Abstract

Background

Healthcare professionals (HCPs) are well-placed to facilitate disclosures by child sexual abuse/exploitation (CSA/E) survivors and promote timely access to specialist support. However, research with HCPs shows that many are reluctant to enquire about abuse and feel underprepared to deal with disclosures. Self-assessment offers a participatory approach that may be employed as part of a suite of educational interventions to increase HCP knowledge and confidence. As a complex intervention involving multiple steps and actors, its effectiveness is contingent on organisational contexts. Realist reviews offer a theory-driven and contextually sensitive approach for understanding the mechanisms of change that generate specific outcomes, enabling reviewers to identify generalisable insights on how and why programmes work.

Methods

We adopted a realist approach to answer the following questions: how are CSA/E self-assessment tools currently being used by HCPs, what does ‘good practice’ in the use of such tools look like, under what circumstances are existing tools effective, and why? Guided by Pawson’s 5 stages, we conducted a realist review of abuse-related self-assessment tools for HCPs. Following preliminary scoping of the literature, we developed an initial programme theory which informed our search strategy and theoretical framework.

Results

25 items met criteria for data extraction, and relevant contexts (C), mechanisms (M) and outcomes (O) were identified and mapped. Eight of these were included in the final synthesis. We identified two key ‘families’ of abuse-related self-assessment for healthcare contexts: PREMIS, a validated survey instrument to assess HCP knowledge, confidence and practice in relation to domestic violence and abuse (DVA); Trauma-informed practice/care (TIP/C) organisational self-assessment protocols. Two revised programme theories were formulated: 1. Individual self-assessment can promote organisational accountability 2. Organisational self-assessment can increase the coherence and sustainability of changes in practice.

Conclusions

Our review contributes to the evidence base on improving healthcare responses to CSA/E survivors, illustrating that self-assessment tools or protocols specifically designed to improve HCP responses to adult survivors of CSA/E remain under-developed and under-studied. Refined programme theories developed during synthesis regarding DVA and TIP/C related tools or protocols suggest areas for CSA/E-specific future research with stakeholders and service users.

Background

HCPs are a trusted “first port of call” for adult CSA/E survivors and should be well placed to facilitate earlier disclosures and access to specialist support. However, reviews suggest HCPs are hesitant to screen for CSA/E, in spite of a robust association with enduring, adverse health impacts and ‘revolving door’ health service use. This pattern of findings points to a clear need for targeted educational interventions to improve HCP knowledge and confidence in relation to CSA/E and reinforce the need for sensitive selective enquiry/screening. Self-assessment (see Box 1 for researchers’ working definition) offers a pragmatic approach to highlighting knowledge deficits, and its participatory/non-confrontational aspects may make it especially suitable for addressing sensitive subject matter, or challenging HCP attitudes or engrained elements of institutional practice. In order to explore how self-assessment tools are currently being used to improve healthcare responses to CSA/E survivors, and under what circumstances and for whom such tools have proven effective, researchers conducted a realist review of the literature. This review represents a significant contribution to the literature on the use of self-assessment tools to improve healthcare responses to CSA/E survivors, underlining the lack of targeted interventions currently available and pointing to fruitful areas for future research with stakeholders (including survivors).

Understanding self-assessment from a realist perspective

Researchers specialising in self-assessment as an ‘andragogical’ or adult learning technique argue that ongoing self-appraisal and reflection is a “defining attribute” of autonomous professional practice (Boud, p. 3). In order to play to their strengths, and remedy their deficits, the competent professional “needs to know what they know with confidence, and similarly know what they don’t know” (ibid). A realist approach was chosen as it would enable researchers to understand the complex internal processes or mechanisms by which a structured self-assessment tool can facilitate this process – and the organisational and social contexts that can enable or disrupt these mechanisms. Meanwhile, the theory-led nature of realist reviews would enable the identification of potentially transferable programme theories and insights for further exploration, even in the absence of an extensive body of literature on CSA/E-specific tools and protocols.

Box 1: Defining self-assessment
Self-assessment is a “defining attribute” of autonomous professional practice \(^9\) (Boud, p. 3) and a regulatory requirement for UK HCPs, who are expected to identify and address their learning needs as part of the annual revalidation process \(^{10, 11}\).

Self-assessment can be broadly defined as “a personal evaluation of one’s professional attributes and abilities against perceived norms” \(^{10}\) (Colthart \textit{et al}, p. 125).

For the purposes of the review, researchers adopted a broad working definition of self-assessment, which encompasses structured (individual and organisational) self-evaluations of:

- Knowledge and/or skills
- Confidence or self-efficacy
- Resources and capacities (including established policies and procedures, institutional environment etc.) in relation to professional norms and patient needs

Given issues around the accuracy of learner self-assessment, researchers would focus on tools or protocols that incorporate pre-post testing, benchmarking or reference to some ‘objective’ external standard rather than those exclusively measuring changes in perceived knowledge, confidence or practice.

