



## Using arts-based research in applied health care: An example from an evaluation of NHS dental contract reform in Wales

Overs, Eleanor; Woods, Chris; Williams, Lynne; Williams, Sion; Burton, Chris; Jones, Lorelei; Brocklehurst, Paul R

**Journal of Health Services Research and Policy**

DOI:

[10.1177/13558196221137202](https://doi.org/10.1177/13558196221137202)

E-pub ahead of print: 11/11/2022

Peer reviewed version

[Cyswllt i'r cyhoeddiad / Link to publication](#)

*Dyfyniad o'r fersiwn a gyhoeddwyd / Citation for published version (APA):*

Overs, E., Woods, C., Williams, L., Williams, S., Burton, C., Jones, L., & Brocklehurst, P. R. (2022). Using arts-based research in applied health care: An example from an evaluation of NHS dental contract reform in Wales. *Journal of Health Services Research and Policy*. <https://doi.org/10.1177/13558196221137202>

### Hawliau Cyffredinol / General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

## Using arts-based research in applied health care: an example from an evaluation of NHS dental contract reform in Wales

Ellie Overs

Research Officer

School of Medical and Health Sciences

Bangor, UK

Chris Woods

Research Officer

School of Medical and Health Sciences

Bangor, UK

Lorelei Jones

Lecturer in Health Sciences

School of Medical and Health Sciences

Bangor, UK

Lynne Williams

Head of School

School of Medical and Health Sciences

Bangor, UK

Sion Williams

Reader in Health Research

School of Medical and Health Sciences

Bangor, UK

Chris Burton

Professor of

Head of School

School of Allied and Public Health Professions

Canterbury, UK

Paul R Brocklehurst  
NHS Consultant in Dental Public Health  
Public Health Wales  
Cardiff, UK

**Author affiliation:**

School of Medical and Health Sciences, Bangor University, Bangor, LL57 2DG, UK.

**Corresponding author:**

Ellie Overs, School of Medical and Health Sciences, Bangor University, Bangor, LL57 2DG,  
UK. *E-mail: edpfe5@bangor.ac.uk*

## Using arts-based research in applied health care: an example from an evaluation of NHS dental contract reform in Wales

### **Abstract**

**Objective:** Arts-based research (ABR) refers to the use of art in the research process to help generate, interpret and/or communicate knowledge. We used ABR principles to adapt a centre-staging method to complement a more traditional qualitative approach to evaluate participants' views on dental service reform.

**Methods:** We asked five individuals in the dental health sector in the National Health Service in Wales to select objects to depict their views on the current reform process and their ideal reform process. This process took place alongside traditional semi-structured interviews with the participants.

**Results:** There were three marked differences in the centre-staging process as compared to the interviews: (1) there was a greater use of symbolism by the participants, (2) the participants put a greater focus on the process of change, and (3) the participants were more likely to reveal the emotions underlying their assessments of the reform process.

**Conclusions:** The arts-based approach adopted appeared to be highly accessible and has the potential to be used in a wide range of applications.

## Keywords

Arts-based research, centre-staging, dental contract reform

## Introduction

Arts-based research (ABR) refers to the use of any art form at any point in the research process, in order to help generate, interpret and/or communicate knowledge.<sup>1,2</sup> Its overarching purpose is to enhance the understanding of the human condition through additional and alternative processes of inquiry, that complement other forms of analysis and information.<sup>3</sup> ABR has been used to evaluate arts-based programmes in health care settings, but also to represent the illness experiences of people with different health conditions.<sup>4,5</sup> The usual justification for using ABR is ‘to provide rich description, highlight lived experience and meaning, attend to contextual factors and enhance understanding.’<sup>1(p21)</sup> This is similar to the rationale that underpins qualitative research more broadly; however, many authors consider ABR as a method for deepening the level of enquiry, extending what is possible with qualitative methods alone.<sup>1,6</sup> Boydell *et al.* argue that ‘by incorporating art forms in the research process, it is possible to evoke emotional responses and to construct alternative forms of representation that promote dialogue and shared story-telling’.<sup>1(p1)</sup>

