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Ethics on the Dental treatment of patients with mental disability: results of a Netherlands – Belgium Survey

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ABSTRACT

This study evaluates several ethical dilemmas of by dental practitioners treating persons with mental disabilities (PMD) by dentists in the Netherlands and Belgium. Ethical dental care for PMD is a hot topic. Worldwide different treatment strategies are used in the dental treatment of this patient group. In addition, cultural aspect seems to play an important role in the choices made. The latter can explain the difficulty in creating European and worldwide guidelines on this issue. A questionnaire was sent to dental practitioners interested in treating PMD persons both in the Netherlands and in Belgium including questions on the use of behaviour management techniques, use and attitude towards sedation and physical fixation and the cooperation with other health care personal. Behaviour management techniques and sedation are frequently used. Dentist of the Netherlands and Belgium in general reject the restraint of PMD persons. However, limited use of manual restraint in accordance with the carers and the close surrounding of the patient seems to be accepted. Dental practitioners are sometimes confronted with an emotional dilemma in treating PMD and the majority feels that it is a continuous challenge to obtain optimal result of the dental treatment

KEYWORDS: Developmentally disabled, mental retardation, ethical treatment, dental treatment

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INTRODUCTION

Research and literature on the use of restraint strategies in dental care for persons with mental disabilities (PMD) are now available including the attitudes of dentists and PMD. Most of this literature covers the use of restraint in dentistry when coping with children and challenging behaviour.

Nunn et al (2004) and Southern Association of Institutional Dentist (SAID) developed documents on the use of physical, mechanical and chemical restraint for PMD.¹ They put an emphasis on a proactive approach to care, rather than merely managing aggression and disruptive behaviour. Due to communication problems, dentistry for the mentally handicapped persons still remains very difficult. Moreover the choice of dental treatment options can be seen as a challenge for the dental practitioner. According to Bridgman and Wilson (2000), consent to treatment, assessment of competency and the use of restraint are the areas of concern.^{2,3,4} These authors also point out that the use of restraint is a clinical decision and must be reasonable.

Horsburgh (2005) formulated key issues on the use of restraint and on methods to

handle and restrain a PMD.⁵ In 2004, Newton et al, investigated the use of Hand over Mouth (HOM) technique and conclude that only a small number of specialist paediatric dental practitioners in the UK use this technique.⁶ A study about parental acceptability of behaviour techniques, concludes that parents accept all behaviour management techniques examined in the study except for hand-over-mouth.⁷ General anaesthesia is ranked as the third most acceptable technique. This high level of acceptance of general anaesthesia compared to earlier studies may suggest that parental acceptance of this technique is increasing. Kupietzky (2004) points out in an opinion-based paper that the benefits and rationale of conscious sedation with restraint and use local anaesthesia is safe and effective.⁸ In his opinion it is a realistic alternative to general anaesthesia in the USA. Manley (2004) and Morris (2004) report that the latter approach is completely unacceptable in the United Kingdom,^{9,10} and Stel (2005) also stresses that Kupietzky's point is not fully objective pointing to cultural differences.¹¹ The aim of the present study is to evaluate ethical considerations expressed by dentists in the Benelux towards the use of physical restraint

strategies for persons with mental disabilities.

MATERIAL AND METHOD

For the Netherlands, a questionnaire was sent to all dentists member of the Dutch Association of Special Care Dentistry (VBTGG). For Belgium, the same questionnaire was distributed during a symposium organised by the Flemish working group of dentist treating patients with Special Needs (WTB). The questionnaire is comprised of the following sections: working environment (city/rural), working situation (private/institution), year of graduation, gender and frequency of treating PMD, attitude to the use of behaviour management techniques, sedation, and fixation. The use of behaviour management techniques including hypnoses, sedation, fixation is asked. Moreover emotional problems as a dentist treating PMD are asked. The SPSS 18 software is used for the statistical analyses. In addition to the analysis and the presentation of descriptive data, the Pearson chi-Square test is used to find out any significant association between different categorical variables and corresponding risk estimates (Odd Ratio). The level of significance is set at 0.05.