**Developing an initial programme theory (IPT)**

Preliminary scoping searches indicated that while there is an extensive body of research on health service responses to CSA/E, and a wealth of research on self-assessment in medical education (see \(^{12, 13, 10, 14, 15}\)), literature at the intersection of these two topics was sparse. When developing our IPT, researchers therefore drew on ‘a priori’ knowledge of UK healthcare contexts, relevant contextual insights from the literature on self-assessment and the (separate) literature on CSA/E, the expertise of our advisory group and middle range theories such as Normalisation Process Theory (NPT).

Researchers hypothesised that, in the right organisational context (C), self-assessment tools (I) highlight HCP knowledge deficits (M1) or deficiencies in practice (M2) leading to the identification of areas for curricular standardisation/improvement (O1) and/or individual learning needs (O2) or areas of sub-optimal practice as an organisation (O3). Possible contextual barriers identified included a culture of risk-aversion and resistance to change and resource-constrained health services, while facilitators included active leadership with an appetite for institutional innovation and improvement, a willingness to redirect staff time and resources or modify policies and procedures in response to self-assessment ‘findings’, a culture of reflexivity and buy-in by staff at all levels. This IPT would provide a theoretical framework for interpreting the literature, and a working hypothesis to test against available evidence.

**Box 2: Realist glossary of terms**

| Context: Context describes those features of an environment or situation that are relevant to the operation of programme mechanisms, including economic, technological, interpersonal and social factors. Contexts “both enable and constrain” programme theories leading to divergent outcomes \(^{16}\) (Pawson & Tilley, p. 8) |
| --- |
| Mechanism: A term used to “describe what it is about programmes and interventions that bring about any effects” \(^{16}\) (Pawson & Tilley, p. 6). Mechanisms are distinct from the intervention being studied; they are the underlying processes set into motion by an intervention which give rise to changes. |
| Outcome: Outcomes in a realist sense refer to both the “intended and unintended consequences of programmes, resulting from the activation of different mechanisms in different contexts” \(^{16}\) (Pawson & Tilley, p. 8). The same programme can result in very different outcome-patterns depending on the context in which it is enacted. |
| Context-Mechanism-Outcome configuration (CMOc): Realist reviews are centrally concerned with theory development, testing and refinement. Context-Mechanism-Outcome configurations are theoretical “models indicating how programmes activate mechanisms amongst whom and in what conditions” \(^{16}\) (Pawson & Tilley, p. 9) |
| Demi-Regularities: Demi-regularities are defined as “prominent recurrent patterns of contexts and outcomes” that emerge during data extraction and synthesis (Wong et al, p. 9) \(^{17}\) |
| Middle Range Theory (MRT): Middle range theories act as a “recyclable conceptual platform” \(^{18}\) (Pawson, p. 94), enabling researchers to connect emerging, localised hypotheses about a programme to established knowledge and existing theoretical frameworks operating at a higher level of abstraction. |

**Methods**

Researchers conducted a realist review of the literature on the use of CSA/E-relevant self-assessment tools in healthcare contexts. Following quality standards for realist reviews, the focusing of the research questions was undertaken iteratively. The protocol \(^{19}\) (Adisa & Allen, 2019) initially framed nine questions for investigation; after preliminary scoping, and discussion of emerging findings, researchers refined these questions to focus on exploring how such tools are currently being used, the contexts in which they are effective, and the mechanisms by which they achieve observed outcomes. We set out to develop, test and refine a programme theory that would enable us to map what ‘good practice’ in the implementation of these tools could look like.

Our research protocol \(^{19}\) and initial inclusion criteria and search strategy (see Inclusion Criteria and Search Strategy) outline our choice of approach and methodology in more detail. The review process broadly adhered to Pawson’s five stages, including initial scoping and theory development, evidence searching, study selection and appraisal, data extraction, and evidence synthesis and analysis. This was an iterative and non-linear process, rather than a sequential set of steps.

**Scoping and theory development**
Preliminary searches were conducted in early February 2020 to assess the depth of the evidence base and investigate the efficacy/accuracy of keywords. Exploratory searches identified potentially relevant articles, reviews or reports, which were used to ‘reverse engineer’ further search terms likely to generate relevant and novel results. These early searches informed theory development.

**Evidence searching**

From February-March 2020, researchers conducted searches via ProQuest and the institutional database for scholarly/peer reviewed articles and eBooks. Grey literature searches were conducted via the NICE health and social care evidence and WHO IRIS online repositories. Researchers individually searched the electronic archives of 13 specialist journals: *Advances in Medical Education; Annals of Behavioral Medicine; British Journal of General Practice; Child Abuse Review; Child Abuse and Neglect; Community Practitioner: the Community Practitioner and Health Visitor Journal; European Journal of Psychotraumatology; InnovAiT: Education and Innovation for General Practice; Journal of Child Sexual Abuse; Journal of Dental Education; Journal of Investigative Medicine; Journal of Paramedic Practice; Primary Health Care Research and Development.*

The research team imported 59 searches to Covidence, a web-based systematic review platform, comprising 599 unique search items. 352 items were excluded during title and abstract screening. Key search terms and phrases included ‘intervention’ terms (“self-assessment”, “self-evaluation”, “audit tool”, “training”, “evaluation”) ‘setting’ terms (“health professional”, “health”, “healthcare”, “medicine”, “medic*”, “physician”, “clinical practice”, “medical education”) and ‘subject’ terms (“child abuse”, “child sexual abuse”, “child sexual exploitation”, “domestic violence”, “sexual violence”, “intimate partner violence”, “domestic abuse”, “trauma-informed”). See PRISMA-P+ checklist and flowchart below for further details regarding the screening and selection process.

