

Institution: University of South Wales		
Unit of Assessment: 3 Allied Health Professions, Dentistry, Nursing and Pharmacy		
Title of case study: Addressing long-standing health inequalities in Wales through the Family Resilience Assessment Instrument and Tool (FRAIT)		
Period when the underpinning research was undertaken: 2014-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s)	Role(s) (e.g. job title)	Period(s) employed by submitting HEI
Prof Carolyn Wallace	Professor of Community Health & Care Services	2004 onwards
Prof David Pontin	Aneurin Bevan Chair of Community Health	2011 onwards
Michelle Thomas	Senior Lecturer Specialist Community Public Health Nursing	2011 onwards
Dr Dean Whitcombe	Immersive Learning & Hydra Technologist	2010 onwards
Dr Paul Jarvis	Lecturer	2006 onwards
Kevin McDonald	Senior Lecturer	2000 onwards
Megan Elliott	Research assistant	2018 onwards
Period when the claimed impact occurred: 2017-2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact (indicative maximum 100 words)		
<p>Family resilience is key to supporting pre-school children's health and development. Welsh Government (WG) policies addressed long-term health inequality, but some families were overlooked. In 2014, University of South Wales (USW) researchers developed an evidence-based assessment tool for health visitors (HV) to identify those families. Family Resilience Assessment Instrument and Tool (FRAIT) was incorporated into Welsh Government (2016) 'Healthy Child Wales Programme' and mandated October 2017. FRAIT is used by every Health Visitor (HV) in Wales (n=1086) with every family on their caseload (min. 250 families) on 7 occasions i.e. over 1.8 million family contacts. Families benefit from an evidence-based HV assessment leading to targeted timely interventions.</p>		
2. Underpinning research (indicative maximum 500 words)		
Background		
<p>There has been a different health system in Wales (different from England, Scotland and Northern Ireland) since powers were transferred to the Welsh Senedd (Government) on 1st July 1999. Welsh Government (WG) has developed NHS Wales health policies, organisation and practice that makes Welsh Health Visitor (HV) practice distinct. HVs are NHS Wales employed public health nurses working with all families of children under 5yrs in University Health Boards (UHB).</p>		
<p>WG policy addressing health inequalities aims to build family resilience through early intervention and prevention (Wellbeing of Future Generations Act 2015; Social Services & Wellbeing Act 2014). Evidence-based tools were not available for HVs to assess family resilience. There were concerns that some families were missing support or resources due to a lack of such tool. USW researchers developed an evidence-based Family Resilience Assessment Instrument and Tool (FRAIT) to address this need.</p>		
<p>HVs provide regular and sustained ante-natal/post-natal care for mothers, and children until they start school. HVs promote, protect and safeguard family health in partnership with families, communities and other agencies. Family resilience assessment is essential for HVs to support families make positive lifestyle choices, and improve child health and development. HVs use FRAIT to inform their judgment about interventions with families. We have not found an equivalent HV family resilience tool/scale in the literature; existing materials are associated with family therapy.</p>		
<p>USW researchers and HVs co-productively explored family resilience as understood by HVs [R1] and developed FRAIT (available at www.frait.wales) [R2], which has changed every day HV</p>		

practice [R3]. FRAIT consists of: FRAT (Assessment Tool), FRAI (Assessment Instrument), guidance document, training package and aide memoire (Keep-in-mind). An all-Wales HV FRAIT Community of Practice (COP) was established April 2017 with 20 members. COP enables direct user engagement between the research team, other Welsh universities delivering HV education and Welsh HVs. Each Health Board has at least one FRAIT Champion (n=7). COP feedback is shared in bi-monthly meetings with WG Policy Head for Women and Children's Health, Chief Medical Officer's Office, Chief Nursing Officer's Office, and quarterly reports to Heads of HVs group.

Developing FRAIT 2014-15

Group Concept Mapping (GCM) of family resilience was achieved using Concept Systems Global Max™ online software. This is an online social research platform where participants can brainstorm, organise and rate ideas. Following statistical analysis visual maps are generated e.g. point maps, cluster maps, cluster rating maps. HVs from across Wales (n=62) identified the concept of family resilience. Academics found that family resilience is a multi-dimensional concept comprising of 117 statements organised into 5 clusters: family health, engagement, socio-economic factors, responsive parenting and family support [R1] from which FRAIT 1.1 was developed.

