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## Why UK dental education should take a greater interest in the behavioural and social sciences

### Abstract

Recent moves by public health academics and social scientists for increased recognition of the behavioural and social sciences (BeSS) in medical education in the UK have put the role and place of the BeSS in dental education back on the curricular agenda. Behavioural and social sciences have been a component of the UK dental curriculum since 1990 but, to our knowledge; have only been reviewed once in 1999. The aim of this article is to reignite a discussion about the role and place of BeSS in dental education in the UK. It reiterates the benefits of BeSS to dental education and dentistry in general, while remaining cognisant of the implicit and explicit barriers that can conspire to side-line their contribution to dental education. This paper concludes by making renewed calls for more integration of BeSS into the dental undergraduate curriculum as well as sectoral recognition for its contribution to the advancement of dental education and the professional development of dentists.

### Introduction

The purpose of healthcare education and the role of the healthcare professional in 21st century society has changed globally in the last two decades. Current thinking on healthcare professional education prioritizes the need for it to be socially relevant and accountable,<sup>1,2</sup> to foster professional identity formation<sup>3,4</sup> and recognize and apply the impact of digital technology on teaching, learning and professional development<sup>2</sup>; in addition, there is an expectation that it will enable healthcare practitioners to be technically competent. This shift has – in part - been reflected in the dental curriculum in the UK. The GDC's <sup>5</sup> *Preparing for Practice* document offers a blueprint for attaining the key educational objectives recognised for the development of a 'safe beginner'<sup>6</sup>. Here four key domains of competency are established: clinical, communication, professionalism, management and leadership.<sup>5</sup> As a result, the 'soft skills' of dentistry, once under-recognised, are acknowledged as making a valid contribution to professional development of dentists and dentistry.<sup>7</sup> With this comes an implied appreciation of the input that the behavioural and social sciences (BeSS) can make to the design, delivery and assessment of dental education.

Though a place for BeSS is implied within the UK dental curricula, there is evidence that it is not fully embedded in the curriculum. BeSS have been a component of the UK dental curriculum since 1990<sup>8</sup> but there has been little evaluation. One UK survey of the teaching of BeSS in dental schools reported that, while, BeSS are an acknowledged part of the dental curriculum across the 14 schools surveyed, there was huge variation in how it was taught and staffed.<sup>9</sup> A recent survey of the Faculty of General Dental Practice (UK) highlighted three areas where the current UK dental curriculum was deficient. In addition to a call for more clinical time and experience, this survey also expressed a need for more focus on business and management issues and communication skills, including patient management and leadership.<sup>7</sup> Such a finding reflects the fact that many attributes of successful general dental practice- being a reflective healthcare practitioner, having effective teamworking, interprofessional and communication skills- are nurtured and advanced by a knowledge of the BeSS.<sup>10</sup> As a result, it is apt that the BeSS have a place in UK dental education.

Our argument that the BeSS within dentistry needs explicit recognition and promotion begins by outlining the benefits that these topics offer to dental education. We contemplate why BeSS have been side-lined in dental education and identify two issues that could explain this phenomenon: the knowledge base or epistemology of oral health and the existence of a hidden curriculum. We also

outline some opportunities that exist for BeSS topics to contribute more openly to the professional development of dentists.

### **Benefits of BeSS to the dental curriculum**

The BeSS take the individual, their experiences in the world and how these experiences shape psychological and social identity, as its focus of concern. With this starting point, we are offered an alternative viewpoint to oral health, one that is sensitive to the needs of both patients and dental practitioners, but also offers an expansive look at the profession of dentistry, as a profession responding to population level oral health need against the real-world context of workplace relationships, pressing institutional arrangements and the social status of the profession as a whole.<sup>10 11</sup>

Below is list of some other ways in which the BeSS advances the knowledge and skills base of dentistry. This list is not meant to be exhaustive: rather it is indicative of how BeSS can enrich the educational experience and overall professional competencies of aspiring dentists.

