What motivates dentists to work in prisons? A qualitative exploration

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RESEARCH

IN BRIEF

- The adoption of responsibility by NHS Scotland for prisoners' healthcare from the Scottish Prison Service has begun.
- It is important to understand what motivates dentists to work in Scottish prisons so that the future provision of care to prisoners can be optimised.
- Dentists were motivated by the belief that despite the difficulties of the environment, their efforts would improve their prisoner-patients' oral health.

Objective To explore what motivates dentists to work in prisons using Vroom's theoretical model of motivation as an explanatory framework. **Method** In-depth interviews were conducted with ten of the 15 dentists working in Scottish prisons. The focus was to explore their motivations to work in Scottish prisons. The data were analysed using a thematic framework based on the three motivational dimensions of expectancy, instrumentality and valence. **Results** The dentists had the skills to help improve their prisoner-patients' oral health but their efforts were often hindered by institutional rationing and the requirement to fit in with prison routines and procedures (expectancy). Despite these institutional difficulties the dentists experienced work rewards associated with the improvement in the prisoners' oral health (instrumentality). Finally, the dentists experienced a feeling of personal worth and a sense of commitment to providing care to Scottish prisoners (valence). **Conclusions** The dentists' motivation to work in Scottish prisons may be explained by Vroom's Expectancy Theory. The dentists' motivation is characterised by their beliefs that their work will improve clinical outcomes which will be rewarded by the satisfaction experienced when they overcome environmental obstacles and provide oral health care for their prisoner-patients.

INTRODUCTION

The Scottish Prison Service (SPS) is, currently, obligated to provide dental care:

'...to a standard that would normally be available under NHS contract, to a civilian population. To provide either within prison, or without, access to a dental surgery, equipped and decorated to current proper standards.'[1]

Traditionally the SPS has provided primary healthcare services but dental services have been contracted to independent general dental practitioners and/or NHS salaried dental services with prisoners exempt from fees. The process of shifting all healthcare provision, including dentistry, from the SPS to NHS Scotland has begun,[2] which will result in services meeting international quality standards.

In Scotland there are 16 penal institutions including, one for male young offenders, one for women and female young offenders and two open prisons. The prison population in Scotland is one of the highest in Europe and the daily population, which stood around 8,000 in 2009, has been projected to be in the order of 10,000 by 2019.[3,4] In Scotland, as elsewhere, prisoners are drawn from the most deprived areas and tend to have chaotic lifestyles,[5–7] as well as having greater prevalence of physical and mental ill-health compared with the general population.[5,8–10] Almost half of all prisoners are dependent on drugs and/or have a history of drug dependence with the associated morbidity.[5,10] Yet prisoners are not a homogenous group and have differing needs in relation to their age, sex and type of sentence.[5,11–13]

As patients, prisoners pose dental practitioners with a series of challenges that magnify the problems found in general dental practice. A number of recent studies, for instance, have shown that the oral health of the prison population in Scotland is particularly poor, with prisoners having greater numbers of decayed teeth but lower numbers of filled teeth than the non-prison population.[14] Moreover, prisoners have higher experience of dental anxiety and more frequent use of emergency dental services.[15,16]

In addition to the health and oral needs characteristic of prison populations, the prison environment exacerbates the difficulties dentists experience when providing patient care. Security checks and restrictions on prisoners' movement all impact on clinic time. Dental health education, commonly prescribed pain relieving medication and the use of oral health aids are restricted in many prison communities. From a clinical perspective, dentists may not be in a position to respond to requests for treatment or use their clinical acumen as they would in general practice. Thus, providing routine dental care in the prison environment has been reported as difficult and challenging.[17]

Ministering dental care to prisoners, with high levels of unmet need, with

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poorer physical and mental health, and within a security conscious environment, raises the question of why would any dental practitioner wish to work in the prison environment? This question is appropriate and timely with the transition of dental services responsibility from SPS to NHS Scotland.

While there are many theories of motivation in the workplace, these are usually based on the principle of self-interest. However, Vroom's Expectancy Theory[18] provides a construct that encompasses situations where self-interest is not the sole driving force. The main focus of the expectancy theory lies on an individual's set of values. In this approach, motivation is linked to the extent to which actions will satisfy the individual most by leading to the outcome the individual values the most.[19] Consequently, a prison dentist may value a role in addressing social injustice, health inequalities or other systemic issues facing prisoners.