**Inclusion Criteria**

- Literature discussing the use of CSA self-assessment tools for HCPs (including relevant non-academic research such as grey literature and practitioner testimony)
- Literature discussing the use of DVA self-assessment tools for HCPs (as above)
- Literature discussing the use of SV self-assessment tools for HCPs (as above)

**Exclusion Criteria**

- Literature does not include discussion of CSA, DVA and/or SV self-assessment tools for HCPs
- Literature does not include discussion of CSA, DVA and/or SVA self-assessment tools for HCPs
- Abstract (or article/report summary, for non-academic literature) not available in English
- Item published prior to 2000

These inclusion and exclusion criteria were agreed in consultation with our multidisciplinary advisory group and were chosen to afford a reasonable degree of ‘sensitivity’ – erring on the side of inclusion, rather than selectivity – while imposing pragmatic boundaries due to the dynamic nature of the review and size of the research team. Realist reviews do not aspire to give an exhaustive account of the evidence; the process is iterative and purposive, ending once theoretical saturation has been achieved and IPT has been tested and revised.

While the review was inspired by findings specifically in relation to CSA/E, in consultation with our advisory group we decided from the outset that DVA- and SV-related HCP self-assessment tools would also be relevant for inclusion. Both retrospective and longitudinal studies demonstrate a correlation between childhood experiences of sexual and/or physical abuse and subsequent victimisation by an intimate partner, with a particularly strong association for CSA/E: “some have argued that sexual victimization during childhood is among the strongest predictors of continued victimization in adolescence and young adulthood” (Bames et al., p. 413).

As the review progressed, and the gaps and emphases of the existing literature became more apparent, these criteria were further refined. Following consultation with advisory group members, it was agreed that CSE represents a subset of CSA rather than a distinct phenomenon, and inclusion criteria were modified accordingly to incorporate relevant literature. Subsequently, given researchers’ focus on the long-term impacts of CSA/E, and the costs associated with delayed disclosure and help-seeking, it was decided to exclude further papers that focus on child CSA/E survivors, which are, appropriately, predominantly oriented towards ‘acute’ primary and secondary prevention and safeguarding rather than managing ‘chronic’ health impacts.

**Assessing rigour and relevance**

In contrast to the standards for assessing methodological rigour employed in systematic reviews or meta-analyses, where randomised control trials represent the peak of the hierarchy of evidence, realist reviews operate according to a distinct set of rules, “which are about drawing warranteable inferences from the data presented” (Pawson, p. 140). For the realist reviewer, the primary question for quality appraisal is "can this particular study (or fragment thereof) help, and is it of sufficient quality to help in respect of clarifying the particular explanatory challenge that the synthesis has reached?" (Pawson, p. 135). That is, realist quality appraisals do not necessarily track or correspond to judgements of methodological rigour per se – which is why realist reviews are free to assimilate diverse sources of insight including grey literature, opinion pieces, stakeholder commentary etc.

When conducting realist reviews, implementation contexts are central to understanding programme theories, barriers and facilitators. Rather than operating according to a binary logic, where items were classified as simply relevant or irrelevant for inclusion, each item that one or more of the research team identified
as a potentially useful source of contextual information was reviewed in full, with salient data extracted and emerging insights, contradictions and reflections documented in the shared logbook.

**Study selection and appraisal**

To promote transparency and auditability, researchers documented their discussions, activities and decision-making during the appraisal process using a jointly accessible logbook. Each of the 599 items imported to Covidence was reviewed and ‘voted’ on (on Covidence) by two reviewers: OA and KA reviewed the majority of items, with assistance from KT. For each item where there were ambiguities or different assessments of relevance (e.g. if one reviewer voted ‘Maybe’ while the other voted ‘No’), items were reviewed in full and agreed jointly. Given the dearth of studies corresponding to our original research focus, the items reviewed during this stage would provide valuable background context. Emerging theories were discussed in scheduled meetings and via the shared workbook.

Following title and abstract screening, researchers reviewed 247 items in full, of which 25 were taken to be sufficiently relevant for ‘full’ data extraction. Eight of these were included in the final synthesis.

**Data Extraction**

During both the full text review and data extraction stages, researchers recorded the title, authors, date, location, methods, sample population, tool or protocol being assessed, findings, and implications or recommendations for practice of each item, using a custom data extraction template (available on request). Each of these 25 items were subsequently assessed for theory-building relevance i.e. detailed contextual and implementation data. All items which included in-depth discussion of the implementation of self-assessment tools as an intervention were analysed for CMOc. Not all outputs which proceeded to this stage of the review yielded sufficiently rich, detailed information to derive insights about CMO configurations.