Extending this further, Archibald and Gerber suggest that ‘integrating the arts with mixed methods....presents untapped potential for innovative methodological approaches’ and provides a platform ‘to facilitate concept formation, data collection, analysis, and representation’ enabling ‘insights not possible through the use of either approach in isolation’.<sup>7(p256)</sup> Proponents of ABR argue that the approach has the potential to offer a paradigmatic shift in how research is conducted,<sup>8</sup> changing how the researcher ‘engages with, understands, explores, and represents concepts, enabling epistemological and ontological gains of benefit to the health and social sciences’.<sup>9(p1)</sup>

In 2018, the Welsh government sought to improve population oral health by promoting access and increasing the level of prevention offered to National Health Service (NHS) patients in ‘high-street’ NHS dental services.<sup>10</sup> Through a process of contract reform, dental practices with NHS contracts were required to:

- undertake an annual assessment of patients’ risk of developing serious dental problems, and

- encourage the use of ‘skill mix’ – i.e. drawing on the resources of the whole dental team, including practice principals (qualified dentists who own a dental practice),

associate dentists (who are employed by a practice, commonly as independent contractors), dental therapists (who are qualified to perform routine fillings and gum treatment, and who place a greater emphasis on prevention) and practice managers.

In order to evaluate contract reform, researchers at Bangor University were commissioned to undertake a qualitative evaluation. This provided an opportunity to explore the potential of ABR to elicit insights into expressed narratives that may have been less accessible through verbal means alone.<sup>7,9</sup>

The ABR method used in the current study is based on 'centre-staging'. This draws on narrative traditions - storylines, plots and themes - to elicit information from participants.<sup>11</sup> Centre-staging is both a visual and metaphorical concept whereby 'the centre of the stage is where the person locates the main issues/life storylines and then uses the length and breadth of the page to position others/issues/challenges around the centre'.<sup>11(p224)</sup> There are a number of parallels between this process and the critical structure and representation found within fine art.

Centre-staging encourages participants to express their thoughts visually and organise these into thematic clusters, indicating their relative level of importance by positioning these clusters on a board representing the conceptual space under

discussion.<sup>12</sup> At the heart of the centre-staging analytic process is the use of positioning theory, which enables participants to represent their experiences and perspectives in a visual form, reflecting on and representing meaning, significance and inter-relationships.<sup>13,14</sup>

Not only does centre-staging provide an immediate visual narrative, but it can be analysed over time as the centre-stage storyline(s) changes. As a result, this process explores three interrelated questions:

- (1) What is the centre-stage storyline in the representation of the phenomenon under study?
- (2) What is centre stage in that lived experience?
- (3) How does the centre relate to the other elements introduced during the process?

## **Methods**

EJO conducted the centre-staging process directly after a series of qualitative interviews of participants working in the Welsh dental health care sector (Oct 2019 to Jan 2020). Those interviewed were two practice principals (whom we have called A and B, and were both males, aged 35-45 years old), one associate dentist (male, 25-35 years old), one dental therapist (female, 25-35 years old) and one practice



manager (male, 35-45 years old). Participants were from different practices across Wales and were selected on the basis of them expressing an interest in the evaluation process. The centre-staging process was conducted on a one-to-one basis at each practice, after a series of interviews conducted as part of the contract reform evaluation, which was later reported to the funder.

