Job satisfaction and working practices of South Africa dental therapists and oral hygienists

Article · June 2015

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JOB SATISFACTION AND WORKING PRACTICES OF SOUTH AFRICAN DENTAL THERAPISTS AND ORAL HYGIENISTS

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ABSTRACT

Aim: To determine the job satisfaction and working practices of oral hygienists and dental therapists. **Method:** This was a descriptive cross sectional study of registered oral hygienists (N=960) and dental therapists (N=440) registered with the HPCSA in 2010. Data was collected by means of a self-administered questionnaire posted to respondents. **Results:** The response rate was 22%. Dental therapists were less satisfied than oral hygienists on every satisfaction dimension ($p<0.0001$), less satisfied than dental therapists in other countries involving similar studies. Dental therapists in private practice were more satisfied than those in public health. Oral hygienists in public health were least satisfied. Dental therapists' routinely performed their full scope of practice; oral hygienists performed the preventive and therapeutic services related to the practice environment. Professional concerns raised include a lack of respect and recognition for the professions and this is reported with greater frequency among dental therapists than oral hygienists; limited scope for career development, further studies and employment. **Conclusion:** Both professions had less job satisfaction than their counterparts in countries where similar studies were done. Work practices for both professions are in line with the needs of a substantial part of the South African population. Dental workforce planning should take into account the concerns expressed. The results suggest that the Department of Health may not be the preferred employer for both oral hygiene and dental therapy.

INTRODUCTION

The South African oral disease profile suggests that dental therapists and oral hygienists can contribute significantly to improve the oral health of the South African population at a primary care level.[1] The current and potential role of these professions in the dental team and in service delivery has been under discussion for a number of years at National Health, the Health Professions Council of South Africa (HPCSA), academic institutions, and professional associations. However, the roles occupied and ultimately the service that these professions deliver may be influenced by the degree of satisfaction with their profession, their workplace experiences and practices.

International trends in the development of oral hygiene as a profession show an increase in the numbers of oral hygienists educated, an increase in baccalaureate dental hygiene programmes with a shift from diploma as entry-level qualification, an increase in the clinical scope of practice and professional autonomy, a decline in mandated level of work supervision and a slight but gradual increase in independent practice.[2] Studies show that oral hygienists are generally satisfied with their careers[3-8] and take career breaks primarily for family-related reasons.[4,5,7] However, these studies highlight professional concerns around issues such as further education and training, expanded clinical functions, independence and decision making and role clarity in the dental team.

Dental therapists were initially trained as school dental nurses in New Zealand to improve access to dental care. This model, where the profession was legislated to work within government structures was subsequently adopted by other countries as a means to improve access to care, primarily for children.[9,10] By the 1980s the term dental therapist was used.[9] International trends in dental therapy indicate considerable variation in the dental therapy practice environment, differences in scopes of practice and the degree of supervision required [9]; career breaks are taken by a significant number of dental therapists.[11, 12] Since the 1990s legislative changes enabled more dental therapists to work in the private sector in prescriptive or consultative agreements with dentists or completely independently.[9,10,13] Satur *et al.* [12] reported that removal of legislative restrictions on employment settings created a "demand and a demonstrable role" for dental therapist services in non-governmental practices. Although the literature is sparse, South African dental therapists have reported concerns around professional development and autonomy, limited post-graduate opportunities and remuneration.[14,15]

Naidu *et al.*[16] reporting on career satisfaction across three health care systems, found that career satisfaction was significantly lower among dental therapists in Trinidad & Tobago, where the role of this professional was also most restricted. Individuals who felt valued as a member of the dental team, expressed higher levels of career satisfaction.[16] Although 59% of dental therapists in New Zealand felt that they were not a valued member of the dental team compared to the United Kingdom (32%) and Trinidad (39%) they were almost twice as likely to express higher levels of career satisfaction.[9] This may be explained by communication with Thompson, cited in Nash *et al.*[9] that New Zealand dental therapists have been highly valued by the public for more than 80 years.