Realist reviews are an increasingly popular methodology for investigating complex health and medical interventions, offering a theory-driven and contextually sensitive approach. While there are published reporting standards which "provide valuable guiding principles for the inclusion of key elements [...] the underlying logic of the approach makes it antithetical to standardized, predetermined or prescriptive application", and supports customisation in response to relevant gaps or "idiosyncrasies" in the evidence base (Jagosh et al. p. 2). One methodologically-salient barrier which emerged during full text review and data extraction was a lack of ‘thick’ descriptive information about programme processes and implementation contexts in reviewed studies and articles. In order to draw inferences about underlying causal mechanisms and arrive at a deeper explanatory analysis – rather than merely reporting on the notional or idealised programme theories advanced by programme implementers – we therefore employed supplementary realist tools such as interpretative “abduction” (Jagosh et al. p. 6).

**Results**

Following ‘advanced’ data extraction including appraisal of relevance for theory-building/refinement and CMOc extraction, researchers found two distinct families or clusters of CSA/E-relevant self-assessment tools in use in healthcare contexts: five studies used a DVA-related self-assessment survey for use by individual HCPs, while three articles employed organisational-level self-assessments to facilitate trauma-informed practice/care (TIP/C). The DVA-related tool was implemented in a UK (n = 2) and US (n = 3) healthcare context, while the TIP/C protocol/workshops were used in US (n = 2) and Australian (n = 1) mental and behavioural health programmes and family services (Insert Data Extraction Table 1).
| Item reviewed | Self-assessment tool used | Location | Methodology | Sample/population discussed | Findings |
|---------------|---------------------------|----------|-------------|-----------------------------|----------|
| Barnett Brown, V., Harris, M. & Fallot, R. (2013).  
Moving toward Trauma-Informed Practice in Addiction Treatment: A Collaborative Model of Agency Assessment.  
*Journal of psychoactive drugs*, 45 (5): 386 | Trauma-informed self-assessment and walk through protocol (Fallot & Harris) | US | Qualitative – theoretical article with case studies | Addiction programmes in the US | Between individual substanţial disorders, diagnoses, trauma and co-occurring behaviour issues, coercion, gender, technology, male, night trauma, etc. |
| Beckett, P., Holmes, D., Phipps, M., Patton, D. & Molloy, L. (2017).  
Trauma-Informed Care and Practice: Practice Improvement Strategies in an Inpatient Mental Health Ward. *Journal of Psychosocial Nursing*, 55 (10). pp. 34–38 | Trauma-informed self-assessment protocol with trauma workshops | Australia | Qualitative – case study of applying self-assessment protocol in mental health ward | 27 bed acute admissions ward, Melbourne hospital | Implement self-assessment protocol results in change over years: seclusion of women of war, pharmaceuticals, etc. |
| Brady, M. (2018).  
UK Paramedics Confidence in Identifying Child Sexual Abuse: A Mixed-Methods Investigation.  
*Journal of Child Sexual Abuse* 27 (4): pp. 439–458 | Online survey – Likert five-point attitudinal scale to measure confidence in ability to recognise, CSA, CSE and FGM | UK | Mixed methods – survey and focus groups | 276 UK paramedics | Current brief, competency other than paramedic low-separability ratio to recognise FGM, CSA/E prevalence certain |
| Item reviewed                                                                 | Self-assessment tool used                                                                 | Location             | Methodology                     | Sample/population discussed                                                                 | Findings |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------|---------------------------------|---------------------------------------------------------------------------------------------|----------|
| Colthart, I., Bagnall, G., Evans, A., Allbutt, H., Haig, A., Illing, J. & McKinstry, B. (2008). | Systematic review of self-assessment as a tool for identifying learner needs, and improving learning activity, clinical practice and patient outcomes | Global – included studies from US, UK, Canada, Australia, Sweden and elsewhere | Systematic review | 32 papers met inclusion criteria, including methodological quality requirements | No high provisio of learning needs. Only two studies considered self-improvement practice outcomes. |
| The effectiveness of self-assessment on the identification of learner needs, learner activity, and impact on clinical practice: BEME Guide no. 10. |                                                                                          |                      |                                 |                                                                                              |          |
| Medical Teacher 30 (2). pp. 124–145                                           |                                                                                          |                      |                                 |                                                                                              |          |
| Connor, P., Nouer, S., Mackey, S., Banet, M. & Tipton, N. (2011).             | PREMIS self-assessment tool                                                               | US                   | Quantitative – survey           | 318 dental, medicine, nursing and social work students at the University of Tennessee       | 70% of respondents preparing for intimate partner violence (IPV) related to their practice. |
| Dental Students and Intimate Partner Violence: Measuring Knowledge and Experience to Institute Curricular Change. Journal of Dental Education; 75 (8). |                                                                                          |                      |                                 |                                                                                              |          |
| pp. 1010–1019                                                                 |                                                                                          |                      |                                 |                                                                                              |          |
| Item reviewed                                                                 | Self-assessment tool used                                                                 | Location                        | Methodology           | Sample/population discussed | Findings |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------|------------------------|-----------------------------|----------|