- **Concepts/Models of health, illness and behaviour:** concepts of health, illness and disease are social constructs, changing over time and influenced by a range of individual, social, economic, historical and cultural factors.<sup>12 13 14</sup> In this way, BeSS can expose the limits of a biomedical approach to dentistry and its subsequent conceptualisation as a 'drill and fill' discipline. Conceptualisation of oral health as a biopsychosocial phenomenon<sup>14 15 16</sup> facilitates recognition of the social determinants of health<sup>17</sup> and acknowledges dentistry as a 'biobehavioral'<sup>18</sup> discipline.
- **The subjective experience of oral health:** Qualitative research methods permit the documentation of patient experiences of oral health and oral diseases as legitimate studies of enquiry e.g. toothache,<sup>19</sup> TMJ<sup>20</sup> dental anxiety,<sup>21</sup> edentulousness<sup>22</sup> and head and neck cancer<sup>23</sup>.
- **Clinical decision-making processes:** an understanding of the BeSS facilitates an understanding of dental practitioners' everyday experiences and decision-making through the development of reflective practice<sup>24</sup>
- **Knowledge of oral healthcare systems:** The profile of oral health in the UK has changed dramatically over the past 40 years. Huge oral health gains have been made across most of society; dental caries rates have fallen for all age groups and the rate of edentulism among adults is at a record low of 6%.<sup>25</sup> In a society of declining dental need, 21st century dentistry is increasingly concerned with health promotion and disease prevention rather than restoration. As a result, an understanding of how personal, social, political, economic and environmental factors influence oral health provides an important knowledge base for oral health promotion skills and the development of a patient-centred approach (recommendation 1.2.7).<sup>26</sup> BeSS also raise an awareness of the types of inequalities or barriers that can impede access to healthcare and how healthcare systems are organised to deliver care to populations.<sup>12 13 14</sup> In this way they promote evidence-based dentistry and enable dentists as positive agents of change who promote oral health equity within their community.<sup>27 28</sup>
- **Professional development:** BeSS help individual practitioners to develop professional norms, values and behaviours and confer notable benefits to practice by fostering the skills necessary to understand patient behaviours and improve patient adherence and outcomes.<sup>29</sup>

- **Evidence-based dentistry:** The BeSS comprise an eclectic group of disciplines; including psychology, sociology, ethics, economics, and philosophy. Each discipline offers a variety of ways in which data is collected (research methods), interpreted and analysed (theory), as well as to how the enterprise of research itself channels and generates meaning, assumptions and knowledge which convey the topic as a 'holistic' intelligible entity (epistemology).<sup>11 12 30</sup> In dental education, the disciplines of psychology and sociology have made the most inroads in translating their benefit to the field. Psychology offers theoretical tools for recognising the patient as an individual who has cares, concerns, values and beliefs. It enables dental care professionals to understand the need for and develop patient management skills, recognising the impact of dental anxiety and the importance of managing behaviour change.<sup>31</sup> Sociology's alignment with the values of social justice and inclusion favourably lends it to the study of oral health inequalities including why and how oral diseases develop and affect some groups more than others.<sup>32 33</sup>

### Challenges posed by the BeSS in the dental curriculum

Despite the widespread acceptance for the inclusion of the behavioural and social sciences (BeSS) into professional healthcare curricula - nursing,<sup>34 35 36</sup> medicine<sup>37 38 39 40 41</sup> and dentistry,<sup>42</sup> this idea is not without its dissenters.<sup>43 44 45</sup> Leading among these are healthcare professional students who openly question the relevance of the BeSS in their curriculum and struggle with the theoretical nature of these disciplines.<sup>39 46 47 48</sup> BeSS educators in medical and professional education roles also struggle to resolve this 'resonance gap' for students, from a pedagogic and assessment point of view.<sup>49 50 51 52 53</sup>

Dentistry is not exempt for this debate. Many dental undergraduates struggle to see the relevance of the behavioural and social sciences, preferring the technical aspects of dentistry over the social<sup>54</sup> and looking for a more practical application of the social and psychological theories they learn.<sup>9 55</sup> In this paper we assert that the ambivalence of dental students towards the BeSS may be attributed to two factors: the hegemony of the biomedical approach in dental education and the existence of a hidden curriculum.<sup>56 57</sup>

First, the clinical focus of dentistry aligns itself with an epidemiological outlook on health, illness and disease. This is echoed in the prevalence of a biomedical approach in dental education and its emphasis on technical skill and the clinical management of oral diseases.<sup>56</sup> Oral health tends to prioritise 'proximate, individual-level risk factors (and their biological mediators)'(p.887)<sup>58</sup> at the expense of a 'dynamic, interactive, life-course model[s] of disease risk acquisition'( p.887).<sup>58</sup> This concern with that which is 'imminent' coincides with a reductionist outlook to health and health care. Consequently, there is a difficulty with all things inherently 'social' or complex: 'the social context [is seen as] as a problem of confounding to be disentangled in order to achieve objectivity'(p.135).<sup>59</sup> The preference for individual factors alone to explain oral health and inequalities<sup>60</sup> is a shortcoming of dental education because it ignores the inherent complexity of oral health, something that is fundamentally multifactorial and socially determined.<sup>33 59</sup> By aligning itself with an individualist approach to oral health, dental education does not equip dental students with the tools, methods and framework needed for delivering long term and sustainable change in health outcomes.