Dental therapists[11] and oral hygienists[5] in the United Kingdom reported to have high levels of job satisfaction; a substantial number had obtained further qualifications, read professional journals and engaged in continuing education. These results suggest "a highly motivated workforce who enjoy their chosen career".[11]

Dental workforce planning may be better informed by understanding the level of job satisfaction and working practices of these professions. Therefore, this study aimed to determine the job satisfaction and working practices of South African oral hygienists and dental therapists.

METHOD

This was a descriptive cross-sectional study of all oral hygienists (N=960) and dental therapists (N=440) registered with the HPCSA in 2010. Data was collected by means of a self-administered questionnaire posted to respondents. A stamped self-addressed envelope was included for the return of the completed questionnaire. Questions were primarily closed-ended and were informed by similar research on working practices and job satisfaction of dental therapists.[11] Variables measured included: 1) demographic characteristics, 2) dimensions of job satisfaction measured by six statements rated on a 10 point scale ranging from 1 (no satisfaction) to 10 (complete satisfaction), 3) frequency of performing scopes of practice rated as regularly (part of daily practice), occasionally and never, 4) the nature of duties within their current employment, 5) exposure to continuous professional development (CPD) in

the past 12 months, and 6) number of career breaks (absence from work for longer than one month). Open ended questions were included for the job satisfaction domain for clarification. A pilot study was done and the questionnaire modified where the response indicated ambiguity in the questions.

Data was entered into SPSS version 20 and the analyses done in SAS v9 (SAS Institute Inc., Cary, NC, USA). Descriptive statistics, the Chi-Square test for association, Wilcoxon Rank Sum test for comparison of groups and the Kruskal-Wallis test, where more than two groups were used.

The research project was approved by and registered with the Faculty and Senate research committees of the University of the Western Cape.

RESULTS

The response rate after two postal mailings was 22% (n=301). 40 questionnaires were returned to sender. Most (70%; N=210) were oral hygienists and 30% (N=91) were dental therapists.

Demographic information

Table 1: Profile of dental therapists (DTs) and oral hygienists (OHs)

Variable		DTs	OHs
Age	Range	23-59 years	22-61 years
	Mean(sd)	39 (9.93)	38 (9.68)
Gender	Female	46%	98.6%
	Male	54%	1.4%
Further studies	Expanded functions	-	49.5%
	University Dipl.	22.6%	6.5%
	Bachelor Degree	9.7%	15.9%
	Post-graduate	32.2%	13%
	Other	35%	14.9%
Area of employment	Self-employed	41.6%	0%
	Employed in:		
	General practice	13.5%	41.7%
	Specialist practice	0%	33.8%
	Public health	36%	9.8%
	Academia	6.7%	7.8%
	Other	2.2%	6.9%
Employment status	Full time	93.6%	60.4%
	Part time	6.4%	39.6%
Career breaks		1-2 (34%)	1-4 (57.6%)
Primary reasons	Child rearing	30	64.1
	Studies	16.7	7.7
	Illness	10	
	Another career	6.7	6.8
	Retrenched	6.7	
CPD in past 12 months	Primarily seminars and short courses	82%	89%
Journal read at least once a month	Journal of DENTASA	73.4%	
	Journal of OHASA		77%
	Journal of SADA	12.5%	
Feels valued in the dental team	Most or all of the time	32.2%	71%
Dental assistant provided	Every patient	74.4	6.4
	When available/ requested	23	37.6
	Never	2.6	55.9

Job satisfaction of oral hygienists and dental therapists

Table 2: Job satisfaction of oral hygienists (OHs) and dental therapists (DTs)

Satisfaction category	Mean (sd) OH	Mean (sd) DT	Mean (DT+OH) (sd)
1. Working conditions	7.1 (2.22)	5.8 (2.77)	6.7 (2.46)
2. Work resources	7.1 (2.25)	6.4 (2.70)	6.9 (2.41)
3. The profession	7.1 (2.00)	6.4 (2.49)	6.9 (2.18)
4. Career development	4.8 (2.62)	4.6 (3.03)	4.7 (2.75)
5. Remuneration	5.7 (2.18)	4.1 (2.62)	5.2 (2.43)
6. Scope of practice	6.7 (2.11)	4.7 (2.65)	6.1 (2.47)
Overall satisfaction	**6.4 (1.68)**	**5.4 (1.98)**	**6.1 (1.84)**

Dental therapists were less satisfied than oral hygienists in every category (Table 2). Significant differences were found between the professions in: overall satisfaction, working conditions, remuneration and scope of practice (p<0.0001).