FRAIT 1.1 alpha testing used USW's Hydra Minerva Immersive Simulation Suite (HMISS) to test HV decision making, actions and consequences. This sophisticated piece of technology works by presenting a scenario to the HVs via a mix of video clips, audio clips and written tasks. The system then tests their abilities to make decisions and action, showing the consequences of their decisions. FRAIT face validity was tested with an all-Wales group of 28 HVs. FRAIT 1.2 developed in 2017 [R2].

FRAIT 1.2 beta tested in 2017 with 123 HVs at four NHS University Health Boards (UHB). Each UHB had a FRAIT champion. Anonymised data from 1160 cases was delivered to the academic team, cleaned giving 1009 cases for RASCH and descriptive statistical analysis (PJ, KM) to produce FRAIT 1.3 [R3]. RASCH analysis is a polytomous mathematical model where the aim is to measure a latent trait such as family resilience portrayed by human participants in response to a measurement model such as a Likert scale [R2]. The differences between FRAIT 1.2 and 1.3 were FRAT reduced from 39 to 36 items, revised FRAI wording on family health and family support, guidance document language simplified, additional Keep-in-mind examples. Training modules (university and 'train the trainer') were reduced from 4 to 3, session plans added, plus opportunities for practice delivery, a digital file, and access to training videos [R3,R4]. Face validity tested using HMISS with 9 all-Wales HVs. FRAIT 1.3 delivered to WG/NHS Wales 31/3/2017.

Reviewing FRAIT and Developing FRAIT2 2018-19

FRAIT2 developed following COP feedback, case study/document analysis and WG interim review [R2,R5]. Face validity was tested using HMISS by all-Wales group of 36 HVs in March 2019. Changes included: new FRAT front sheet, minor word change in FRAI 'engagement' scale, training modules and guidance revision. FRAIT2 was distributed to HV services 31/3/2019 and presented at Institute of Health Visiting (IHV) conference 23/4/2019 [R5].

Identifying Wales HV Quality Indicators (QIs)

Following a scoping review (CW, DP & ME) Heads of HVs group asked for QIs to be identified to assess Welsh Health Visiting. We used online GCM (GroupWisdom™ software) and a face-to-face workshop, with an all-Wales HV group (n=43) and identified 118 quality indicator statements. These were organised into five clusters, 'Health Visitor Management', 'Compliance to Healthy Child Wales Programme', 'Child Outcomes', 'Public Health Priorities' and 'Family Resilience'. The top-20 most important QIs with most impact on service delivery were identified, and reported to Heads of HV group/WG 21/1/2020 [R6].

Developing electronic FRAIT (eFRAIT)

USW researchers worked with NHS Wales Informatics Service (NWIS) to create eFRAIT March 2020 using COP feedback on FRAIT2. COVID-19 delayed eFRAIT finalisation; work to be completed January 2021. eFRAIT face validity/usability will be tested using HMISS with 100 HVs when restrictions lift, piloted in Powys Teaching Health Board, reviewed, and distributed to all HVs in Wales via Welsh Community Care Information System (WCCIS).

3. References to the research (indicative maximum of six references)

R1) Wallace C, Dale F, Jones G, O’Kane J, Thomas M, Wilson L, Pontin D. (2018) Developing the health visitor concept of family resilience in Wales using Group Concept Mapping. *Rural and Remote Health*; 18: 4604. <https://doi.org/10.22605/RRH4604>

R2) Pontin D, Thomas M, Jones G, O’Kane J, Wilson L, Dale F, Whitcombe D, Wallace C, 2019. Developing a family resilience assessment tool for health visiting/public health nursing practice using virtual commissioning, high-fidelity simulation and focus groups. *Journal of Child Health Care*. [Doi.org/10.1177/1367493519864743](https://doi.org/10.1177/1367493519864743)

R3) Wallace C, Dale F, Jones G, O’Kane J, Thomas M, Wilson L, Pontin D, (2017) FRAIT (Family Resilience Assessment Instrument and Tool). Phase two: validation of a child and family assessment and instrument for use by health visitors to identify and measure family resilience. Final Report. March 31st 2017. University of South Wales, Abertawe Bro Morgannwg University Health Board, Hywel Dda University Health Board.

