Learning alongside: Patients' experiences of a university dental clinic

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Abstract

University dental schools provide services that meet community needs, particularly the requirements of people from low socio-economic backgrounds, and the requirements of dental students. People from low socio-economic backgrounds have reduced access to dental services and poorer oral health outcomes. Reduced access is linked to dental treatment costs within the private sector and lengthy wait times for public sector dental appointments. In Australia, those at greatest socio-economic disadvantage are eligible for health concession cards that enable them access to reduced or no fee dental services within the public health system. Limited public dental resources, and the often complex treatment requirements of this population group, mean that wait times for dental appointments can be significant.

University dental clinics address barriers to access by providing reduced fee services and shorter appointment wait times than is generally the case in public and private dental services. University dental clinics also benefit dental students by providing a clinical placement opportunity for training the next generation of dental professionals while serving population groups who may otherwise have difficulty accessing regular dental care. The literature provides evidence of the benefits of university dental clinics, however, there is a gap in the literature that presents benefits from the perspective of patients. This study sought to identify the benefits of university dental clinics by exploring and describing patients' experiences at an Australian university dental clinic.

Purposive sampling of participants resulted in 23 university dental clinic patients participating in the study. Data was collected using semi-structured interviews. Thee essential grounded theory method of concurrent data collection and analysis resulted in three key themes being identified in the data: 1) aspects of attendance; 2) quality of service; and 3) learning alongside.

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Introduction

It is internationally recognised that people from low socio-economic backgrounds have poorer oral health outcomes and reduced access to dental services (Atchison and Dubin, 2003). In Australia, those at greatest socio-economic disadvantage are eligible for a government health care concession card, which entitles card holders to health care, including dental treatment, within the public health sector. All Australian state and territory governments provide public dental services to concession card holders at reduced or no cost (Brennan, 2009). While public dental services play an important role in providing emergency treatment, there are significant waiting times for general dental care due to limited resources and the complex treatment requirements of vulnerable population groups, (AIHW Dental Statistics and Review Unit, 2002).

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Keywords
university dental clinic; patients' experiences; dental students

Literature suggests that patients' attendance at dental health services is influenced by many factors including: long waiting times, workforce maldistribution, financial constraints, patients' attitudes to oral health, geographical access and a focus on emergency care (Tan, 2010, Roberts-Thomson et al., 2011, Brennan et al., 2008). Australians carrying a concession card are 1.8 times more likely to have unfavourable dental attendance patterns as financial barriers prevent them seeking private dental care and they are unable to be seen regularly within the public system (Brennan, 2009). Irregular dental attendance results in more severe dental problems as early intervention is not achieved, fuelling the cycle of an overabundance of emergency work within the public sector.

As an adjunct to private and public dental services, Australian university dental schools and training facilities provide dental services to the community. Dental students in their final clinical years complete their education by treating patients either through clinical placements within the public health system or at their university dental clinic. Clinical placement programs improve access to dental services in two ways. Firstly, training dental students within public health clinics decreases waiting times significantly by increasing the number of treatment providers without the expense of hiring salaried dentists (Richards et al., 2002). Secondly, within university dental clinics, patients are treated at a significantly reduced fee compared to a private practitioner practice.

University dental clinics benefit both students and the community by training the next generation of dental professionals while simultaneously servicing population groups who would otherwise have difficulty accessing regular dental care (Richards et al., 2002). The university dental clinic included in this study provides general dental treatment and molar endodontics free of charge to patients holding a healthcare or aged pension concession card. Complex treatments such as crown and bridgework are offered at cost price, providing patients with treatment options not routinely available to them in the public system. The operation of this university dental clinic increases access to dental services for the low socio-economic population in this regional centre.

Although the university dental clinic provides the aforementioned benefits, the clinical environment is very different to most public and private dental clinics. On making an appointment, patients are paired with a student who, where possible, works with them for the duration of their treatment. An experienced general dentist or a dental specialist supervises students to ensure that the quality of care delivered by the student is acceptable. A patient is not guaranteed to have the same supervisor at each appointment. Due to the inexperience of the students and the time required for supervisors to check over treatment progress, the length of an appointment is often significantly greater than an appointment with a qualified dentist. The physical layout of the clinic also differs as patients are treated in open bays separated by glass panels and dividing walls, rather than in a more traditional closed private room. The clinic consists of 88 dental chairs separated into 11 bays of eight, allowing the treatment of 176 patients on average per day.