| 13 Davis, D., Mazmanian, P., Fordis, M, Van Harrison, R., Thorpe, K. & Perrier, L. (2006). Accuracy of Physician Self-assessment Compared with Observed Measures of Competence: A Systematic Review. JAMA. 296(9). pp. 1094-1102. https://doi.org/10.1001/jama.296.9.1094 | Systematic review of evidence on accuracy of individual self-assessments relative to peer/‘objective’ external measures | Studies from US, UK, Canada, Australia and New Zealand | Systematic review | 17 studies relevant for inclusion | Positive between expert observer measures and objective measures define areas of failure. |
| DeCorby-Watson, K., Mensah, G., Bergeron, K., Abdi, S., Rempel, B. & Manson, H. (2018). Effectiveness of capacity building interventions relevant to public health practice: a systematic review. BMC public health 18 (1). pp. 684 – 15 | Systematic review of capacity building interventions | Global – English language literature published 2005 onwards | Systematic review | 14 studies examining six intervention types: 1) Internet-based instruction 2) Training and workshops 3) Technical assistance 4) Education using self-directed learning 5) Communities of practice 6) Multi-strategy interventions | Review outcomes of capacity building interventions but no clear evidence of superiority of one type over another. |
| Item reviewed | Self-assessment tool used | Location | Methodology | Sample/population discussed | Findings |
|---------------|---------------------------|----------|-------------|-----------------------------|----------|
| 15 Fetters, M. Motohara, S., Ivey, L., Narumoto, K., Sano, K., Terada, M., Tsuda, T. & Inoue, M. (2017). Utility of self-competency ratings during residency training in family medicine education-emerging countries: findings from Japan. *Asia Pacific Family Medicine*, 16 (1). [https://doi.org/10.1186/s12930-016-0031-1](https://doi.org/10.1186/s12930-016-0031-1) | 142 item online survey measuring self-perceived competency in different subject areas within family medicine/general practice | Japan | Quantitative – cross-sectional longitudinal study over a four-year period | 20 medical residents (11 women, nine men) | Score annua to grai compex incres 65% F showes wth tf incres health and ge |
| 28 Fraser, J., Griffin, , Barto, B. Lo, C., Wenz-Gross, M., Spinazzola, J., Bodian, R., Nisenbaum, J. & Bartlett, J. (2014). Implementation of a workforce initiative to build trauma-informed child welfare practice and services: Findings from the Massachusetts Child Trauma Project. *Children and Youth Services Review* 44. pp. 233–242 | Trauma-informed self-assessment protocol, with dissemination of trauma training and trauma-informed leadership teams | US | Qualitative | 192 clinicians and 1096 child welfare workers from 20 MH and social care agencies across Massachusetts | Follow dissem traum: forma Inform Teams: we: e eviden treatm short c goals |
| 27 Horwood, J., Morden, A., Bailey, J., Pathak, N. & Feder, G. (2018). Assessing for domestic violence in sexual health environments: a qualitative study. *Sexually transmitted infections* 94 (2). pp. 88–92 | Evaluation of a pilot training intervention to promote DVA screening – Identification and Referral to Improve Safety (IRIS) | UK | Qualitative – semi-structured interviews | 17 sexual health clinic staff and DVA advocate workers | Most r espor wome an aut electric record positin. Staff tme c added burder eviden enquir prioriti about alcoc were a victim |
| 27 Horwood, J., Morden, A., Bailey, J., Pathak, N. & Feder, G. (2018). Assessing for domestic violence in sexual health environments: a qualitative study. *Sexually transmitted infections* 94 (2). pp. 88–92 | Evaluation of a pilot training intervention to promote DVA screening – Identification and Referral to Improve Safety (IRIS) | UK | Qualitative – semi-structured interviews | 17 sexual health clinic staff and DVA advocate workers | Most resport wome an aut electric record position. Staff time added burden evidence inquiry priorities about alcohol were a victim |
| Jones, K. M. (2016). *Obstetrician/gynaecologists’ readiness to manage intimate partner violence*. PhD thesis in Clinical Psychology. American University Washington DC | PREMIS self-assessment tool | US | Quantitative | 194 members of the American College of Obstetricians and Gynaecologists, 981 patients | * Only survey report screen for IPV. * Nonwere s likely t than V * First were s likely t than n |
| Item reviewed                                                                 | Self-assessment tool used                                      | Location  | Methodology                                                                 | Sample/population discussed                                                                 | Findings                                                                 |
|------------------------------------------------------------------------------|----------------------------------------------------------------|-----------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Moskovic, C.S., Guiton, G., Chirra, A., Núñez, A., Bigby, J., Stahl, C., Robertson, C., Thul, E., Miller, E., Sims, A., Sachs, C., & Pregler, J. (2008). Impact of Participation in a Community-Based Intimate Partner Violence Prevention Program on Medical Students: A Multi-Centre Study. *Journal of General Internal Medicine*, 23. pp. 1043–1047 | Pre-post survey to test actual knowledge, attitudes and confidence | US        | Quantitative/randomised controlled trial. Students randomly assigned to didactic training with or without participation in community-based programme | 117 students attending four medical schools                                 | Both condition knowledge greater confidence participation completing training, assists community programmes               |
| Murray, H. (2017). Evaluation of a Trauma-Focused CBT Training Programme for IAPT services. *Behavioural and Cognitive Psychotherapy*, 45 (5). pp. 467–482 | Pre-post training self-rated PTSD competencies on an adapted/bespoke assessment tool | UK        | Mixed methods – actual knowledge, self-reported competencies, training feedback, supervisor feedback, patient outcomes | 20 therapists from 10 IAPT services                                                   | The training programme successful trauma knowledge outcomes found highly                                          |
| 14 Pierides, K., Duggan, P., Chur-Hansen, A. and Gilson, A. (2013). Medical student self-reported confidence in obstetrics and gynaecology: development of a core clinical competencies document. *BMC Medical Education*, 13 | Core competencies list – administered as part of an 81-item survey | Australia | Mixed methods – a candidate list of core competencies was reviewed at two focus groups, then administered as online survey | 172 medical students                                                          | Confidence taking ratio preser sexua abuse                                                                       |