RESULTS

Response rate of the study is 66 % (n = 172) in the Netherlands and 95 % (n = 44) in Belgium.

Descriptive Analysis

More than 78 % of dentists who treat PMD graduated longer than 15 years ago and work mainly in an urban environment (66%). Moreover, a majority of dentists treating PMD works exclusively in private offices (54.2%), about 33% of dentists work in an institution or a (university) hospital and the others combine different work environments. The results show that 74 % of the dentists who responded to the questionnaire treat PMD for at least 4 hours a week with a majority treating PMD patients from 4 to 12 hours a week. Almost 75 % of dentists use behaviour management techniques and 37 % give a positive answer to the use of any kind of hypnoses. The number of dentists with a negative attitude towards the use of sedation is limited - fewer than 15 %. The majority (77.8 %) admits to the use of some form of sedation. When sedation is used, most dentists use benzodiazepines (71.3 %). Nitrous oxide is used by 37.5 % of the dentists. Fewer than half of the dentists (43.6 %) report a negative attitude towards the use of physical restraint and 88 % of the dentists never (or extremely

rarely) use any fixation belts or Velcro®. After careful consideration and by mutual agreement, 90.3% of the dentists accept hand fixation of the patient by a carer although the attitude on hand fixation by an accompanying person is rejected by 30 % of the responders. The use of fixation is more accepted in combination with sedation (81.5%) compared to the use without sedation (55 %).

Inferential analyses

Some inconsistencies are found between attitude and behaviour. Although a highly significant correlation (0.61 - $p < 0.001$) is observed between the attitude towards and the use of sedation, an important proportion (67%) of dentists who report a negative attitude to the use of sedation report a rather frequent use of sedation techniques. The same highly significant correlation (0.45 - $p < 0.001$) is observed between the attitude towards and the use of fixation by hand. Dentists who oppose the use of restraint score significant lower on the use of manual fixation by the carer (44% versus 85% - $p < 0.01$).

Only 6.9 % of dentists in The Netherlands and Belgium have problems when any kind of force is used to brush the teeth of a

PMD. A correlation is found between dentists who accept restraint and dentist who accept brushing with force. ($p < 0.01$).

A large majority of the dentists (90 %) supports an evaluation after treatment if any restraint is used. Both groups, those who accept or reject the use of force during brushing, support the idea of evaluation ($p = 0.67$).

Most differences in use of restraint are found between work situations (Table 1) Except for the use of nitrous oxide sedation, no gender differences are observed. More female dentists regularly use nitrous oxide sedation when treating PMD (49% versus 26%- $p = 0.004$). Differences in the use of nitrous oxide are mainly explained by country and gender. More dentists in the Netherlands and more female dentists use nitrous oxide sedation when treating PMD with respective odds ratio's of 16.95 (95% CI 3.87-71.43) and 3.01 (95% CI 1.60 – 5.65) (Table 2) .

Results show that 85.6 % of the dentists admit that he/she deals with emotional problems in treating PMD, and 93.5 % have the feeling that the treatment done is not always optimal and that they fail in their duties towards PMD.

Table 1: Use of restraint by work situation

<i>Restrain</i>	<i>Work situation</i>		<i>p-value</i>
	<i>Private</i>	<i>Institution (hospital)</i>	
Use of techniques of behaviour management for PMD	69%	80%	0.05
Use of hypnosis	26.5%	49.5%	0.001
Use of nitrous oxide sedation	25%	45%	0.004
Use of manual fixation by a carer	55%	74%	0.01

Table 2: Statistical values for logistic regression analysis with the use of nitrous oxide (use versus no use) as dependent variable (n=213)

Variable	Estimate	SE	P-value	OR	95% CI
Constant	-0.363	0.251	<0.05	0.69	
Regio					
Flanders	1				
The Netherlands	2.825	0.750	<0.001	16.86	3.87-71.43
Gender					
Male	1				
Female	1.102	0.321	<0.001	3.01	1.60-5.65