Despite there being literature regarding the benefits that university dental clinics have for the education of dental students, a search of the literature did not find any published studies relating to the benefits of university dental clinics from the patient's perspective. This qualitative study sought to identify the benefits of university dental clinics by exploring and describing patients' experiences of attending an Australian university dental clinic.

Methods

Purposive sampling of participants and the essential grounded theory method (Birks and Mills, 2011) of concurrent data collection and analysis were used in this qualitative exploratory study. Participants were recruited using information sheets and posters displayed in the university dental clinic waiting room. Letters of invitation were sent to patients who were identified as non-returners in an attempt to increase variation in the data; however, no participants were recruited as a result of this strategy. A total of 23 participants (each holding a concession card) participated in the study. The age range of participants was from 28 to 76, with the average age group being 65+.

Data was collected using semi-structured interviews. Interviews were conducted in pairs of student researchers, with one researcher undertaking the interview and one observing and writing field notes. Participants were not interviewed by a student researcher who had treated them in the clinic. Each interview was digitally recorded and transcribed. The research team listened to interview recordings numerous times and key themes were identified and further developed during iterative phases of data collection and analysis. Ethics approval for this study was received from the university Human Research Ethics Committee.

Findings

Three key themes were identified in this study: aspects of attendance, quality of service and learning alongside. Significant findings from this study include: for all participants aged 65 years and over and holding a concession card, a lack of time was not a significant factor in making the choice to attend a university dental clinic; and for the majority of participants the reduced cost as compared to private dental services and shorter waiting times as compared to public dental services were very influential when deciding to attend. A positive side benefit identified in the data is the opportunity for patients to contribute to the broader community through the facilitation of education and training for dental students. There are two main contributors to the quality of care received by participants attending the university dental clinic: firstly, the strength of their relationship with the attending student; and secondly, the model of clinical supervision and the expertise and range of clinical supervisors on the teaching team. Learning alongside dental students contributes to patients having greater autonomy in decision-making about treatment, a higher awareness of preventative oral health strategies, and a greater incentive to implement these strategies in their everyday life.

Aspects of attendance

The majority of participants discussed how financial constraints restrict their ability to readily access dental care outside of the public system, with financial reasons being an important factor influencing their initial attendance. *"[I am] very grateful to [receive] the treatment for free, otherwise we wouldn't be able to have that dental attention because we have a low income"*. (P7)

Other participants stated that waiting lists for public dental services were too long, which led them to seek treatment at the university dental clinic where waiting times are much shorter. When asked when or where they would have sought treatment outside of the university dental clinic, most participants admitted they would have had to stay on the public system waiting lists or would have delayed seeking treatment until it became an emergency situation. *"The waiting list (at the public clinic) was a three year wait, I didn't bother. [At the university clinic] they booked me in within two-three weeks, and the follow up after that was within a few weeks, I was very happy with that"*. (P14)

The physical environment at the university dental clinic differs significantly to most public dental clinics and this was noted by many of the participants. At the clinic there are 88 dental chairs and patients are treated in bays separated by two low walls and a patterned glass division. Many participants thought this open layout created a positive atmosphere and did not feel the environment encroached on their privacy during treatment. with some participants suggesting that the open spaces of the physical environment gave the clinic a community vibe. *"It's nice to have company, and share the experience, we are all in the same boat"*. (P20)

Although the university clinic benefits the community by providing accessible dental care, the key purpose of the clinic is to train dental students to become qualified professionals. There are, therefore, recognisable differences between being treated in a conventional dental clinic and a university dental clinic. Participants identified longer appointment times at the university clinic compared to standard dental appointments, as a significant factor in their experience. Most participants who were retired or unemployed did not feel this affected their choice to attend; however, some did identify that perhaps the longer appointment times would be a deterrent to other patients with strict work commitments. *"We're not working, time factor isn't a problem for us but for some people it might be"*. (P5)

Other participants identified that their appointments took longer because the students were trying to achieve a high standard. *"Sometimes it's hard having your mouth open for that long, but I would prefer being there for a long time and it be done well than for a short time and have problems later"* (P22). Despite the long appointment times resulting from the educational structure of the clinic, most participants viewed the long appointments as beneficial to their overall treatment and as an opportunity to give something back in return for their dental treatment. There was a strong sense of participants being able to make a contribution to the community by attending the university dental clinic for treatment and thus providing students with an opportunity for clinical placement. *"I'm helping train this person to become a good dentist, I felt like I was contributing something - it felt really good"* (P15). Additional evidence supporting the aspects of attendance theme is included in Box 1.