R4) Thomas M, Wallace C, Jones G, O’Kane J, Wilson L, Dale F, Pontin D. Under review. Using an integrated competence model to evaluate a health visitor cascade training programme for the Family Resilience Assessment Instrument and Tool (FRAIT). *Nurse Education in Practice*.

R5) Wallace, C., Pontin, D., Thomas, M., (2019) The updated Family Resilience Assessment Instrument & Tool² (Healthy Child Wales), Conference Presentation, Manchester 9.5.2019

R6) Wallace C, Elliott M, Pontin D, 2020. Identifying quality indicators in health visiting using consensus methods. Final report. January 21st 2020. University of South Wales, PRIME Centre Wales.

Grants:

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Awarded to ‘Strengthening health systems to support family resilience in post-pandemic India’. Welsh Government Global Wales Research Mobility 2020, £5185 (CW, DP). Time supported by Prime Centre Wales (CW) and University of South Wales (DP).

Awarded to ‘Community/Family Resilience Solution’ (CRS) bringing together FRAIT and AI (artificial intelligence) maps of local groups, clubs & activities to explore the technical feasibility, projected health impacts and commercial potential, in partnership with Cardiff & Vale University Health Board, DATRIS Ltd and USW (CW). Outputs: locally defined heat maps of family resilience in near real time and then identify which local areas may require priority action or support e.g. interventions which HVs use to support family resilience. CRS commercially aimed at health organisations, local government and third sector. Funder: SBRI (Small Business Research Initiative- GOV.UK) 2020, £46,500.

4. Details of the impact (indicative maximum 750 words)

FRAIT gives HVs an evidence-based tool to support their family resilience assessment, judgement making and family access to services. It is available online in English and Welsh, free to NHS Wales and Welsh HEIs. A business model has been developed to commercialise elsewhere. Since 2017, FRAIT has been disseminated through meetings/presentations to COPs, HEI staff, WG Head of Women and Children’s Health, Chief Medical Office and Chief Nursing

Office, international conferences, publications in peer reviewed journals, training materials and social media.

Impact on Welsh Government policy and practice

The FRAIT team have worked with Welsh Government (WG) since 2014 [S1]. FRAIT was included in WG 'Healthy Child Wales Programme' (HCWP) 2016 and has been mandatory since October 2017 for every child under 5yrs [S2]. The FRAIT team meet bi-monthly with WG members to discuss FRAIT feedback [S1, S3]. FRAIT allows UHBs to meet WG mandated policy requirement to implement HCWP [S2].

Public Health Wales/WG presented FRAIT at European Public Health Conference Milan, 2015, the largest public health event in Europe. Delegates (n=2700) [S1] included researchers, educators, policy makers, community representatives and health managers from 71 countries. USW team have received enquiries from India, Ireland, Northern Ireland, England, Scotland, Spain, USA, Singapore, South Africa and Namibia [S4].

NWIS planned development of eFRAIT for digital HV records and digital data return for service monitoring and planning in March 2020 [S5, S7]. COVID-19 delayed eFRAIT completion and is now planned for completion in January 2021. This will improve data collection and data quality across Wales.

Impact on Health Visitor (HV) practice:

Since 2017 every welsh HV has used FRAIT on seven occasions with every caseload family (min. 250 families/caseload) from pre-birth to 5yrs. *'I find it useful particularly at the 6-8 week review to consider and bring together information gained during the assessment'* - Lynda Robbins, Health Visitor, Cwm Taf University Health Board [S11]. USW research has changed how HVs think about working with families. HVs focus on resilience and how to support/maintain it rather than risk and vulnerability [S8]. All 1086 welsh HVs use FRAIT to support professional judgment when working with families. HV practice has changed by standardising family resilience assessment across Wales [S1, S2, S3, S4, S5, S6], increasing low resilience families' chances of accessing support/resources. HVs can identify unavailable/insufficient services/interventions and lobby relevant agencies/providers [S8]. This has changed the style of daily HV practice and welsh HVs have identified family resilience as a quality indicator [R6].