Small miscellaneous objects largely unrelated to dentistry were provided to the participants – e.g. toys, figurines, artefacts and natural forms. These are ‘objets trouvés’ (objects found by an artist and displayed with no, or minimal, alteration as a work of art). The participants were asked to consider their views and experiences of the current reform process, choose a selection of objects from the collection to reflect these views and experiences, and position each on a square board labelled ‘Current Contract Reform’. They were told to place the objects they regarded as most important at the centre of the board. Participants were given an opportunity to replace the objects and rearrange them, so that they were happy with their final selection and position. The arrangement of the objects was then photographed. The participants were asked why they chose each object and what it meant to them. This generated an account of the context and symbolism of the objects and revealed the participants’ reflexive positions. Participants were then given a second board labelled ‘Ideal Contract Reform’ and asked to repeat the exercise, this time considering what

they regarded the ideal reform process should be. The centre-staging process took 45 minutes to complete and were recorded.

Analysis was undertaken by EJO and triangulated through discussion with SW, LJ and PRB.

### Ethics approval

School of Medical and Health Sciences Research Ethics Committee (#2019-16574).

### Results

The participants' arrangements of the objets trouvés are shown in Figures 1 to 5 (Figure 1 and 2 represent practice principal A and B; Figure 3 represents the associate dentist, Figure 4 the dental therapist and Figure 5 the practice manager).



Figure 1. Visualization of contract reform by practice principal A.

The themes identified in the semi-structured interviews were similar to those elicited using the arts-based method. Overall, the interviews highlighted the need to reduce the level of unnecessary clinical activity undertaken within NHS dentistry and participants welcomed the change in focus towards prevention and improving oral health. Equally, the interviews highlighted the importance of clarity in NHS policy in the medium to long-term, with respect to the contractual changes being introduced by the reform programme. This would enable practice owners to plan and manage their risk and provide stability for their businesses. Implementation of dental contract reform was also seen to be contingent on policy-makers addressing the impact of local factors e.g. geographic location, variation in the patient base and the size of the practice. For example, the size of the NHS practice was seen as the single most important factor in facilitating the greater use of the whole dental team, given the need to provide more space for prevention clinics. However, the results of the arts-based method produced three key differences in the type and nature of meaning that was elicited, when compared with the semi-structured interviews alone: greater use of symbolism, greater focus on the process of change, and the revealing of emotion.

### ***Greater use of symbolism***

Overall, a more symbolic account was generated by the arts-based method, highlighting different themes and experiences experienced by the participants in the contract reform process. Some of these differences were between the current and ideal reform process. For instance, as shown in Figure 3, in symbolising the current contract reform, the associate dentist chose a dice to represent uncertainty, a toy soldier to represent the stamina required in what he called 'soldiering on' in his job, and coral to represent the complexity of the balancing act between patient needs, professional aspirations, and the need to earn a living within an evolving contract. Together these elements suggest the associate dentist was feeling highly pressured in the current reform process. By contrast, in representing ideal contract reform, the associate dentist selected the tortoise to indicate his desire to slow down his work processes 'because I'd love more time with [patients]' and a camel to represent independence in his job.

Different participants imbued the same objects with different symbolism. Whereas the associate dentist used the house to signify professional protection (Figure 3), the two practice principals used the house to represent funding issues, reflecting the principals' need to focus on budgetary pressures (Figures 1 and 2).

Sometimes, participants selected the same objects for the current situation and the ideal one. The object could carry the same meaning in the different situations or a different one. For instance, practice principal A used the television and the book to mean better education and protection in both contexts (Figure 1), whereas the associate dentist used keys to represent skills mix in the current reform and to represent financial security in the ideal reform process (Figure 3).



Figure 2. Visualization of contract reform by practice principal B.