| Ramsay, J., Rutterford, C., Gregory, A., Dunne, D., Eldridge, S., Sharp, D. and Feder, G. (2012). Domestic violence: knowledge, attitudes, and clinical practice of selected UK primary healthcare clinicians. *British Journal of General Practice*. https://doi.org/10.3399/bjgp12X654623 | PREMIS self-assessment tool                                     | UK        | Quantitative – prospective observational cohort study                      | 272 clinicians from 48 general practices in Hackney and Bristol (59% response rate)      | Findings most only training knowledge frequent enquiry preser indica experience                                      |
| Ritchie, M., Nelson, K., Wills, R. & Jones, L. (2014). Development of an Audit Tool to Evaluate the Documentation of Partner Abuse Assessments within a Provincial Emergency Department: An Exploratory Study. *Journal of Family Violence* 29 (2): pp. 215–221 | Clinical audit tool                                             | New Zealand | Mixed methods – five stage development process, including systematic review, selecting review criteria, piloting and testing for inter-rater reliability | Documentation of women aged 16 + attending hospital emergency department for IPV | Trends stages developed that training introduced yielded improvement                                             |
| Ritchie, M., Nelson, K., Wills, R. & Jones, L. (2013). Does Training and Documentation Improve Emergency Department Assessments of Domestic Violence Victims? *Journal of Family Violence*, 28 (5): pp. 471–477 | Clinical audit tool                                             | New Zealand | Quantitative – 80 randomly selected clinical records from a nine-year period scored using Family Violence Identification Form (FVIF) and scores entered into the Statistical Package of Social Science Research (v18) | 80 clinical records of women aged 16 + attending emergency department for IPV | Trends stages developed that training introduced yielded improvement                                             |
| Item reviewed                                                                 | Self-assessment tool used | Location | Methodology                                                                 | Sample/population discussed | Findings                                                                 |
|------------------------------------------------------------------------------|---------------------------|----------|----------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------|
| 22 Short, L., Alpert, E., Harri, J. & Surprenant, Z. (2006). A tool for measuring physician readiness to manage intimate partner violence. | PREMIS self-assessment tool | US       | Quantitative – psychometric survey instrument development, testing and refinement | 166 practicing physicians – subscribers to a continuing medical education website | The first tool developed was internally reliable. Cronbach’s alpha > 0.65. The findings were consistent with the predicted outcomes. |
| Sohal, A., Pathak, N., Blake, S., Apea, V., Berry, J., Bailey, J., Griffiths, C. and Feder, G. (2018). Improving the healthcare response to domestic violence and abuse in sexual health clinics: feasibility study of a training, support and referral intervention. | Pre-post training self-assessment surveys (for Site 2 only, as low response rate at Site 1) | UK       | Adaptive mixed methods pilot study – intervention comprised multidisciplinary training sessions and electronic prompts, | Two women’s walk in sexual health clinics | Self-rationing capabilities, consensus development, referral pathways. |
| Songer, T., Stephens-Stidham, S., Peek-Asa, C., Bou-Saada, I., Hunter, W., Lindemer, K. & Runyan, C. (2009). Prevention and Preparedness: Core Competencies for Injury and Violence Prevention. American Journal of Public Health 99 (4): pp. 600–606. | Core competencies framework | US       | Qualitative – consulted expert advisory panel and public to arrive at consensus on essential and desirable competencies for public health professionals working in violence and injury prevention | 52-person expert panel, public comment from 32 relevant agencies | Core components include: * Definition of injury, * Social problem, * Concepts and theory, * Prevention and intervention, * Evaluation of effectiveness, * Building capacity, * Stimulating advocacy and education, * Main competencies. |
| Trevillion, K., Agnew-Davies, R. and Howard, L. M. (2011). Domestic violence: responding to the needs of patients. Nursing Standard 25 (26): pp. 48–56; quiz 58, 60 | Self-assessment questionnaire | UK       | NA – article offering overview of DVA facts and questionnaire | Guidance for nurses | NA |
| Item reviewed | Self-assessment tool used | Location | Methodology | Sample/population discussed | Findings |
|---------------|--------------------------|----------|-------------|-----------------------------|----------|
| Williamson, E., Jones, S., Ferrari, G., Debonaire, T., Feder, G. and Hester, M. (2015). Health professionals responding to men for safety (HERMES): feasibility of a general practice training intervention to improve the response to male patients who have experienced or perpetrated domestic violence and abuse. *Primary Health Care Research Development*. 16 (3): pp. 281–288 | PREMIS self-assessment tool | UK | Mixed methods – pre-post completion of PREMIS, disclosures documented in clinical records, semi-structured telephone interviews | 25 survey participants, 7 interviewees. All physicians from 4 general practices in Bristol | Post-tti shows self-re response and improvement in response |
| World Health Organisation (2019). *Caring for women subjected to violence: a WHO curriculum for training health-care providers*. Available at: [https://www.who.int/reproductivehealth/publications/caring-for-women-subject-to-violence/en/](https://www.who.int/reproductivehealth/publications/caring-for-women-subject-to-violence/en/) | Training curriculum, including pre- and post-training self-assessment tools | Global, with a particular focus on low- and middle-income countries | NA – 13 training sessions to deliver over two and a half days | NA – the training curriculum is primarily designed for primary healthcare providers | NA |
| Royal College of Nursing (2017). National Curriculum and Competency Framework Emergency Nursing (Level 1) | Core competency framework | UK | NA | NA | NA |
| Royal College of Nursing (2017). National Curriculum and Competency Framework Emergency Nursing (Level 2) | Core competency framework | UK | NA | NA | NA |
Guided by our IPT, developer/implementers’ stated programme theories, salient contextual information gleaned from all full-text reviewed articles and middle range theories (NPT), researchers isolated three central functions or uses of self-assessment in healthcare contexts:

