = higher preparatory examination; HTX = higher technical examination programme; HHX = higher commercial examination programme.

exams in the first academic year must be passed within two years) and c) exemption from the participation requirements (the student must participate in the FYE within one year and the student must participate in both the exams in medical biochemistry and physiology on the fifth semester at the same time).

A total of 18 students were excluded because their dispensations were an administrative formality that did not require an application. The final group of students with dispensation included 55 students. Five applications for dispensation were not found in the archives and therefore the reasons for these applications were not clarified.

Each application was carefully reviewed. The statistical analyses were made in SPSS 17.0 and Microsoft Excel.

Trial registration: not relevant.

RESULTS

Students with applications for dispensation

A total of 55 students (5.2%; 95% confidence interval (CI): 3.9-6.7%) applied for a dispensation, and the total number of applications was 76. In the statistics from the Medical School at Aarhus University, there was an increase from 42 applications in 2005 to 91 in 2009. The data included all types of applications from the entire year and included the total number of applications.

However, our survey was limited to the number of students applying for dispensation.

In the present survey, ten students (18.2%; 95% CI: 9.1-30.9%) applied for more than one dispensation. 90.9% (95% CI: 80.0-97.0%) of the dispensations concerned the FYE. Six applications were rejected (6.0% (95% CI: 2.2-13.0%)).

Applicants were significantly older than non-applicants. The median age was similar for applicants and non-applicants, but the 90 percentile differed as shown in **Table 1**.

Applicants were more likely to have more sabbatical years than non-applicants. There was no significant differences between the two groups in terms of gender and grade point average.

A significantly higher proportion of applicants than non-applicants (58.2%; 95% CI: 44.1-71.4%) discontinued their studies. Conversely, among students without dispensations, only 17.6% discontinued their studies. A total of 15 applicants were students with a foreign qualifying exam (27.3%; 95% CI: 16.1-41.0%). 54.6% (95% CI: 40.6-68.0%) of the students with applications did not pass the FYE. This was the case for 10.7% (95% CI: 8.9-12.7%) of the non-applicants. Additionally, 61.3% (95% CI: 42.2-78.2%) of the applicants who discontinued their studies did so within 12 months after their latest dispensation.

Reasons for applying

The applicants described the reasons they found relevant for their application. Females had a relatively higher proportion of psychologically related reasons than males (**Figure 1**). 36.0% (95% CI: 22.7-50.8%) of the students were undergoing treatment for a mental disease. The male students stated a higher proportion of family reasons and study-related difficulties than females did. Other reasons included maternity leave and accommodation problems.

Delay and discontinuation

After expiry of the follow-up period, 39.2% (95% CI: 36.2-42.2%) of all the students had finished their studies without delay (**Figure 2**).

In all, 83.8% (95% CI: 79.7-87.4%) of males and 78.4% (95% CI: 75.1-81.4%) of females were still registered as active students after follow-up. A total of 208 (19.7%; 95% CI: 17.3-22.2%) of the students discontinued their studies, 32.3% (95% CI: 25.9-39.0%) of whom were male and 67.8% (95% CI: 61.0-74.1%) of whom were female.

DISCUSSION

This is the first survey to clarify the background and proportions of applications for dispensation from the aca-

demographic regulations at the Faculty of Health Sciences, Aarhus University.

Students with applications for dispensations

The expectation of an increase in the number of applications for dispensation during the reviewed period from 2003 to 2006 was not met. The increase observed in the statistics provided by the Study Committee may be due to an increase in the number of applications submitted by individual students or an increase in other types of dispensations not reviewed in the present study.

There was a significant difference in discontinuations among applicants compared with non-applicants: the majority of the applicants discontinued their studies within one year after the dispensation. Unfortunately, the reasons for their discontinuation were not registered. Hence, it may be speculated whether discontinuation was due to the reasons given in the application or caused by completely different matters. A survey from the USA [2] described that 11% of the medical students in seven different medical schools had serious thoughts of dropping out. Depressive symptoms and burnout predicted serious thoughts of dropping out the following year. There were no association between gender or ethnic groups and serious thoughts of discontinuing medical school.