Vroom's explanatory framework suggests that there are three dimensions, each of which influences an individual's level of work-related motivation and each of which has to be acknowledged and assessed.[20] It is the interplay (Fig. 1) between expectancy (ie the expectation that work effort will result in improved work outcomes), instrumentality (ie that improved work outcomes will result in work rewards – such as income) and valence (ie that work rewards will satisfy important held attitudes – such as professional status recognition in the workplace), which determines an individual's level of work-related motivation. It seemed reasonable to suggest that Vroom's Expectancy Theory was an appropriate model to act as a theoretical basis to explore prison dentists' motivation. Therefore, the aim of this qualitative investigation was to explore what motivates dentists to work in prisons using Vroom's theoretical model of motivation as an explanatory framework.

METHODS

Participants

All 15 dentists working and providing care to prisoners in Scottish gaols were approached by letter from the Chair of the Scottish Oral Health Improvement in Prisons Group. This initial approach and a further reminder letter included a research information sheet and an invitation to participate. The participants were asked to return their completed consent forms together with their additional contact details so that the researcher (one of the authors, PAS) could contact them to arrange a suitable time and location for the interview.

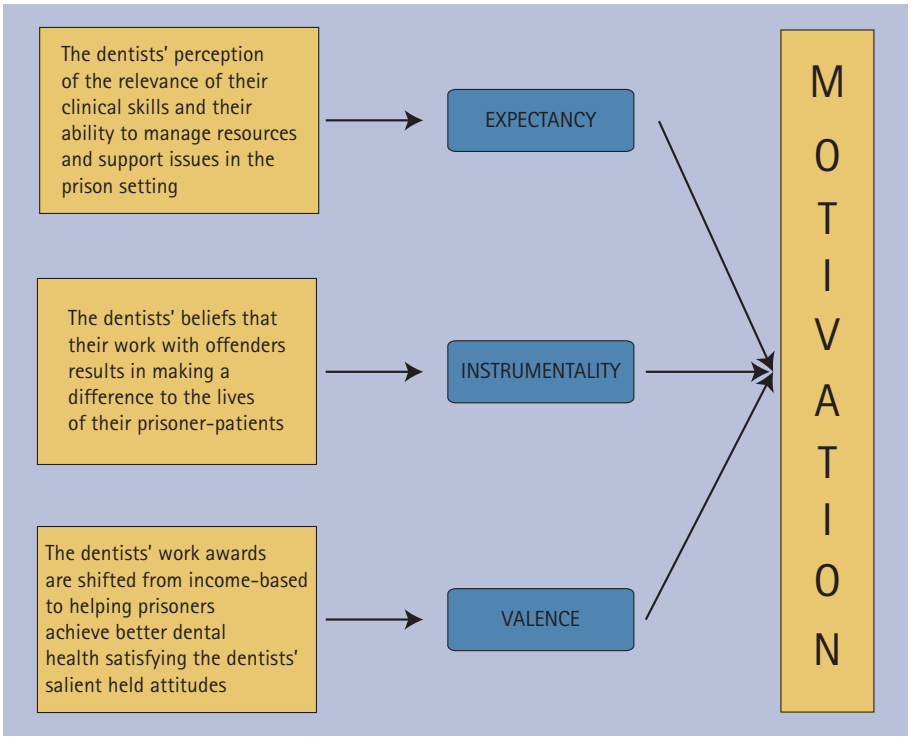

Fig. 1 Findings: expectancy model of prison dentists' motivation

Procedure

The in-depth interviews were all conducted by PAS outside the prison and at a location suggested by the participants. The dentists were reassured that their anonymity would be preserved and no demography information would be reported which might inadvertently identify them. They were encouraged to share their reasons for pursuing prison work, their initial thoughts on their clinical load and their prisoner-patients, and their subsequent work experiences. The interview guide included broad, open-ended questions (for example, 'How did you get involved in prison dentistry?'; 'What were your expectations for this type of work?'). The interview structure was flexible so that participants' responses could be explored and new issues raised by the interviewees followed up. Each interview lasted approximately one hour. All interviews were audio-taped and transcribed by PAS at a later date.

Data analysis

The interviews were transcribed and the data coded and charted by PAS. The transcribed interviews were analysed using the 'framework' method, a matrix-based method of analysis which facilitates rigorous and transparent data management.[21] The method used a thematic framework. The interview data were broken up and examined for the identification of key topic areas. The transcripts were systematically coded using the motivational dimensions from Vroom's Expectancy Theory. Thematic charts (in spreadsheet form) were constructed with column headings for each dimension and a row for each interviewee. Summaries of the relevant sections of transcripts were written into the charts so that each case could be examined across a range of different themes. The charts allowed the original data to be revisited to ensure the analysis reflected the participants' views.[22]

The authors met together once they had trawled through the data to discuss the emerging themes. In instances when discrepancies occurred, discussions took place to reach inter-observational agreement ensuring that the data analysis was valid and reliable.