- ‘Primary’ self-assessment, used to highlight areas where knowledge or confidence is lacking, or where HCPs hold inaccurate or harmful beliefs and attitudes (Type 1)
- Organisational self-assessment protocols used to identify areas for institutional transformation (Type 2)
- ‘Secondary’ or indicative self-assessment/pre-post testing used to measure the efficacy of an educational intervention (Type 3)

Revised PT1: Highlighting individual knowledge and confidence deficits to create collective accountability

Insert Table 2
By using PREMIS to diagnose individual learners’ knowledge and/or perceived competence deficits, (I) implementers are able to use collated findings to self-directed learning by individuals (one of its suggested functions by developers Short et al. 2006). This indicates, identified CMOcs for the uses of PREMIS both support and enrich this model, contributing a more nuanced or dimensional understanding of how the proximal outcome (evidencing gaps or changes in knowledge, confidence and practice) can, in the right context, become a mechanism triggering meaningful organisational changes. Notably, none of the reviewed studies discussed PREMIS in the context of self-directed learning by individuals (one of its suggested functions by developers Short et al. 2006), so this does not feature in our revised PT.

By using PREMIS to diagnose individual learners’ knowledge and/or perceived competence deficits, (I) implementers are able to use collated findings to identify and document areas where curricular improvement or standardisation is needed (M1) and create an evidence trail of the need for curricular change (M2) which, in a receptive organisational context (C), incentivises changes to the curriculum (O). M2, the implicit intervening mechanism, provides the missing link to support the evidence-based training model (O). The curriculum change is disseminated as a pre-post intervention measure (I). Authors found that a sizeable number (ranging from half to nearly two-thirds) of our dental students who were preparing to enter the profession as practicing dentists are still receiving no education about the highly prevalent health problem of IPV.

Although the trend in higher education continues to support providing students with more and better training in IPV, our findings reflect research which affirms that there remains a pronounced deficit in IPV education across disciplines and particularly in the field of dentistry. At the institutional level, we also plan to incorporate student survey responses as part of a revision of the familyviolence curriculum (O).

“Such training produces better outcomes than the ‘standard’ (M2). This adds to the evidence base supporting wider, evidence-based DVA training (O).”

Our results indicate that screening rates have not improved in over 15 years despite public health and medical recommendations and empirical evidence demonstrating that screening is an effective way to identify IPV and intervene to support survivors of abuse (…). Considering that routine IPV screening rates are still low among physicians, but satisfaction among patients who are screened is high (98% satisfied) (…), it seems imperative to address physician reported barriers to IPV screening, such as discomfort in asking about IPV (…), and emphasize patient satisfaction with routine IPV screening” (pp. 46–47). The survey functioned as a partial test/demonstration to areas for curricular standardisation and improvement (M2). The authors advocate for improvement in this area, generating external pressure for improved DVA training for general practice staff (O).

When administered 6 months post-training the modified PREMIS survey demonstrated an improvement in perceived ability to manage situations where patients either disclosed, or the clinicians suspected, exposure to DVA. There were statistically significant improvements in perceived competence in responding to heterosexual, gay, or bisexual male patients” (p. 284).

