

# Special care dentistry for people with intellectual disability in dental education: an Italian experience

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## Keywords

intellectual disability; education; dentistry.

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## Abstract

**Aim:** This study documented: (i) the curriculum in special care dentistry in the Italian dental schools, as perceived by Deans and by students, (ii) the rate of satisfaction of dental students with their curricular education in special care dentistry, (iii) the attitude of the dental students towards special care dentistry and towards the 'Special Smiles' programme.

**Methods:** The quality and amount of didactic and clinical training delivered by each dental school for subjects with intellectual disability (ID), the interest of students towards this health field and the 'Special Smiles' programme were collected. Self-administered surveys were sent to the Dean and to all the final year students of all dental schools in 20 Italian Universities.

**Results:** Only four Deans of the 20 dental schools answered the survey, stating to provide didactic and clinical education in special care dentistry. A 51% of student response rate was obtained. Dental students reported to spend about 4% of didactic and 5% of clinical training in the dental care for ID subjects. Most students (83%) rated the training they had received on the topic to be poor. Over 50% of students expressed interest in working in dental offices specifically dedicated to ID patients and 25% of students wished to become Special Smiles volunteers.

**Conclusions:** Although the paucity of didactic and clinical training in dental care for ID patients, this survey demonstrated a high level of student's interest in learning more about treating these subjects. The current results could suggest to revise the curricular standards of dental schools, by promoting ID-oriented education programmes.

## Introduction

In the western world, the number of subjects with intellectual disability (ID) living with their family is rapidly increasing because of the deinstitutionalisation process and of the augmented life expectancy of ID subjects (1–5). In Europe, about 10% of the population is affected by a developmental, physical or ID and the situation in Italy mirrors that found in many other European Countries with more than three million residents having a disability (about 4.8% of the entire population) and approximately 190 000 subjects living in residential Institutions (1). Therefore, the community will face a larger need of private and public health structures providing oral care for ID patients (6, 7).

Unfortunately, only few dental practitioners offer special care dentistry to patients with ID. Lack of experience with disabled patients, low compensation rates, complex management, additional time and staffing, expensive dedicated 'special' machineries, limited reimbursements and financial incentives are the major causes of dentists' reluctance to treat people with ID (5, 8, 9).

In particular, the scholarly education of dental students is a key core value for acquiring a specialised skill to treat disabled patients (8–11). For this reason, new accreditation standards related to the comprehensive oral care of patients with special needs were adopted in 2004 by the US Commission on Dental Accreditation (5). Moreover, interactive patient virtual modules (3) and academic service-learning courses (12) have been

recently developed to improve dental student and dental hygienists competencies and confidence in delivering oral treatment for ID patients in the US.

Several international investigations reported the outcomes of surveys evaluating the oral health status and the 'dental habits' of people with ID (13, 14). In contrast, few studies analysed the education and training of dental students about special care dentistry (15–18). Besides, a survey-based research concerning what general dentists think about their scholarly preparation in treating special needs patients, documented a high impact of undergraduate dental education on future provider's professional behaviour, practice and confidence. The majority of dental caregivers did not perceive that the curricular programmes had prepared them well (10). Therefore, the question of how well dental schools educate future dentists is still open. Moreover, there is a controversy about which level of educational carrier (pre-, post-doctoral or both) is necessary to prepare dental students in the management of patients with disabilities (9).

Currently, the actual education of Italian dental students about oral care in individuals with ID is still very poor. The word 'disability' is lacking in the educational objectives of the dental students and no specific training has been inserted into the official dental school curricula of the Italian University (<http://www.miur.it>). To date, only non-official programmes concerning special care dentistry for patients with ID are planned at a local level. Some courses as paediatric dentistry include practical demonstrations on the treatment of children with physic or mental disability. Other seminars or elective courses are organised concomitantly with medical workshops or scientific events like the National Games of Special Olympics. Special Olympics is an international non-profit organisation dedicated to empowering individuals with ID to increase their quality of life through sports training and competitions (<http://www.specialolympics.org>). Free health screenings and services are offered to athletes at local, National and World

Games. In particular, the 'Special Smiles' programme is designed to help Special Olympics athletes enhance their oral health (19). To date, Special Smiles is the only National charity programme for improving dental health in ID subjects (<http://www.specialolympics.it>).

This study aimed to document by self-administered questionnaires: (i) the curriculum in special care dentistry in the dental schools in Italy, as perceived by Deans and as perceived by students, (ii) the rate of satisfaction of dental students with their curricular education in special care dentistry, (iii) the attitude of the Italian dental students towards special care dentistry and towards the 'Special smiles' programme.