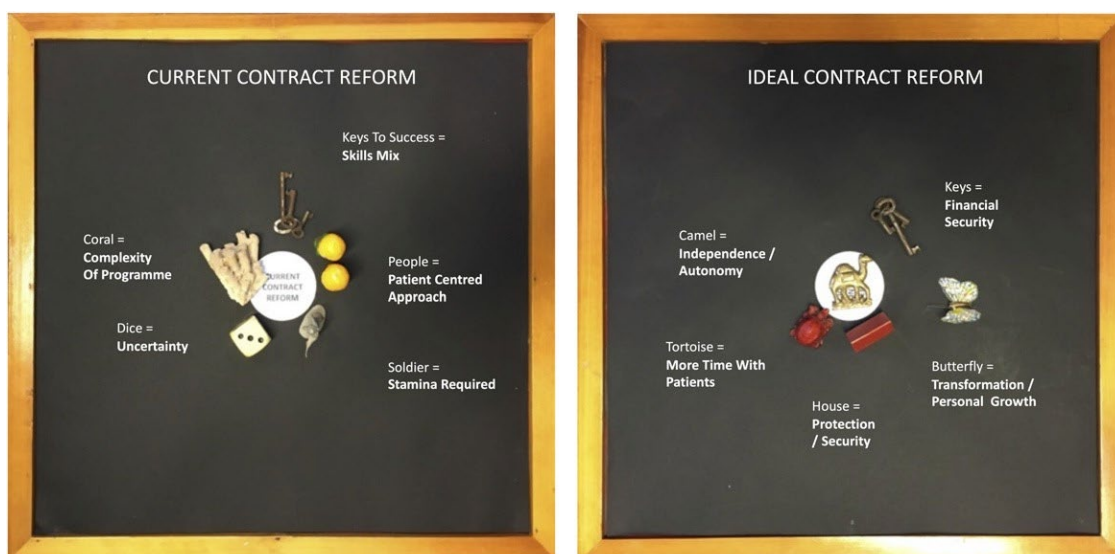


Figure 3. Visualization of contract reform by an associate dentist.

### ***Greater focus on the process of change***

Often, after using some objects to reflect the current situation, participants replaced these to reflect the ideal situation, suggesting a considerable gulf between reality and the participants' ideal state. For instance, the practice manager chose to use entirely different objects to represent the current reform process as against the ideal reform process (Figure 5). The practice manager spoke about the need to drive things forward and chose the car to represent this in his ideal scenario. He observed, 'The car's the same thing, driving things forward. Perhaps we need to drive things forward with that a bit more.' He introduced a television as a symbol for a 'clearer picture of what's going on', a male figure to identify the need for a new associate dentist and a building to reinforce the importance of business security:

The house indicates that I want a secure business and practice at the end of it, and something that works for the business and the practice ultimately, so that we've got longevity and can move forward.

The dental therapist chose the butterfly as a symbol of the opportunity to transform the way dental care professionals were used in her version of ideal contract reform (Figure 4). In placing the butterfly on the board, she said, 'Let's put this like emerging people, to utilise what we're all good at really.' The butterfly was absent in her depiction of her current experience.

Practice principal B used stones to represent obstacles in the current reform process but replaced these with a building to represent funding for structural changes (Figure 2). Likewise, he replaced the figurine included to highlight the need for a new team member with a toy soldier to show solving recruitment issues. Speaking of both replacements, he commented, 'This is my ideal world: I've got a bigger building, more people on board.'

### ***Revealing emotion***

The arts-based method revealed the emotions that drove the participants' views of the reform practice more than did the interviews alone. When discussing the recruitment issues surrounding current contract reform (Figure 2), practice principal B became quite emotional talking of his regrets about moving to North Wales to start his business. He said difficulties in recruiting staff were creating a major obstacle in his ability to meet contractual targets:

Hindsight, I probably wouldn't have opened the practice here...tough area...I'm trying hard, I'm trying hard, I'm not getting supported enough. I don't think there is the support.

Likewise, the arts-based method revealed how vulnerable the associate dentist felt in his work and how this factored into his views about ideal contract reform. He

selected a small model house to represent protection and safety (Figure 3), candidly explaining:

Safety from the institution, sort of thing, because at the moment there's a lot going around about dentists being sued for things...so if you're dishonest then you are really frowned upon, but dishonesty is such a wide thing, everybody's dishonest, aren't they? Everybody is a little bit dishonest in little ways. So, if someone who thinks they're being right and saying, well, you can't have this, it might look dishonest to somebody else and so we need some kind of back-up.