Ethical considerations

Tayside Research Ethics Service Office reviewed the protocol and under the

terms of the Governance Arrangement for Research Ethics Committees (GAfREC) in the UK, stated that NHS ethics was not required for this study. The protocol was further reviewed by the SPS Ethics Committee and ethical permission was granted on the proviso that no information which may inadvertently identify the dentist would be included in any written documentation.

RESULTS

Ten of the 15 dentists responded to the first invitation to participate. One dentist subsequently withdrew due to difficulties in finding time for an interview. A reminder letter was sent to the remaining five prison dentists inviting participation but with no further responses. To ensure that all types of prisons in the Scottish penal establishment were covered, a final request was made to one dentist who agreed to participate. The group had worked in a range of Scottish gaols and had provided dental treatment for a broad section of prisoners residing in open prison, long-stay, short-sentence, remand, young offenders and women's penal institutions. Numbers, as requested by ethics, are substituted throughout for the dentists' names to preserve anonymity.

The qualitative findings will be presented within Vroom's motivational framework comprising 1) expectancy, 2) instrumentality and 3) valence. The quotations used are illustrative of the overall responses from the dentists.

1) Expectancy

Expectancy is the perception that increased effort – in terms of skills, resources and support – will lead to improved performance and hence increase motivation.[18–20,23] With regard to skills, the dentists had the clinical and behavioural management abilities to fulfil the requirements of the position as prison dentist – after all, they had NHS experience and although the prison environment, as one dentist remarked, was more 'exotic' than routine everyday NHS practice, in essence the clinical and behavioural demands of the client group were familiar and therefore manageable. The following comment is illustrative of the commonly held view among the dentists concerning the similarities with NHS dental practice:

'And it was much more mundane and run of the mill and routine. It wasn't the differences with outside that were striking it was the similarities.' (D1)

Dentists expected time for clinical work to be readily available in the prison environment. In fact dentists were much less in control of clinical time than they had expected. Clinical time, for example, was robbed from the dentists by institutional rationing and prison procedures such as the necessity of prisoners attending for meal times. The prisoners' dental anxiety meant that appointments and treatments were sometimes delayed because they refused to leave their cells or halls and come for treatment. The high experience of illiteracy and poorer levels of educational attainment made communication difficult in already pressured circumstances. This resulted in difficulties prisoners encountered with adhering to dental health advice – *'It annoys me. I know I am not getting through to these guys.'* (D4) – or the prisoners' lack of compliance with post-extraction care instructions, for example to reduce smoking to promote wound healing:

'Some of them in there, you see them a month later and they are not healed. They are prone to postoperative problems.' (D5)

Prison regulations, at either local or national levels, were often not a resource which supported the dentists' efforts to improve the prisoners' self-care. Oral health aids such as floss and mouthwashes were not available for security reasons. The attempt to improve the prisoners' oral health was, therefore, a struggle not assisted by the restricted oral health resources allowed in the prison environment:

'They won't give out floss... makes quite a good garrotte. You can also use it to throw needles from window to window.' (D7)

Support, nonetheless, from the prison administrations existed but varied between prisons. Dentists stated that they appreciated the necessity of developing good relationships with the prison authorities. Therefore, where good routine and rapport had been established between dentist and prison staff, the triaging and escort of prisoners by prison staff to the clinic worked well. The number of prisoners seen in a session was maximised. However, where this was lacking, dentists waited for long periods for prisoners to arrive at their clinic session in the knowledge that waiting lists were backing up. Periods of down-time could be followed by intensely pressured bursts of activity as the dentists tried to catch up:

'It is either feast or famine. You are either mobbed or you can't get prisoners because the officers are short staffed or they are in court or they have been released and you have to wait until they come back.' (D7)

This highlighted a significant difference between working in prison dentistry in comparison to the NHS. Once a good relationship has been established with the prison authorities, prison dentists were in a position to utilise their time very efficiently, barring security issues. At times, however, support was beyond control of prison officials, the establishment or the dental team. When prisoners' behaviour on the halls became unmanageable, dentists were in limbo in a paralysed system:

'If there is some kind of anarchy, everything stops and you just have to back away and wait.' (D9)

Initially, therefore, it appeared that difficulties with support were so great that they acted to disincentivise and reduce effort and performance. However, the dentists did not perceive the problems engendered by lack of support as insurmountable. Solutions were found to the prohibition of dental floss, the triage of prisoners on referral and out of hours care. With solutions found, the dentists spoke of their satisfaction as prisoners expressed their gratitude:

'...an awful lot of them seem very grateful with what you are doing. That is worth an awful lot.' (D3)

In terms of clinical support in the dental surgery, the dentists were well served by their own dental nurses who appeared to welcome the break from dental practice routine and were often able to help communicate oral health advice.