Quality of care

An important aspect relating to the quality of care received by patients attending a university dental clinic is professional relationship building. Most participants in the study identified the interactions between the student and supervising clinician, patient and supervising clinician, and student and patient as factors that contributed to the quality of their treatment. It was commonly expressed that each of these relationships are important in order for patients to feel at ease and confident while receiving treatment within a university based clinical environment. Several participants discussed how due to the longer appointment times and the continuity of dealing with 'their' dental student over a course of treatment, they built a comfortable relationship with the student, which positively impacted the course of their treatment. *"They [the student] talk to you, they made you feel comfortable, they were more light [gentle]- you didn't feel like you were a patient- you felt like you were a friend who they were helping"*. (P15)

All participants were happy with the conduct and professional attitudes of the students providing their treatment. A number of participants discussed how approachable the students are, with the result that they felt comfortable enough to ask any questions they had regarding their treatment. Participants trust that the care they are receiving is of an acceptable standard and are confident that the treatment is being performed correctly. The presence of clinical supervisors is an important factor in reassuring participants that they are receiving consistent and quality care. *"I feel more assured that I will get better treatment because as well as having the student who is trying to do his/her best, there is a supervisor as well with plenty of experience."* (P4)

The concept of the participant consistently seeing the same student but different supervisors is a situation unique

Box 1: Aspects of attending a university dental clinic

"*You do what you can afford; a lot of people neglect their teeth, not by choice.*" (Participant 20)
"Would have found the cheapest place if [I] couldn't attend [the] clinic, or would have stuck with the pain I was in." (Participant 8)
"In some ways I think it's more soothing…not so clinical.... I like the high ceilings and roominess of the whole place" (Participant 3)
"it's very bright, there's a lot of glass so you can see everyone else" – other clinics are very dark and you just don't want to go in" (Participant 16)
"Time wasn't weighed in monetary terms, for me, time wasn't an issue" (Participant 3)
"I find it better here than what I've had done on the outside- you do a better job; you're not in and out in about 10 minutes- you take your time and you're here for about 2-3 hours" (Participant 8)
"It's an opportunity for students to practice on a live patient, whilst getting really good dental care" (Participant 25)
"I felt useful, like my problems where someone else's learning aids" (Participant 22)
In regards to the length of appointments :
"I know you're getting a good job done and you're getting it done straight up- better to get it done now than wait on the waiting list" (Participant 18)

Box 2: Quality of Care

"*Not worried about being treated by a dental students, you guys are being trained by the state of the art procedures at the moment, and you've got backup*" (Participant 3)
"*Students usually take a great deal of care because they are new at it and try hard not to do the wrong thing*" (Participant 20)
"*I thought it was a good thing [on supervisors] because at least they are double checking to make sure and getting a second checking so obviously that's going to act in my favour, they're not going to make a mistake*" (Participant 29)
"*I felt that the consistency I had by getting the same dentist was good because you can build that relationship up and you feel more comfortable with them and you're used to them*" (Participant 16)

to a university dental clinic. Participants realised and accepted the reasons for having different supervisors, with many feeling it gave them more treatment opinions and options than they felt had been offered in past dental treatment outside of the university clinic. *"Would have been nice to have the same supervisor however realistically I realise that this is not possible"* (P12). Participants also identified the benefit of students receiving supervision from a variety of clinicians. *"It was also interesting to see three different supervisors' points of view and I think from the student's point of view it would be good to have different supervisors so that they will learn more than being stuck with the same supervisor with the same ideas"* (P16). Also contributing to patients' perceptions of quality is the availability of specialist practitioners, for example, prosthodontists and endodontists, in the university clinic setting. *"You've got more than one specialist, whereas in a [non student clinic] environment you only have one person"* (P18). Box 2 summarises participants' comments related to quality of care.

Learning alongside

The strongest theme identified in the data is the concept of patients and students learning alongside each other. Participants explained that during their treatment at the clinic, they felt they were gaining knowledge that would help them to improve the state of their oral health. Participants noted that they learnt about their oral health, treatment options available to them and the details of their final treatment plan from the dental student, while the student was learning from the treatment opportunity the participant presented. Participants emphasised that this concept of learning alongside the student was beneficial to their overall experience at the dental clinic. *"You learn more in a teaching environment …I heard the student discuss it with the dentist so I was a lot more involved and I knew what was going to happen next whereas in a non-teaching environment the job just gets done"* (P16).