Second, and relatedly, is the concept of the hidden curriculum. A curriculum is made up of three components: a formal curriculum, informal curriculum and hidden curriculum.<sup>57</sup> Formal curricula outline what is *planned* to be taught(and how it will be taught),<sup>57 61</sup> the informal curriculum refers to what is *actually* taught in the curriculum, including unscripted teaching<sup>57 61</sup> and the hidden

curriculum refers to ‘what is being *experienced* by the students (including information implicitly conveyed by instruction, teachers and peers themselves and the values and moral judgements of the profession)’ (p. 344).<sup>61</sup> These three forms of curriculum are interconnected and all contribute to the overall education and professional socialization of dental students.<sup>57</sup> Nevertheless, research suggests that the ‘hidden curriculum’ may be more influential, impacting directly on how students learn to be professional.<sup>61 62 63</sup> In medical education, the hidden curriculum is associated with the development of ethical thinking, the rise and fall of student empathy and idealism<sup>63 64</sup> but there is less research on the hidden curriculum in dentistry.<sup>65</sup>

Our practical experience of teaching BeSS to dental students has led us to recognise a hidden curriculum about BeSS where students struggle with the content of BeSS.<sup>55</sup> The mix of ‘conceptual or empirical, quantitative or qualitative, and descriptive or analytical- or a combination of all these’<sup>12</sup> offered by BeSS can directly challenge the imminent, reductionist outlook of dental education. In addition, we also found that the attitude of some staff members towards the BeSS (especially those most likely to have been exposed to a traditional dental education) and the place of BeSS teaching in the curriculum can reinforce the perception that BeSS is not relevant to dental education. This echoes Albert, Paradis and Kuper<sup>66</sup> finding that social science staff employed in medical schools struggle for professional acceptance and are challenged by the legitimacy of their non-biomedical/interpretivist perspective by their clinically trained colleagues and faculty members.

### **Opportunities for the future**

The “near-focus” outlook of clinical dentistry and existence of a hidden curriculum about BeSS in dental education is damaging in a number of ways: first, they perpetuate the misconception that dentistry is a purely clinical, biomedical discipline rather than a ‘biopsychosocial’ discipline;<sup>18</sup> second, it can jeopardise the patient focus of dentistry and the need for effective communication skills and patient management skills among undergraduates. More effort needs to be made to celebrate the benefits that BeSS offers to dental professional development and validate its place within the dental curriculum. This will require action at Faculty, national and sectoral level.

Dental schools and Faculty should reflect upon whether or not they perpetuate and legitimate explicit and implicit biases against BeSS. How much time is given over to BeSS teaching in the timetable? How many BeSS staff are employed? Do clinical and BeSS staff have opportunities to learn what each are teaching, finding opportunities for cross-collaboration, knowledge sharing and co-teaching? Such self-reflection will catalyse a bottom-up change in attitude towards BeSS.

The behavioural and social sciences need to be fully integrated into dental curricula rather than being merely an ‘add-on’ to dental school teaching.<sup>65 67</sup> ‘Optimal dental student learning integrates biomedical science and clinical dentistry and provides numerous examples of their application and relation to life and dental practice’ (p.279).<sup>65</sup> A truly integrated curriculum, co-designed and co-taught by clinicians and BeSS staff will promote the perspective that clinical and BeSS knowledge, skills and expertise, although different bodies of knowledge/epistemologies, will complement professional healthcare practice and ensure curricular relevance for dental students.

Finally, at an upstream level, the benefits that BeSS bring to professional and clinical competencies in dentistry need to be more explicitly acknowledged by the General Dental Council and other professional dental professional bodies. Much could be learned from our BeSS colleagues and their recent achievements in UK medical education. Through the establishment of the “UK Public Health Educators in Medical Schools (PHEMS) network<sup>68</sup> and The Behavioural and Social Sciences Teaching

in Medical Education group (BeSST),<sup>69</sup> position documents have been produced and established public health and BeSS curricula in UK medical education.<sup>69-72</sup> BeSS Faculty who work as dental educators should come together and undertake similar work, creating a position paper for how BeSS should be taught and assessed in dental education.

## Conclusions

This article builds on the growing recognition of the benefits of BeSS to clinical education generally and dental education specifically. Study of and engagement with BeSS will deepen dental care professionals' understanding of oral health care, patient management and the intricacies of general dental practice. In this way they can re-conceptualise dental professionalism and dental competencies, acknowledging patient-focus and advocating / facilitating oral health behaviour change, at both an individual and population health level. BeSS also enable student healthcare professionals to become more holistic and patient-centred practitioners.<sup>40</sup> However, dental students are ambivalent, in part because of the focussed clinical outlook of dentistry and also the existence of a hidden curriculum. We offer guidance on how to strengthen the contribution of the BeSS in dental education with the intention of reducing the traditional clinical / non-clinical and biomedical / psychosocial divides that characterise dental education, aiming to forge a middle ground where aspiring dentists can emerge with a rounded and holistic education, ready to meet the oral health demands of the 21<sup>st</sup> century.

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