A retired HV who is now a Patient and Public Involvement (PPI) representative said:

"As a health visitor in the 80s, I was acutely aware of the need for a working tool which identifies the needs and vulnerabilities of children and their families in a manner which was both recognised and comprehended by other service deliverers(...) In HV records it is imperative to be able to provide evidence for the actions/decisions/interventions made at and after an assessment. This is a key part of generic HV practice as it provides proof of the pathway options discussed and shared with the family. Although in the Common Assessment Framework (CAF) it emphasises the fact that we work in partnership with families, it is well recognized that this partnership is an unequal one. Nevertheless, practitioners have a duty of care to work in collaboration with families to endeavour to reach an agreed optimum outcome. It seems, therefore, appropriate to consider that the FRAIT becomes an integral element of the CAF/TAC or whatever each LA (local authority) is calling their comprehensive assessment process".[S11]

HVs work closely with statutory local authority services (e.g. social workers, police, courts) and third sector agencies (e.g. NSPCC Cymru) to safeguard children and family members. FRAIT supports HV professional judgment when safeguarding [S8].

The other FRAIT PPI representative is a young mum and human resources manager. She says the tool helps HVs to not miss anything out and help all families as their children grow up:

"For health visitors I could see this being a tool that would ensure that key areas and questions relating to family health were not missed or overlooked. I think this could be a beneficial tool to communicate with my health visitor if I felt unable to communicate key information verbally"[S11]

Since 2017, over 1086 Welsh HVs and students have had FRAIT training via a cascade train-the-trainer model [S9] (see www.frait.wales for training materials). All Welsh HEIs teaching student HVs have changed their curricula to deliver standardised FRAIT training provided by the FRAIT team [S8, S9, S10]. USW researchers meet quarterly with Welsh HEI HV lecturers to coordinate FRAIT delivery. Due to COVID-19 restrictions, a FRAIT Online Universities Package Quiz/Knowledge Checker was developed in October 2020 for all Welsh HEI student HVs to complete <https://360.articulate.com/review/content/749d94ae-5fbc-4849-b817-d7de628d66bc/review>. An Associate Professor at Swansea University commented 'I think the e-learning FRAIT package has been great for my SCPHN students this year. Unfortunately, the situation with COVID has meant that it has been very difficult for all students to experience how to use the FRAIT in clinical practice. It has also been tricky for practitioners to dedicate time to virtually deliver a 'live' presentation for the students, so the e-learning package has been useful to enable them to learn the 'nuts and bolts' of the tool at their own pace.' [S11]

Since July 2017, the active FRAIT Twitter account (@HVFRAIT), with 80 followers, has recorded engagement ranging from 169-2013 impressions and 20,100 total engagements. FRAIT website www.frait.wales is viewed internationally [S10] and FAQs frequently updated in response to HVs/ CoP questions.

Impact on families

HVs make 1.8 million family contacts every 5 years. Standardising family resilience assessment across Wales and increases low resilience families' chances of accessing support and interventions. Every Family with children age 5 years and under has a personalised child health record (known as 'red book') which includes information on FRAIT [S2, S6]. At COP meetings HVs confirm that FRAIT helps them identify insufficient services in specific locations and work with local communities and agencies to rectify this [S8].

5. Sources to corroborate the impact (indicative maximum of 10 references)

- S1 E-mail correspondence, Welsh Government & Public Health Wales, Oct 2015.
- S2 Welsh Government (2016) Healthy Child Wales Programme, p6 & 16 [online] <https://gov.wales/healthy-child-wales-programme-0>
- S3 Meeting minutes, Chief Nursing Officer meeting re: FRAIT, July 2016.
- S4 E-mail correspondence, WG, Public Health England, Chief Nursing Officer. Resource request for Westminster select committee, Dec 2018.
- S5 E-mail correspondence, all health boards, (Lee Jenkins) WG & NWIS have signed licenses, Mar 2019.
- S6 Photograph, Inclusion of family resilience assessment in the personal child health record (known as 'red book') owned by every family with children age 5 years and under in Wales, March 2019
- S7 E-mail correspondence, Welsh Government, NWIS re: eFRAIT, 2019-20
- S8 Meeting minutes, Community of Practice meetings, November 12th 2018, April 10th 2019, June 4th 2019.
- S9 Table, training numbers from HBs and universities, 2017- 2020
- S10 Two reports, website analytics from the FRAIT website, March 2020
- S11 Four emails, Cwm Taf Morgannwg University Health Board, Swansea University, PPI comments included in Health and Care Research Wales (HCRW) Public involvement achievement awards submitted from PRIME Centre Wales and email from Frances Dale.