In addition to students explaining the treatment process, the interaction between the student and their supervising clinician in which they discussed the treatment process allowed patients to receive a higher level of information about their treatment. *"I enjoyed having the dentists come and discuss what was happening- I had a better understanding of what was happening"* (P32). For a number of participants, there was a sense that they were part of the learning process and that this involvement offered greater autonomy over their treatment options. *"It's discussed and presented to me and it's my option whether to go ahead or not"* (P4). The greater choices of preventive treatment options provided by students were identified by participants as an important contributor to high levels of satisfaction. Participants often identified that they were previously unaware of a preventive approach to dental care. *"Oral hygiene was pointed out better and highlighted the options I had… never really been pointed out these things before"* (P3).

Box 3: Learning

"*I learned a bit- listening to discussion between the teacher and student" "It was really nice because you know about what's going on with you and things that I didn't even know were valid*" (Participant 7)
"*I am[now] aware … that a lot of these teeth can be saved and looked after, I'm more acutely aware that there's a better future for me, but before I was going down the track of neglect*" (Participant 3)
"*They [public clinics] don't actually offer that service, they offer an emergency service, and then they just want to rip your teeth out, they don't want to fix it they just want to pull it out*" (Participant 29)
"*Before it was damage control now we can look at something that's developing*" (Participant 7) *on oral health attitudes*
"*Huge changes, I have decided to give up smoking and that was because of what the student said to me in the chair*" (Participant 22)

Due to the preventive approach learnt throughout their time at the clinic, many participants indicated that they would return for routine treatment in the future, rather than presenting only when in pain. These participants indicated that the concept of preventive dental care was unavailable and unrealistic to them in previous situations. The experience of a university dental clinic encouraged participants to improve their oral health care, with the aim of preventing further dental problems. *"I will be here in 6 month when I get the letter. If we didn't have this I would probably only have gone if something was wrong"* (P5). Additional evidence in support of the learning alongside theme is presented in Box 3.

Discussion

People who are eligible for health care concession cards are at a higher risk of developing dental diseases. This increased risk is due to difficulty in accessing dental treatment outside of the public sector as a result of financial barriers. Furthermore, patients holding concession cards are subject to a restricted level of care as there is an emphasis within the public sector on tooth extraction rather than preventive measures and maintenance care (Brennan, 2009, Allan et al., 2011). In most regions of Australia, waiting lists for routine dental work are in excess of 50 months, with emergency waiting lists averaging three months (Brennan, 2009). The focus on emergency treatment stems from an overburdened system where patient demand is higher than the system's capacity to supply adequate care. This phenomenon was apparent in the findings of this study with participants identifying poor access to comprehensive dental care as a reason for their initial attendance at the university dental clinic. Participants also discussed how these barriers resulted in them feeling helpless to change the deteriorating state of their oral health and how they resigned themselves to enduring the associated discomfort.

It is well established that patients with low levels of satisfaction resulting from negative experiences of dental health services will be less likely to demonstrate a positive attitude to their oral health (AIHW Dental Statistics and Review Unit, 2002). Many participants in this study discussed their own negative experiences of dental treatment prior to attending the university dental clinic. Perceptions stemming from these experiences included a belief that there was a lack of communication between themselves and their dentist. Participants also reported that the time restrictions placed upon public sector dentists because of long waiting lists resulted in short appointments that did not allow for the development of a positive patient relationship. It is accepted within the public sector that it is unlikely for a patient to be attended to by the same dentist across appointments (Mainous et al., 2001). It has been shown in the literature that continuity of care between a patient and provider across a course of treatment is crucial for the development of positive health attitudes (Mainous et al., 2001, Saultz and Lochner, 2005). In this study participants commented positively on their ability to receive ongoing treatment from the same dental student at the university clinic. The resulting relationship established between the two was expressed as an important indicator of quality of care.

Continuity of care between a health care provider and their patient also leads to the development of trust, which is proven to be important for improved treatment outcomes. A dentist-patient relationship founded on trust leads to less conflicts regarding treatment decisions and greater patient participation (Mainous et al., 2001). In relationships without a foundation of trust it can be difficult for a dentist to motivate patients to comply with treatment. The findings of this study reflect findings in the broader literature, as participants reported greater confidence in their students' abilities and proposed treatment as their relationship developed. The learning environment was said to foster this trust, as the student explained all treatment in depth to both their supervisors and participants. Having the supervisors present to ensure the quality and validity of the treatment ensured participants felt at ease within the unique environment. The time taken to explain the range of available treatment options and participants' inclusion in the treatment planning process allowed them to feel that they had some control over their final treatment plan. Many participants expressed that perhaps this was unique within a learning environment as this had not been the case in their past dental experiences. They felt that a better understanding of their dental situation made them more receptive to making long-term oral health changes.