Figure 4. Visualization of contract reform by dental therapist.





Figure 5. Visualization of contract reform by practice manager.

## Discussion

The arts-based method proved useful in the process of eliciting meaning from the different participants. It helped reinforce the findings of the semi-structured interviews, but also provided additional insight given the symbolism that was used, how the process of change was described and how emotions surfaced. The use of the arts-based method extended beyond the descriptive-analytic continuum of thematic analysis and facilitated new insights while maintaining the authentic voice of the participants. The free selection of the objets trouvés (within the bounds of what was provided) enabled participants to imbue the physical objects with a range of different symbolic meanings and helped the researchers to understand how they were related to each other.

Participants became active authors in the emerging narrative and were empowered to position and re-position the elements in the centre-staging exercise as part of a reflexive dialogue with the researcher. They shaped and displayed their perspective on the dental contract reform programme, the focus of control shifting towards co-construction, framing and re-framing meanings as part of visual representations.

In this context, the arts-based method acted as a participatory approach that enabled a process of 'discovery' and 'display' to emerge as part of the research process. The 'discovery' process focused on enabling participants to explore dental contract reform within the visual space of the board, creating an environment for appraisal and reflection on meaning, and operating as a catalyst for knowledge generation. At the same time, the exercise enabled these discoveries to become visible and performed a second catalytic process, that of display.

The exploration of current and ideal reform states allowed the researcher to understand what needed to happen to facilitate change (represented again through the selection and positioning of the objets trouvés). Significantly, participants used objects that were absent in their initial depiction of the current state of the programme to identify this repositioning in a future context. This advantage of ABR has been noted by earlier studies.<sup>15-17</sup>

Equally, the potential of the method used in this study to reveal emotions is noteworthy. Bonanno argues that using the arts 'offers an alternative modality to writing...better suited to capture experiences that are affectively and emotionally charged and, sometimes, resistant to any rationalising efforts'.<sup>18(p44)</sup> Our study appeared to show that the structure of the method created enough space for the elicitation of emotions that might otherwise not have surfaced. As such, it may reflect an approach that disarms traditional rhetorical practices and replaces this use of language with a new, unrehearsed, visual process.<sup>19</sup>

## **Limitations**

The main limitation of this study was the small sample size and the number of dental clinicians within each professional group. However, the clinical findings from the centre-staging process were very similar to those elicited by the qualitative interviews. Equally, the question of representativeness is a moot point in qualitative research, where depth is often given more credence than the breadth of enquiry. In this study, the mode of representation was symbolic and here, there was overlap in the types of symbols that were selected and their interpretation. Another limitation, was that effectively participants had an opportunity to rehearse their narrative in the

qualitative interviews, which were always conducted prior to the centre-staging process.

## **Conclusions**

The use of the arts-based method uncovered a new grammar and new vocabularies in the research process, without the need for the participant to be proficient or experienced in any artistic medium.<sup>20</sup> As such, it has the potential to be adapted to a range of different health care settings. Adult participants can initially feel inhibited by the prospect of arts-based data collection, yet the approach adopted had the advantage of being highly accessible to participants, reducing cognitive barriers to effective participation.

**Declaration of conflicting interests**

The Authors declare that there is no conflict of interest.

**Ethics approval**

School of Medical and Health Sciences Research Ethics Committee (#2019-16574).

**Funding**

The authors disclose receipt of the following financial support for the research, authorship, and/or publication of this article: Welsh Government [C234/2018/2019 – Evaluation of Dental Contract Reform].