'I think they quite enjoy it. I always do involve the nurse. She is a member of the

team and at times she can relate to the young boy or girl that is in the chair and it changes with various patients. And my dental nurse is younger than me and she says – "Oh come on" – so it is about trying to engage and using all different tools to engage with prisoners.' (D9)

With regard to expectancy, the dentists had the clinical and behavioural management skills to provide a firm basis for their motivation to work in the prison environment. However with regard to resources and support, these were dimensions of expectancy which were riddled with ambiguity. On occasion the resource of time was readily available but on other occasions the prison regime ensured that time was in effect robbed from the dental team. This was reflected in the dimension of support which on the one hand would be excellent but on the other hand hindered the smooth running of the dental surgery. The contribution of the expectancy component to the dentists' prison work-related motivation depends, therefore, on their perceived level of relevant clinical skills and on the extent to which they manage to resolve resource and support difficulties encountered in caring for their prisoner-patients.

2) Instrumentality

The results suggested that despite some institutional difficulties, the dentists could see the link between their prison work and work rewards, not only in their increased income, but also the influence their clinical work had upon their prisoner-patients. For instance dentists could relieve pain, improve oral function and appearance, even if often by denture provision.

'...the prisoners' smiles looked better.' (D5)

The dentists consequently felt that they had been given an opportunity to make a real difference to the lives of their prisoner-patients. As the dentists spoke with satisfaction of doing 'good work' they recognised that their prisoner-patients were a particularly needy group and the dental care they provided could result in tangible improvements:

'I find it quite rewarding. A lot of them are very grateful because they have been in a poor state of health for many years and we improve things for them. I hesitate to say that we have made a huge difference to their life but it has improved a little bit – it hasn't changed their other social and addiction problems but it has improved a little their lot in life. So I find that quite rewarding.' (D6)

The constraints of the prison environment, although sometimes dispiriting, had an exculpatory element. The dentists did what they could for the prisoners within their allocated sessions but the institutional environment placed external limits onto what could be achieved. The primary function of the prison regime was containment, within which the prisoners' oral healthcare played a small part. The dentists needed a pragmatic approach to the clinical practice in gaols.

Working with a disadvantaged client group like prisoners was a worthwhile venture where a tangible difference to these patients' lives could be made. The prisoners' baseline oral health was so poor that it was perhaps easier to see immediate benefits of treatment with these patients than in general dental practise. Although prisoners' disregard for their own oral health appeared almost insurmountable, it was possible to make real improvements with simple treatments even though these might be extractions and dentures. Many prisoner-patients were severely compromised by poor general health and substance abuse and withdrawal from drugs in prison meant awareness of dental problems that had been masked previously. The tangible difference may have simply been pain relief, as described by one dentist who had been asked by a prisoner to 'take the pain from me' (D7). Consequently, links between the dentists' actions and reward of improving prisoners' oral health were evident.

'It is an uphill struggle. The pictures on the back of cigarette packets [government health warnings] *– that's what their mouths are like. It is sad. The troubles they must have gone through to get there – almost full arches with just roots in them. I have seen abscesses and stuff I never saw in practise.'* (D5)

3) Valence

None of the dentists stated that they had a particular vocation for prison work. Their initial motivation was reward-based, that is, increased income: *'just a job'* (D8) that *'made sense financially'* (D7). The value of increased income was reflected in the dentists' keen interest in filling vacant posts, their wish to be engaged in dental practise and in their appreciation that part-time prison work provided additional income. For the most part, being paid a fee-per-session to provide dental care in prisons was welcomed without the administrative woes of general practise:

'I don't think I could go back to that [NHS form filling]. *I found that quite frustrating at times and although money isn't an issue, you do go to work and by the time you pay your nurse, you realise that you have made only £20. You kinda think – Och no!'* (D9)

Thus for dentists familiar with NHS general practise, the manner of remuneration and the focused nature of the role were valued and a welcomed relief from the administrative demands and clinical restrictions of NHS dental regulations.