In all, 27.3% of the applicants (15 students) had a non-Danish qualifying exam, and five of these were Greenlandic (Table 1). Hence, foreign students may have difficulties that are rooted in their emigration from their native countries. Furthermore, a cultural background other than Danish may make it difficult to adapt to the new life as a student. Extra attention might be indicated for such students, e.g. Greenlandic students. This is in accordance with a publication from Germany [3] in which students with a migration background had overall fewer contacts to other students. Furthermore, contact to German students was sparse. More students with a migration background had lower scores in mental health, and students with a migration background were significantly more interested in having personal counselling than students without a migration background.

In the present study, the study period of the majority of the applicants was delayed by more than two years relative to the prescribed time of study. It is obvious that extra attempts to pass the exams and extension of the time limit will lead to delay. The delayed students had difficulties staying in a study group and maintaining their social network. Furthermore, when the student is more than one year delayed, the payment of the Danish state education grant will stop. This may cause financial difficulties.

The average grades were higher for students start-

FIGURE 1

Reasons for applications.

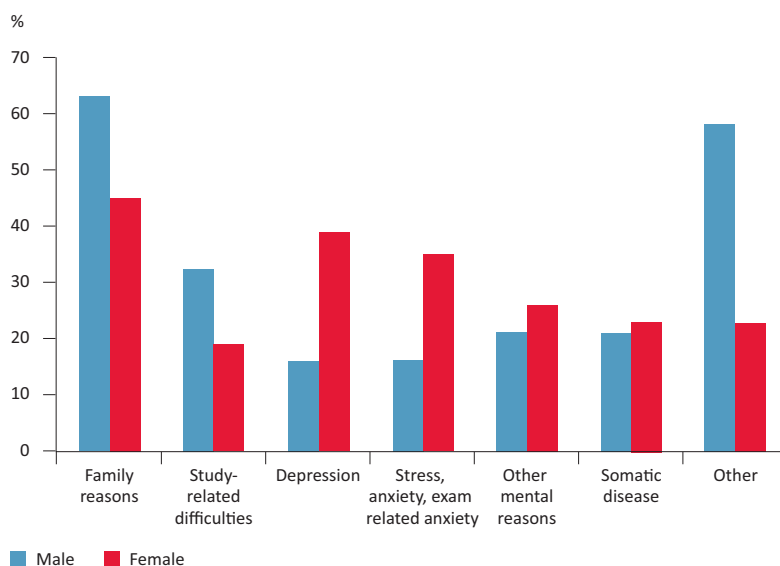
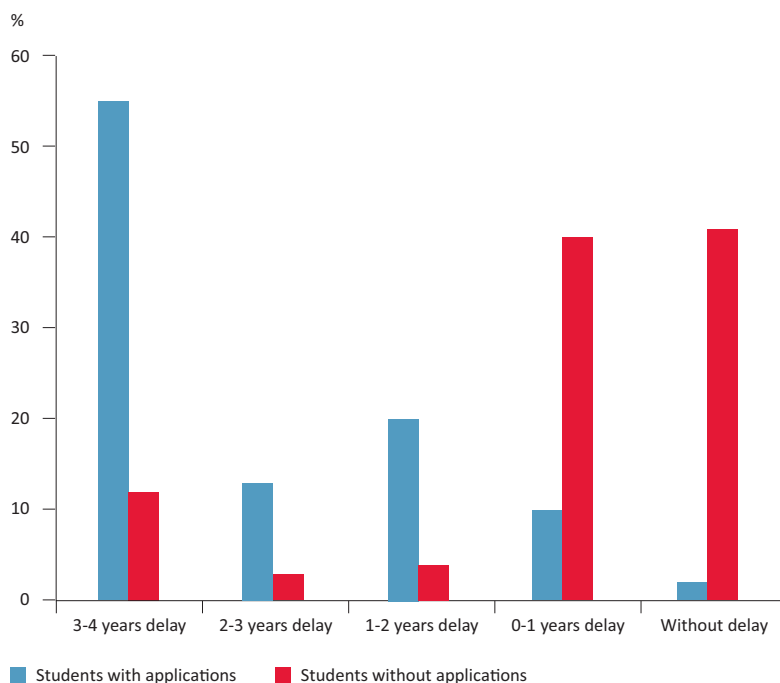


FIGURE 2

Student delay after four years of study.



ing in February than for students starting in September. This may be so because a higher number of students are admitted through quota 2 in September than in February. The students in quota 2 are generally older and have lower grades. In a survey from the Copenhagen



University which compared students who commenced in September 1992 with students commenced in February 1993 [4], no differences were found between quota 1 and quota 2 students regard to percentage completion or the number of years spent to finish medical school.