DISCUSSION

Despite decentralisation of care to rural health services in both countries, it seems

obvious that most dentists treating PMD work in an urban environment. However in both countries distances are limited and most places can be reached within one hour of travelling. The results indicate that

the majority of dentists treating PMD are experienced dentists with over 15 years of practice. A possible explanation for this is the actual shortage of newly graduated dentists both in the Netherlands and Belgium (including the idea that treating PMD is financially not always the most rewarding) and the low interest in teaching special care dentistry to the undergraduate student as shown by all dental schools in both countries. The inexperience and possible fear of undergraduates in treating PMD patients should be taken into account. However, the fact that only experienced dentists are working with PMD can be a benefit for the patient. Although it is found that the majority of the dentists included in this study work in a private office, with the decentralisation of the patients this can be seen as an advantage.

Most dentists included in the present study treat PMD for at least 4 hours every week which can be seen as an advantage with due to added experience. It is shown that more than 75% of the responders use behaviour management techniques. This seems obvious although it can be stated that those who responded negative to this question probably use some kind of behaviour management technique without knowing the extent of the terminology 'behaviour management technique'. It can

be suggested that more attention should be taken by national and local dental organisations in promoting this topic. If the access to general anaesthesia or sedation is easy, it is possible that the effort of using intense behaviour management techniques may be neglected.

The results of this survey make it clear that there are a lot of concerns about the use of restraints. It seems that if any form of restraint is accepted, it is manual fixation. It can be seen as beneficial that a majority of the dentists have a positive attitude towards the collaboration with other caregivers treating patients with mental disability. In the past Houkes and Vromans, both psychotherapists, undertook an experiment investigating the cost-effectiveness of contact desensitisation with persons with mental retardation having a mean age 39.6, all having extremely uncooperative behaviour.¹²

This study encourages the cooperation of dentist and psychotherapists, although the use of the latter it is time consuming to reach the level of better cooperation and it is not known how long the positive results will last. Pruijssers and Meijel (2005) described the problems in the diagnosis and treatment of people with an intellectual disability and anxiety disorder in a review

on communication problems and atypical symptoms.¹³ This means that it is also difficult for dentists to diagnose the reason of uncooperative behaviour. The authors plead for a multidisciplinary approach. Roemer and Dam (2004) conclude in their dissertation that the practical knowledge of caregivers (direct companions) is an important source of knowledge for communications with these clients and that this knowledge can be transferred successfully.¹⁴ In Belgium and the Netherlands patients can be easily referred to hospitals when there are behaviour problems. The latter may explain the higher number of dentists using restraint in the hospital.

Houtem van *et al* point out that 68.4% of parents of PMD have difficulties with tooth brushing and in fact they need a form of physical restraint.¹⁵ In our study 66.2% of the dentists found restraint acceptable under certain circumstances. Abma *et al* (2006) developed several quality criteria for 'freedom restriction' in the care for persons with an intellectual disability.¹⁶ In their opinion five criteria are needed: 1 skills, 2 communication, 3 targets, 4 care giving as a process, and 5 surrounding conditions. These criteria have to be

elaborated in actions and rule of thumbs. An environment of negotiation and debate instead of a climate of control has to be created because the authors believe that an emphasis on personal development and good care is better than underlining the autonomy of the most patients requiring special dental care. Moreover intense collaboration with the general medical profession can be useful as they face identical problems concerning restraint.¹⁷

If restraint is used, most dentists prefer to combine this with sedation and in collaboration with other caregivers. As such it seems that restraint is of limited use. However, this seems to be contradicted by the use of restraint during daily tooth brushing. Whilst this may seem surprising, it may be explained by the fact that dentists are too focussed on the daily oral health care of the patient. It seems that dentists make a difference between the daily oral health care and the actual medical/dental treatment.

Although most dentists are experienced in treating PMD, they still admit in the questionnaire that emotional problems are involved. The latter motivates the idea of increasing the efforts in training dentists to treat PMD both in undergraduate and postgraduate courses. Moreover, increasing

efforts of dental schools in supporting special care dentistry seems appropriate.