Gradually, it emerged that the dentists actually valued the contained and packaged nature of the prison environment. They were able to concentrate on clinical work and found a welcome escape from the stresses of general practise:

'And people laugh when I say this, but I find it less stressful than working in practise. I find there are less things to worry about – the patients are brought to you – so I find it much less stressful than the challenges of practise where the phones are going and someone is on the phone to speak to you. You are fairly insulated up there and people know not to bother me.' (D6)

Their reduced experience of stress was reflected in the degree of complexity of their clinical work. Because of the generally poor state of the prisoners' dentition, the dentists mostly practised less complex dental treatments. Although dismayed that the prisoners needed so many extractions and other basic treatments, there was, nonetheless, a sense that the dentists appreciated being able to perform 'small procedures' (D9). Underlying this appreciation was the sense of how much they valued their role as 'expert' in clinical dentistry within the prison environment – *'Now I'm at the prison I feel like I'm am*

an expert again!' (D5) – and how much they valued the stimulation engendered performing emergency extractions in a more 'dangerous environment' (D4) than general practise:

'But in the prison you tend to do less root treatment and less advanced restorative work... as I said before, [it is] *dentistry of a generation ago that we do up there. It is sometimes like a MASH unit, all the teeth out!'* (D4)

Therefore although some of the dentists had agreed to working in the prison environment on a temporary basis, as time moved on, they slowly started to derive a sense of personal value from their work with the prisoners and felt committed to providing a service for them:

'So when they are in there for any length of time, I then get the opportunity to take them through a full course of treatment and then hopefully rectify something and give them some sort of start.' (D2)

It would seem that the dentists valued their position within the prison environment and their ability to care for the oral health needs of their prisoner-patients. While the value of additional income (work rewards) may be conceptualised as the prime motivational factor, with regard to important values, it seemed that significance of additional income gradually became secondary when compared with the sense of self-worth experienced by the dentists when caring for their prisoner-patients. Therefore in terms of Vroom's theoretical framework, the dentists' motivation to work in prisons may be reflected in the construct of 'valence', that is, the satisfaction of important held values derived from providing dental healthcare for their prisoner-patients.

DISCUSSION

This qualitative exploration was conducted to answer the question, 'What motivates dental practitioners to work in prisons?' The impetus to ask and find a response to this question was due, in part, to the reorganisation of dental services in Scottish prisons, with responsibility moving from SPS to NHS Scotland. Therefore, in order to investigate the motivation of dentists to work in prisons, Vroom's Expectancy Theory[18] of motivation was used as the theoretical basis of this qualitative exploration. The three linearly linked motivation dimensions were used to inform the qualitative analysis.

It became apparent that the dentists' motivations to work in prisons could be explained using Vroom's theoretical constructs.[23] In terms of instrumentality and valence, each of these dimensions contributed positively to the dentists' work-related motivation. The contribution of the expectancy dimension is less clear and depended on how the individual dentists were able to deal with prison-related resource and support issues. However, while the dentists' motivation could still be explained by resources and clinical skills (expectancy) as well as the work rewards of additional income (instrumentality), what became apparent was the gradual shift in their important held values regarding their work rewards in the prison environment (valence).

It is proposed that the shift from income-based work rewards to patient-centred work rewards was characteristic of the considerable effort required to cope with the environment of prison work. Despite the dentists' frustration and disappointment at the limits placed on what was achievable, they nevertheless felt satisfied that their important values were being rewarded. Moreover, it seemed that being in a constrained security conscious environment in fact liberated the dentists, not only from the stresses of practise but also from the financial and administrative worries of NHS dentistry.

Within the prison environment, the dentists adopted a practical approach to what was clinically achievable in a setting which was both rewarding and thwarting. The dentists' role in the resolution of this ambiguity resulted in changes in service provision, clinical suggestions being implemented and satisfaction gained by knowing that they had been instrumental in improving the oral health status of the prisoner-patients.

It may be suggested that a limitation of this qualitative exploration was that it only investigated the motivations of general practitioners working in Scottish gaols. However, the data overwhelmingly suggested that those practitioners who opted to care for prisoners' oral health represented a group of dentists with a special interest. Edwards,[24] commenting on the training needs of dentists working in the prison sector, would support this suggestion – that the prison dentist is an individual with special interests and competencies not only to engage with his/her client group but also those of the prison establishment. The requirement for 'experienced and skilled prison dentists' is apparent.

Caring for prisoners' oral health needs was an essential component of this exploration and hence it was essential to understand what factors motivated dental practitioners to work in the prison environment. The findings from this qualitative work would suggest dentists' motivation to work in Scottish prisons may be explained by Vroom's Expectancy Theory and that their motivation is characterised by the beliefs that their work will result in improved clinical outcomes which will be rewarded in terms of the satisfaction experienced when they overcome environmental obstacles and provide dental healthcare for their prisoner-patients.

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