Reasons for applying

The students listed a range of reasons for their application; reasons referring to mental and somatic disorders were documented with a medical certificate.

Especially the first year of study is challenging for the students. Some of the greatest challenges in this year are related to learning and study technique. Furthermore, in this part of their studies, the students need to take responsibility for their own education, and lack of support or high expectations from the family may also contribute to some students' poor mental wellbeing. A Danish survey [5] showed that among medical students at the University of Copenhagen, more female than male students had a negative body perception and that female students were estimated to have a higher risk of developing eating disorders than male students.

The student counsellors experienced that students with poor mental wellbeing often had difficulties participating in a study group. Participation in study groups in medical school is very important from both a social and a professional perspective.

A study environment survey [6] from the Faculty of Health Sciences, Aarhus University, showed that 86% of the medical students participated in study groups in the exam periods. Furthermore, 39% of the medical students experienced strong stress symptoms in the exam periods. "Studenterrådgivningen" is a free counselling service for students at Aarhus University which registers why students draw on its counselling service. We compared their statistics for medical, law and political science students from 2003 to 2008. Depression and sadness affected law students (27-36%) and medical students (24-35%) more than political science students (7-27%).

The study environment survey also highlighted that only 25% of the students found that they had a good opportunity to be advised on academic performance.

Delay and discontinuation

A high percentage of the students remained active after four years. A survey from Copenhagen University [4] examined students commencing in September 1992 and February 1993. 75% of male and 61% of female students, respectively, completed medical school. We found a notable improvement in our survey compared with the study from Copenhagen University. We followed the students for four years, unlike the survey from Copenhagen University, which followed the students throughout the entire study period. We determined, however, that the majority of students discontinuing their studies did so within the first two years of study. This may be so because some students are having study-related difficulties in their first years of study. Another reason may be that medical school did not fulfil their expectations. Discontinuation of studies after several years could be due to the increased knowledge about the future job options, including anxiety-related to the responsibility that comes with the relevant positions.

A survey from Copenhagen University [7] clarified medical students' expectations to their future positions as a doctor. In general, the students had mainly positive expectations (70%), while a smaller part (9%) were worried about their future job. The students were especially worried about making mistakes. Significantly more females than males worried about their future job. They were especially concerned about working hours, stress and the working relationship with other professions.

When a student is delayed by more than six months with respect to the prescribed time of study, he or she is entitled to individual or group-based student counselling. If the delay exceeds 12 months, the university requires special counselling in an individual interview.

Strengths and limitations

This study's strength is the comprehensive survey of 1,056 students commencing medical school. The pilot project resulted in better data collection than previously obtained. Two observers carefully and individually assessed the applications. To reduce inter-observer variability, the applications were reviewed by two observers in case of doubt. Since the group of students with applications was considerably smaller than the group of non-applying students, we chose to describe the two groups in a retrospective descriptive survey. This is a limitation of the study. Another limitation is that the students themselves decided which reasons they found relevant for their application. The only confirmed reasons were those documented by a medical certificate.

However, mental distress is also found in those who complete the studies without dispensations. Counselling may be relevant for a larger group of students than those applying for a dispensation.

CONCLUSION

The majority of the applications for dispensations were associated with the FYE. Applicants were significantly older than non-applicants. 27% of the applicants (15 students) had a non-Danish qualifying exam, and five of these were Greenlandic. Studies were discontinued after for years by 58% of the students who had filed dispensation applications.

Female students generally listed more emotional reasons in their applications, such as depression, stress and anxiety, than males did. Correspondingly, a greater part of the male than female students had listed study-related difficulties and family reasons.

Recommendations

We recommend that an enhanced effort to help foreign students, e.g through language courses or by combining foreign and Danish students in study groups.

Failure to pass an exam two times should trigger an individual meeting with a student counsellor.

We recommend prophylactic lessons in study techniques and improved student counselling, especially in the first year of study. Furthermore, we recommend that lessons in coping with exam-related anxiety and study-related stress.

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