## Materials and methods

One year before starting the current investigation, a pilot study was conducted in one dental school to test the validity of the questionnaires. All confusing questions were modified as suggested by the students. Therefore, in February 2007 two self-administered surveys were sent by registered mail (paper version) and by e-mail (electronic version) to the secretary of all dental schools in 20 Italian Universities. One survey was addressed to the Dean and the other survey to all the final year students of each dental school. The questionnaires were anonymous, but all the responder students had to sign a list to safeguard that the reactions were from different students. A cover letter from a faculty member explained the purpose of the questionnaire ensuring the eventual publication of data in not-identifiable aggregate form.

The Deans of the dental schools were asked if didactic (seminar, course, ...) and/or clinical dental programmes for people with ID were provided from their University, specifying the number of dedicated dental chairs and tutors (with their medical/dental specialty), and the time spent in this specific student training (Fig. 1).

### *Questionnaire for the Dean of each Dental School*

UNIVERSITY OF \_\_\_\_\_

In your dental school:

1) Do you provide the students a didactic education about the oral needs and treatments of patients with intellectual disabilities (ID)?

Yes  No

2) Are there some clinical divisions offering dental care to the patients with ID?

Yes  No

3) How many dedicated dental chairs are there? \_\_\_\_\_

4) How many professors/tutors are involved in the ID-oriented education? \_\_\_\_\_

5) Which is the medical/dental specialty of the professors/tutors?

Fig. 1. Self-administered questionnaire sent to the Dean of each Italian dental school.

The questionnaires addressed to the dental students consisted in three parts: the first part investigated the percentage time dedicated to the ID-oriented dentistry during their didactic and clinical training; the second part attested their satisfaction with the curricular education in the special care dentistry for ID subjects, asking the percentage time they would like to spend in treating ID patients during curricular courses; the third part assessed their attitude towards ID special care dentistry and their knowledge of existing dental programmes promoting oral health in subjects with ID participating in the Special Olympic competitions. In addition, students were asked to include some

suggestions to improve the current state of dental education in special care dentistry (Fig. 2).

The study was approved by the Ethical Committee of the Department of Human Morphology (University of Milan, Italy).

### Data analysis

Descriptive statistics were computed for all categorical (% of 'yes' and 'no' answers) and continuous variables, separately for the last year dental students and the Deans of the dental schools.

#### *Questionnaire for all the 5<sup>th</sup> year students of each Dental School*

UNIVERSITY OF \_\_\_\_\_

##### Part 1

1a) In your dental school which is the percentage time that each student should spend in the dental care for subjects with intellectual disability (ID)?

Didactic education: \_\_\_\_\_%      Clinical activity: \_\_\_\_\_%

1b) Did you follow extra-curricular events, such as seminar, congress, symposium,... concerning the dentistry for subjects with ID promoted by a Dental School?

Yes       No

##### Part 2

2a) Are you satisfied with your curricular dental training for patients with ID?

Yes       No

2b) How much time (in percentage) would you like to dedicate to the ID-oriented dentistry?

Didactic education \_\_\_\_\_%      Clinical activity \_\_\_\_\_%

##### Part 3

3a) Would you like to work in a dental office specifically dedicated to the oral care of ID patients?

Yes       No

3b) Did you heard something about "Special Olympics"?

Yes       No

Special Olympics is an international non-profit organization dedicated to empowering individuals with ID to increase their quality of life through sports training and competitions. Free health dental screenings and oral hygiene instructions are offered to athletes at local, National and World Games.

3c) Would you like to attend as a volunteer the "Special Smiles" program that provides oral health screening and prevention to the athletes participating in the Special Olympic competitions?

Yes       No

Do you have any suggestions about the proposed items?

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Fig. 2. Self-administered questionnaire sent to the 5th year students of each Italian dental school.

## Results

The collection of the current data was rather difficult. In fact, several universities were solicited more times to get an answer. Last surveys were returned in October 2007. Only four Deans of the 20 dental schools answered the survey. All except one affirmed to provide the students a didactic and clinical education about the oral needs and treatments of ID patients with 1–3 dedicated dental chairs and 2–5 paediatric dentists as tutors (Fig. 1).

A total of 248 students out of 487 final year dental students (51%) from 13 of the 20 Universities (65%) responded the questionnaire. Similar percentage values of all analysed items were found between the responding Dental schools.