Differences were also found within professions with self-employed dental therapists rating their satisfaction higher for working conditions, work resources, career development and remuneration than their peers.

Higher satisfaction was reported by oral hygienists in general practices for the profession and remuneration; in specialist practices for working conditions, scope of practice and work resources; and in academia for career development. Public health oral hygienists scored the lowest for each category.

Significant differences were found in employment categories for: remuneration, conditions of employment, resources, scope of practice and total satisfaction (p<0.0001).

Respondents comment on job satisfaction

The following were highlighted in the open ended question for elaboration on job satisfaction:

- **Overall satisfaction:** A lack of respect for the professions was a common theme and this was reported with greater frequency by dental therapists than oral hygienists. Positive satisfaction experiences were related to greater autonomy, a positive and challenging work experience, recognition for the profession, having flexibility in the work environment and being able to make a difference to patients and communities.
- **Working conditions and resources:** These included personal concerns such as lack of benefits in terms of medical aid, pension and poor salaries and structural concerns such as working without a dental assistant, a shortage of material, old equipment and substandard sterilisation.
- **The profession:** Lack of recognition of the professions, being poorly treated as professionals, limited opportunities in terms of employment, promotion and room for growth.
- **Career development:** No or limited scope for career development, further studies, and lack of post-graduate opportunities.
- **Remuneration:** Poor salaries, being underpaid, not being treated fairly, big differences in salaries between professions for the same work done; tariffs being different between dentists and dental therapists for the same procedures.

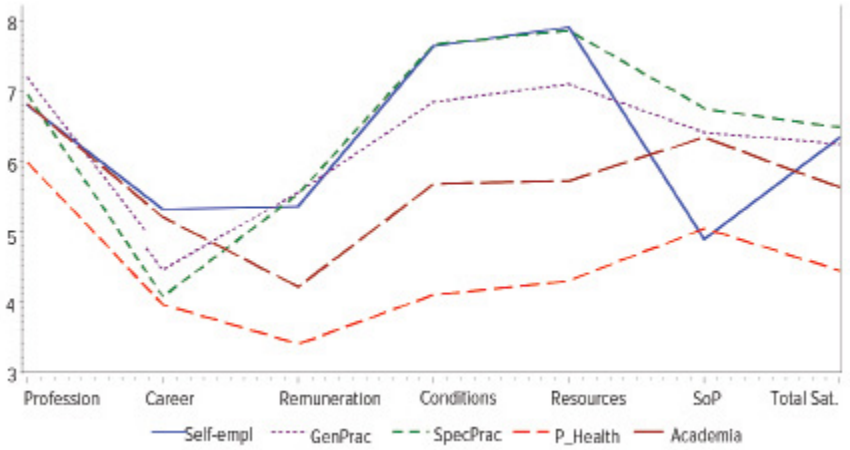

Figure 1: Level of job satisfaction per employment category*

* *Figure 1 shows oral hygienists and dental therapists combined for the six dimensions of job satisfaction by category of practice (see legend below Figure 1 for categories of practice).*

- **Scope of practice:** Not using "expanded functions" were noted by oral hygienists; scope being "to limited" leading to limitation of work was reported.

Work practices of dental therapists and oral hygienists

Most respondents primarily fulfil the role of a clinician, with supplementary administration and management functions. Public health practitioners work in clinical and health promotion roles. Most respondents (96% of oral hygienists and 91% of dental therapists) perform clinical functions as part of their daily work practices.

Table 3: Scope of practice performed on a regular basis by oral hygienists (OHs)

Clinical procedures	% OHs
Polish	75
Scaling	74
Fluoride Rx	66
Tooth desensitising	55
Fissure sealants	50
Radiographs	49
Impressions	44
Plaque controlling agents	40
Cutting of distal wires	36
Removal of orthodontic bands	34
Surface aneasthetic	30
Patient examination (perio)	25
Rootplaning	25
Cephelometric tracings	20

The most frequently performed functions were the basic preventive and therapeutic procedures (Table 3). Less than 10% of oral hygienists perform the remaining scope of practice regularly. The scope of practice performed was consistent with the practice environment. 70.6% discussed plaque control with every patient and 22.4% discussed plaque control with at least 75% of their patients. Additional functions to the scope of practice suggested by oral hygienists were tooth bleaching and one surface restorations.