A study of community based learning within the medical education field identified that when being treated by students, patients are more likely to see themselves as the experts of their health (Howe and Anderson, 2003). They feel positive about the contribution their medical condition imparts to the student's learning experience. Factors such as in-depth discussions regarding their treatment options, the learning environment, and the personal satisfaction of assisting in the student's education all contributed to patients having a positive view on participating in medical education (Howe and Anderson, 2003). These findings were mirrored in this study. Participants often expressed that by assuming a more active role in their treatment they learnt more about oral health, whilst their student was able to benefit from their treatment needs. There was a unanimous sense of usefulness as they felt that although they were benefiting from the free treatment at the university, they were also providing valuable learning opportunities to the dental students. The active learning was said to contribute to a greater retention of knowledge and a motivation to improve their future oral health.

As well as improving provider-patient relations, the perceived greater involvement of the participant in their treatment and the continuity of care with the same health care provider is associated with improved delivery of preventive services (Mainous et al., 2001, Saultz and Lochner, 2005). Participants expressed that a combination of the unique learning environment and the relationship established with their student resulted in better retention of preventive dental instruction. Many participants divulged that these instructions had never been offered to them previously, and they were unaware of many basic oral health practices. As a result of this learning encounter, most participants admitted that their attitudes towards their oral health care have changed considerably. Having access to services such as regular examinations and professional cleaning has inspired participants to view preventive measures as necessary to gain control of their dental situation.

Conclusion

University dental clinics provide patients, particularly those from low socio-economic backgrounds, with reduced fee services and shorter waiting times for appointments than is often the case in private and/or public dental clinics. University dental clinics provide additional benefits to patients as identified in the three key themes: aspects of attendance, quality of care and learning alongside. The longer patient appointment times in university dental clinics are particularly beneficial for patients as the learning environment provides extended opportunities for patient education, which in turn motivates patients to improve their oral health care. Gaining an understanding of patients' experiences of university dental clinics provides information to support service provision improvements.

Using qualitative methods for this study allowed the researchers to gain insight into participants' experiences of one Australian university dental clinic. However, by using a prospective method, future studies may allow the ways in which participants' views change over the course of their treatment (and indeed as the clinic evolves) to be recorded. In addition, research into patients' experiences across other health care disciplines at university clinics would be beneficial to examine whether the patients' experiences identified in this study, are unique to dental care.

References

AIHW DENTAL STATISTICS AND REVIEW UNIT 2002. Public perceptions of dentistry: stimulus or barrier to better oral health. Dental statistics and research series no. 25. Cat. no. DE 96. Canberra: AIHW

ALLAN, J., POPE, R., O'MEARA, P., HIGGS, J. & KENT, J. 2011. Serving inland rural communities through university clinics. Health Education Journal 70, 475-480.

ATCHISON, K. & DUBIN, L. 2003. Understanding health behavior and perceptions. Dental Clinics of North America, 47, 21-39.

BIRKS, M. & MILLS, J. 2011. Grounded theory: A practical guide, Los Angeles, Sage.

BRENNAN, D. 2009. Oral health of cardholders attending for dental care in the private and public sectors. Dental statistics and research series no. 50. Cat. no. DEN 196. Canberra: Australian Institute of Health and Welfare (AIHW).

BRENNAN, D., LUZZI, L. & ROBERTS-THOMSON, K. 2008. Dental service patterns among private and public adult patients in Australia. BMC Health Services Research, 8.

HOWE, A. & ANDERSON, J. 2003. Involving patients in medical education. BMJ, 327, 326-328.

MAINOUS, A., BAKER, R., LOVE, M., GRAY, D. & GILL, M. 2001. Continuity of care and trust in one's physician: evidence from primary care in the United States and the United Kingdom. Family Medicine, 33, 22-27.

RICHARDS, L., SYMONS, B., BURROW, D., CHARTIER, A., MISAN, G. & WILKINSON, D. 2002. Undergraduate student experience in dental service delivery in rural South Australia: An analysis of costs and benefits Australian Dental Journal, 47, 254-58.

ROBERTS-THOMSON, K., STEWART, J. & GIANG DO, L. 2011. A longitudinal study of the relative importance of factors related to use of dental services among young adults. Community Dentistry and Oral Epidemiology, 39, 268-275.

SAULTZ, J. & LOCHNER, J. 2005. Interpersonal continuity of care and care outcomes: a critical review. Annals of Family Medicine, 3, 159-166.

TAN, H. 2010. Dental visiting and the use of dental services amongst the Australian older population. Australian Dental Journal, 55, 223-227.