CONCLUSION

Most dentists that are active in treating patients with mental impairments in Belgium and the Netherlands seem to be aware of the ethical dilemma involved in this treatment. From this survey it became clear that the majority of dentists accept limited forms of manual restraint under strict circumstances including the use of sedation and in collaboration with other

caregivers. However taking into account the emotional problems of dentist and the strict criteria in using restraint, it could be beneficial to create guidelines to help dentists overcome the ethical dilemma and in improving the treatment strategies for patients with mental disabilities.

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REFERENCES

1. Nunn J, Greening S, Wilson K, Gorden K, Hylton B, Griffith J. *A Policy Document. Principles on intervention for people unable to comply with routine dental care. British Society for Disability and Oral Health* April 2004.
2. Bridgman AM, Wilson MA. *The treatment of adult patients with mental disability. Part 1: Consent and duty. Br Dent J* 2000; 189: 66–8.
3. Bridgman AM, Wilson MA. *The treatment of adult patients with mental disability. Part 2: Assessment of competence. Br Dent J* 2000; 189 : 143–6.
4. Bridgman AM, Wilson MA. *The treatment of adult patients with mental disability. Part 3: The use of restraint. Br Dent J* 2000; 189 : 195–8.
5. Horsburgh D. *How, and when, can I restrain a patient. Postgrad Med J* 2004;80: 7–12.
6. Newton JT, Patel H, Shah S, Strumey P. *Attitudes towards the use of hand over mouth (HOM) and physical restraint amongst paediatric specialist practitioners in the UK. Int J Paediatr Dent* 2004; 14: 111–7.
7. Eaton JJ, McTigue DJ., Fields HW, Beck FM. *Attitudes of Contemporary Parents Toward Behaviour Management Techniques Used in Pediatric Dentistry. Pediatr Dent* 2005; 27: 107–113.
8. Kupietzky A. *Strap him down or knock him out: Is conscious sedation with restraint an alternative to general anaesthesia ? Br Dent J* 2004; 196: 133–8.
9. Manley MC. *A UK perspective. Br Dent J* 2004; 196: 138–9.
10. Morris CDN. *A commentary on the legal issues. Br Dent J* 2004; 196: 139–140.
11. Stel G. *Vastbinden of narcose ? De keuze tussen sedatie met passieve fysieke bewegingsbelemmering en algehele anesthesie (strap him down or knock him out). Ned Tijdschr Tandheelkd* 2005; 112: 56 – 60.
12. Houkes MTW, Vromans EGM. *Vermijdingsgedrag van verstandelijk gehandicapten bij tandheelkundige behandeling. Abstract lezing voor de Vereniging tot Bevordering der Tandheelkundige Gezondheidszorg voor Gehandicapten.2007*
13. Pruijssers AC, Meijel van B. *Multidisciplinaire diagnostiek en behandeling van angststoornissen bij mensen met een verstandelijke beperking: de rol van de verpleegkundige in een integrale aanpak. Nederlands Tijdschrift voor de Zorg aan mensen met verstandelijke beperkingen (NTZ) - 2005 (4).*
14. Roemer M, Dam van L. *Making oneself understood, communication with people with profound intellectual (multiple) disabilities: Inventory and transfer of practical knowledge. Dissertation University of Maastricht – The Netherlands 2004.*
15. Houtem van C, Resida G , Schoof van de M. *(Zorg in kinderschoenen, een pilootonderzoek naar de mondgezondheid van meervoudig beperkte thuiswonende kinderen in de leeftijd van 4 t/m 12 jaar plus de mening van zowel ouders/verzorgers als tandartsen ten aanzien van de kwaliteit van de tandheelkundige zorg. 2004.*
16. Abma TA, Frederiks BJM, Hooren van RH, Widdershoven GAM, Wijmen van FCB, Curfs LMG. *Kwaliteitscriteria voor vrijheidsbeperking in de zorg voor mensen met een verstandelijke beperking. Eindrapport 2006.*
17. Behrman S, Dunn M. . *Physical restraint of medical inpatients: unravelling the red tape. Clinical ethics* 2010; 5:16-21.