Table 4: Scope of practice performed on a regular basis by dental therapists (DTs)

Clinical procedures	% of DTs
Extractions	91
Examinations	79
Scaling	73
Polish	71
Restorations	71
Treatment for post extraction bleeding	59
Treatment of alveolar osteitis	58
Trimming of restorations	52
Radiographs	48
Fissure sealants	44
Fluoride treatments	55
Tooth desensitising agents	48
Plaque controlling agents	43
Surface aneasthetic	49
Sutures	33
Treatment of minor injuries	33

Frequently performed functions fall within the basic primary oral health care domain. (Table 4).

Additional functions to the scope of practice suggested by dental therapists were the design of crowns, bridges and dentures, drug prescription, root canal treatment and surgical removal of teeth. 44.6% discussed plaque control with every patient and 28.9% discussed plaque control with at least 75% of patients.

DISCUSSION

Demographic characteristics

Dental hygiene is predominantly a profession occupied by females,[2,6] whereas the gender distribution of dental therapists appear to be country specific. Career breaks primarily for child care or family responsibility seems to be a feature of dominantly female professions[4,5,7] also noted in this study. This observation may influence work patterns of these professions as indicated in the literature. Considering that more females are entering all professions in the dental field, there may be a need to look at the impact on the dental workforce in South Africa.

Job satisfaction among oral hygienists and dental therapists

The level of job satisfaction of respondents in this study was lower than similar studies where job satisfaction of dental therapists[11] and oral hygienists[7] was rated on a 10 point scale. The concerns expressed in this study may be better understood if located within the concept of a profession and what being a professional entails.

In theorising the concept of a profession, authors have referred to characteristics of "a unique body of knowledge, the provision of an altruistic service to society and autonomy through control over work and work conditions in practice".[17] These characteristics may offer some indication of practice expectations of respondents in terms of their profession. Concerns such as limited discipline specific post-graduate studies, qualifications that had financial and personal implications, yet may have had limited use in their daily working practices (which were primarily clinical in nature) would not support the notion of building a body of knowledge. Reports of "making a difference to patients and communities" highlighted that respondents wished to make a difference, rather than simply perform a service. The fact that respondents participated in continued professional development, further education and regularly read professional journals indicated an interest in professional development; practices also reported by dental therapists in the United Kingdom.[11] At the time of this study oral hygiene was offered as a two year University diploma by most South African universities, although the suggestion for a degree in oral hygiene enabling graduates a wider scope of employment and possibility of post-graduate study was raised as early as 1977.[18]

Autonomy is a key characteristic of any profession.[17] The lack thereof noted by respondents may have been a reflection of the referral system and practices within the employment setting. Self-employed dental therapists practice privately and independently subject to working under supervision of a dental therapist or dentist for one year[20] and thereafter follows the "upward referral model". This model adopted by medicine uses a referral system where dental auxiliaries diagnose and carry out their treatment plans within their professional ambit and refers conditions outside their diagnostic and treatment capabilities for specialist input.[19] This system may have contributed to the greater job satisfaction expressed by self-employed dental therapists. However, there is an inherent contradiction in that dental therapists are able to practice autonomously if employed in the public health system but is mandated to supervised practice as a requirement for independent private practice. The rationale for supervision prior to independent practice is not articulated in policy documents. A potential consequence of this requirement is that the dental therapist is socialised to the professional and personal work practices of the supervising professional. Independent private practice has been promulgated for oral hygienists since the initiation of this study, subject to the same conditions as dental therapists [21] which explains why there were no oral hygienists in the self-employed category of this study.