The outcomes of the self-administered questionnaires for students are reported in Table 1. About 4% of respondent students completed the open question at the end of the questionnaire. Most of them suggested to create specific curricular courses concerning the psychologic approach to the dental patient with ID.

## Discussion

This study assessed the education, the rate of satisfaction and the attitude of Italian dental students about patients with ID by using self-administered questionnaires. Globally, students demonstrated a high level of interest in learning more about caring for people with ID. Over half of the responding students was motivated to experience the treatment of ID patients in their professional life and to attend specific extra-curricular dental activities. Indeed, 17% of student respondents had ever attended extra-curricular events as a meeting, seminar, or course on the topic. About 58% of the dental students ignored the Special Olympic Games and the associated healthy programmes, but 25% of them wished to participate as volunteer oral health promoters.

Nevertheless, the positive attitude of the students towards oral care for ID subjects is not yet met by the didactic and clinical offerings of dental programmes in the official courses of

the Italian dental schools. Besides, these findings mirror those of the previous US-based studies (15, 17, 18), documenting the paucity of didactic and clinical training for dental students in caring for patients with ID in Italy. However, only partial comparisons are possible because of the different parameters used in the relevant studies.

The present dental students spent 4% of their didactic courses and 5% of their clinical training in special care dentistry with ID subjects. In the study by Weaver et al. (15), nearly 41% of dental students reported having no clinical training in the oral health care for disabled patients. Comparable results were reported by Wolf et al. (17): about half of dental students said they were not getting any clinical training in this area, and most of them (68%) reported receiving 5 h or less of instruction devoted to how to care for people with ID. Similarly, Romer et al. (16) found that about 73% of the respondents reported that only 0–5% of clinical time and less than 5 h of didactic activities were devoted to managing special care patients.

Most of the Italian students (83%) rated the training they had received on the topic to be poor. This finding is in accordance with the US literature. In the investigation by Wolf et al. (17), 75% of dental students reported they had little to no preparation in providing care and over 60% of respondents had little to no confidence in providing care for people with ID. Also, only 6.4% of dental students reported to be well prepared to treat patients with special needs (15) and 29% of students affirmed that they were not prepared (16).

Considering the response rate, a 65% of current dental schools returned the questionnaires. Comparable values were found by Schwenk et al. (18) who reported a 64% of US dental schools (42 out of 66) responding after a second request.

In previous studies, the Deans of dental schools referred that 40% of official courses provided special care dentistry, quantified in about one month of clinical training per student (18), and 38% of the responding dental schools had dedicated special care clinics (16). In contrast, no meaningful conclusions about special care dentistry in the Italian dental education as perceived by the Deans of the dental schools can be drawn because of their poor response rate (20%). This low rate could be partially explained by the large amount of documents overwhelming the secretaries of the Italian dental schools for administrative and bureaucratic work. Therefore, many questionnaires can not be considered by the Deans. Moreover, the topic of this survey covers a relatively new problem of Italian society. To solicit the Deans of dental schools to answer the questionnaire, the current results could be presented in a future official meeting of all professors of dental schools.

The reduced number of responding students and Deans is one of the limitations of this study, hindering a detailed statistical analysis of data. A presentation of the objectives and of the actual results of the study during an official meeting or a dental symposium could enhance the interest towards this specific field. In addition, the current questionnaire was devised to obtain a widespread view of the special care dentistry in the Italian dental education. However, more detailed questions may be used in future surveys to better assess the actual clinical activities (dental specialty, clinical procedures, kind of prevention) with the correspondent hours dedicated by dental

TABLE 1. Results of the questionnaire answered by 248 Italian students

Items	%
Part I – Content curriculum	
Time spent in didactic activity for ID subjects	4
Time spent in clinical activity for ID subjects	5
Participation to extra-curricular events for ID oral care	17
Part II – Satisfaction curriculum	
Students considering poor their global training for ID oral care	83
Wished time to spend in didactic activity for ID subjects	19
Wished time to spend in clinical activity for ID subjects	17
Part III – Attitude of students towards ID care	
Students wishing to work with ID patients in their future professional life	50
Students knowing Special Olympics	42
Students wishing to volunteer in Special Smiles programme	25

ID, intellectual disability.

students in facing patients with ID. These data could allow larger comparisons with the literature.

## Conclusions

This study could suggest to revise the curricular standards of dental schools, by promoting ID-oriented education programmes and scholarly clinical experiences and improving the training of the dental students in treating individuals with ID. An increased number of educated students, prepared to meet the dental needs of patients suffering from ID, could enhance the provision of special oral care and the development of new research activities in the field.

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