## References

1. Boydell KM, Gladstone BM, Volpe T, Allemang B, Stasiulis E. The Production and Dissemination of Knowledge: A Scoping Review of Arts-Based Health Research. *Forum Qualitative Social Research* 2012; 13:1.
2. McNiff S. Art-based research. In: Knowles G and Cole A (eds) *Handbook of the Arts in Qualitative Research. Perspectives, Methodologies, Examples and Issues*. Los Angeles: Sages Publications; 2008, p29-40.
3. Cole A and Knowles G. Arts-informed research. In: Knowles G and Cole A (eds) *Handbook of the Arts in Qualitative Research. Perspectives, Methodologies, Examples and Issues* (pp. 55-70). Los Angeles: Sages Publications; 2008.
4. Wreford G. The state of arts and health in Australia. *Arts & Health: An International Journal for Research, Policy and Practice* 2010;2(1):8-22.
5. Cox SM, Lafrenière D, Brett-McLean P, Collie K, Cooley N, Dunbrack J, Frager G. Tipping the iceberg? The state of arts and health in Canada. *Arts & Health* 2010;2(2):109-124.
6. Jones, K. A biographic researcher in pursuit of an aesthetic: The use of arts-based (re)presentations in 'performative' dissemination of life stories. *Qualitative Sociology Review* 2006;2(1):66-85.

7. Archibald MM, Gerber N. Arts and Mixed Methods Research: An Innovative Methodological Merger. *American Behavioral Scientist*. 2018;62(7):956-977. doi:10.1177/0002764218772672
8. Dyches, Tina Taylor; Cichella, Elizabeth; Olsen, Susanne Frost & Mandleco, Barbara (2004). Snapshots of life: Perspectives of school-aged individuals with developmental disabilities. *Research and Practice for Persons with Severe Disabilities*, 29(3), 172-182.
9. Archibald M, Blines J. Metaphors in the Making: Illuminating the Process of Arts-Based Health Research Through a Case Exemplar Linking Arts-Based, Qualitative and Quantitative Research Data. *International Journal of Qualitative Methods* 2021;20:1–8.
10. Welsh Government. The oral health and dental services response to a healthier Wales our plan for health and social care. Available at: <https://gov.wales/sites/default/files/publications/2019-03/the-oral-health-and-dental-services-response.pdf> [Accessed 24/01/2020]; 2018
11. Williams S, Keady J. Centre stage diagrams: a new method to develop constructivist grounded theory – late-stage Parkinson’s disease as a case exemplar. *Qualitative Research*. 2012;12(2):218-238. doi:10.1177/1468794111422034
12. Plummer K. *Documents of Life 2: An Invitation to a Critical Humanism*. London: Sage; 2001.

13. Harré R, van Langenhove L. Positioning Theory. Oxford, UK: Blackwell Publishers; 1999.
14. Harré R, Moghaddam MF, Pilerton Cairnie T, Rothbart D, Sabat SR. Recent advances in Positioning Theory. *Theory and Psychology* 2009;19(1):5-31.
15. Moreau KA, Eady K, Sikora L, Horsley T. Digital storytelling in health professions education: A systematic review. *BMC Medical Education* (2018);18(1): 208.  
<https://doi.org/10.1186/s12909-018-1320-1>
16. de Jager A, Fogarty A, Tewson A, Lenette C, Boydell KM. Digital storytelling in research: A systematic review. *The Qualitative Report* (2017;22(10):2548–2582.  
<https://nsuworks.nova.edu/tqr/vol22/iss10/3>
17. McGrath L, Mullarkey S, Reavey P. (2020). Building visual worlds: Using maps in qualitative psychological research on affect and emotion. *Qualitative Research in Psychology* (2020);17(1):75-97. <https://doi.org/10.1080/14780887.2019.1577517>
18. Bonanno L. I swear I hated it, and therefore I drew it. *Entanglements* (2019);2(2):39-55.
19. Roger KS, Blomgren C. Elicitation as a mind-set: Why visual data matter? *International Journal of Qualitative Methods* 2019;18:1–9.



20. Tolia-Kelly DP. Participatory art – capturing spatial vocabularies in a collaborative visual methodology with Melanie Carvalho and South Asian women in London, UK. In Kindon S, Pain R. and Kesby M (eds). Participatory action research Approaches and methods: Connecting people, participation and place. Abingdon: Routledge, 2007, p132-140.