In contrast a "downward referral model" refers to a system where expertise is seen to lie within the dental practitioner who diagnose and refer as in the case of supervised practice. A downward referral system limits the patients' choice of provider and of the professional to develop an optimal care plan within the ambit of their profession. The literature refers to the training of dental auxiliaries as a means to shift procedures requiring "low-technology services" to free the dentist to undertake more demanding complex technological procedures.[19,22] Yet the logistics of a "downward referral model" may not leave room for the dentist to develop or practice more advanced skills. Instead of being the "professional specialist" in terms of referral as is the case of medicine, or the team leader as indicated in the dental literature, the dentist ends up being the gatekeeper of dentistry.

Concerns around lack of autonomy, professional

respect, flexibility in the work environment, being able to make a difference to patients and communities reported in this study may be embedded in broader issues of teamwork and role clarity in the dental professions as noted by Csikar *et al*.[23] Dental therapists in the United Kingdom reported to see themselves as part of the dental team, yet a substantial number felt that more practice patients could have been referred to them and that they could have done more extensive clinical work. A lack of awareness among referring dentists of the dental therapist's role and contribution to improved oral health was noted.[23]

The broader dental environment requires multi-disciplinary teamwork to address oral health concerns. Such an approach needs a culture shift in power sharing [19] and developing programmes within undergraduate training that focus on the dental team as a multi-professional unit.[19,24,25] These programmes should champion the benefits of working in a multi-professional group. It should address tensions inherent, "with reference to the structural, cultural and skills context" in professional groups and individual practitioners working together.[19] It should further reflect a more patient-centred oral health team and ensure a "more collaborative arrangement where professionals work together as colleagues with mutual recognition of each person's professional expertise and contribution".[24] Where the profession is not perceived to be valued, individuals may pursue a career such as dentistry as it is seen to possess the qualities of a profession.

Work practices of dental therapists and oral hygienists

Although the scope of practice for oral hygienists in South Africa is extensive compared to a number of other countries,[2] the actual procedures performed are informed by the nature of the practice and referral by the dentist. Considering the oral disease profile of the country and the commitment to primary healthcare[1], there is a need for oral hygiene posts in the public sector to focus on the prevention and promotion aspects which is core to this profession. Monajem[26] argued that dental hygienists have a role to play in integrating oral health into general health through "translating health promotion principles into action" at community levels. However, considering that public health oral hygienists showed the lowest satisfaction at every level suggests that public health may not be the preferred employer of oral hygienists.

The range of services provided by dental therapists show that the full scope of practice was generally provided on a regular basis and encompassed the basic package of oral health services expected to be delivered at primary healthcare facilities.[1] Treatment of pain and sepsis, conservative, therapeutic and preventive care was provided as part of their regular working practice. Self-employed dental therapists showed high satisfaction for all categories except scope of practice whereas public health respondents showed lowest satisfaction for all categories except scope of practice (Figure 1). The implication is that public health may not be the preferred employer for dental therapists. An exploratory study comparing patient satisfaction with dental and dental therapist visits, found that patients attending dental therapists had significantly higher overall satisfaction.[27] In spite of variables reported that could possibly have influenced the outcome, the results show an acceptance of the dental therapist by the public.[27]

The response rate of 22% may indicate that the result of this study is biased to those individuals not satisfied with their profession and that non-respondents may differ substantially from responders. However, the results appear to be consistent with that of Prinsloo[14] who reported dental therapist complaints such as inadequate salary, status, equipment and unsuitability of training, poor promotion potential in state services and Singh[15] who reported that frustration with their limited scope of practice in the private sector; a lack of posts, poorly functioning dental facilities, and inadequate remuneration in the public sector caused high levels of dissatisfaction among dental therapists.[15]

Oral hygienists and dental therapists may need to reflect on their role and responsibility in elevating the status of their profession within the dental team and broader community. As was indicated for the New Zealand dental therapist, where the professional is highly valued by the public, their job satisfaction was also higher. [9]

CONCLUSION

Dental therapists were less satisfied than oral hygienists at every level and were less satisfied than their counterparts in countries where similar studies were done. Working practices for both professions were in line with basic oral health services to meet the basic needs of a substantial part of the South African population. Dental workforce planning for the utilisation of these professions should take account of the concerns expressed. The results of this study suggest that the public health sector may not be the preferred employer for both oral hygiene and dental therapy.

Acknowledgement: Professor Madsen for assistance with statistical analysis.

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