“This study highlights the persistent poor preparation of general practices for responding to the needs of women experiencing domestic violence. There is an urgent need for more comprehensive training at undergraduate and postgraduate levels and explicit referral pathways to specialist domestic violence services for women disclosing abuse.” (p. 654)

Disclosure of Abuse among Gynaecologists: A Training Intervention William et al. (2015) A modified version of PREMIS, (edited down to the sections on clinical practice and behaviours) was disseminated as a pre-post intervention measure (I). 14 practitioners who attended training on supporting male patients experiencing or perpetrating DVA completed the survey twice - once before training and again at 6 months after the training. Participants were drawn from four general practice surgeries in Bristol (C). The survey functioned as a partial test/demonstration of the effectiveness of the training (in addition to external measures such as increased identification of DVA) by tracking changes in perceived preparedness and competence (M1), providing researchers with supportive evidence that the training offers better outcomes than the ‘standard’ (M2). This adds to the evidence base supporting wider, evidence-based DVA training (O).

“Authors found that a sizeable number (ranging from half to nearly two-thirds) of our dental students who were preparing to enter the profession as practicing dentists are still receiving no education about the highly prevalent health problem of IPV.”

Although the trend in higher education continues to support providing students with more and better training in IPV, our findings reflect research which affirms that there remains a pronounced deficit in IPV education across disciplines and particularly in the field of dentistry. At the institutional level, we also plan to incorporate student survey responses as part of a revision of the family violence curriculum (O).

“Our results indicate that screening rates have not improved in over 15 years despite public health and medical recommendations and empirical evidence demonstrating that screening is an effective way to identify IPV and intervene to support survivors of abuse (…). Considering that routine IPV screening rates are still low among physicians, but satisfaction among patients who are screened is high (98% satisfied) (…), it seems imperative to address physician reported barriers to IPV screening, such as discomfort in asking about IPV (…), and emphasize patient satisfaction with routine IPV screening” (pp. 46–47).

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step between pinpointing areas of ignorance and actually taking action to address these. By providing tangible evidence of deficiencies in current practice, PREMIS can act as an accountability mechanism by generating (internal or external) pressure, spotlighting areas where change is needed and providing the impetus to take action. Conversely, by demonstrating collective gains in knowledge and confidence following training (M1) PREMIS supports the efficacy of the educational intervention being trialled (M2) which, in the right context (C), incentivises wider adoption of evidence-based training strategies and phasing out of ineffective educational practices (O).

**Revised PT2:**

**Insert Table 3**

| Reference | Intervention and CMOc | Illustrative quote(s) with page number |
|-----------|-----------------------|----------------------------------------|
| Barnett Brown et al (2013) | Research and clinical evidence shows that the majority of patients in substance use programmes have histories of trauma and abuse, which can lead to negative treatment outcomes/poor retention (C). Falleti & Harris’s self-assessment and walkthrough protocol (2011) (I) enables service providers to assess how trauma-informed their practice is at baseline, map where progress is needed and evaluate change following training (M1), helping service providers to understand how they can improve their programme for traumatised service users (M2). This understanding of current practice failings, and their therapeutic significance, motivates evidence-based changes (O). | “Each of these [assessment] elements are utilized as a pre-post measure in the assessment; i.e., what does the agency look like at baseline and what does it look like after training and consultation has taken place […] The walk-through is a mutual data-gathering strategy that does not feel judgmental” (p. 388). |
| Beckett et al (2017) | The Clinical Nurse Consultant and Senior Clinical Psychologist at a 27-bed acute mental health ward in Metropolitan Sydney, Australia (C) facilitated a series of TIC/P workshops to embed the core values identified by Falleti & Harris (2011): choice, collaboration, trustworthiness, safety and empowerment (I). Through these workshops, staff collaboratively identified six key practice areas that were insufficiently trauma informed (M). Working groups were mobilised to address these, effecting positive changes in practice for traumatised patients (O). | “The integration of strengths-based philosophies and practice was reflected in a reduction in the use of clinical jargon and pejorative descriptions of consumers (e.g., chronic schizophrenic) and efforts to focus on consumer strengths and resources during clinical discussions and handover. Greater awareness of childhood and adult adversity encouraged greater understanding, compassion, and respect for consumers” (p. 36). |
| Fraser et al (2014) | The Massachusetts Department for Children and Families launched a state wide initiative to build capacity for TIP/C and trauma-specific services, including the formation of trauma-informed leadership teams (TILTs) (C). TILTs performed an initial self-assessment to identify issues with current practice and provide metrics for capturing change (M). This led to improvements in practice (O). | “By the end of the initial implementation year (September 2013), the majority of TILTs in the Northern and Western regions had completed their self-assessments and were implementing trauma informed innovations to address issues identified through the assessment process” (p. 238). |

Our review yielded fewer relevant articles on TIP/C organisational self-assessments, and, in contrast to our review’s focus on primary care and generalist services the implementation contexts featured in these studies were settings more traditionally associated with trauma: child welfare and adult behavioural and mental health services (see Table 3). It is therefore possible that some identified causal mechanisms and barriers will not be directly transferable. However, there were significant similarities between contextual pressures observed in the study sites and those operating in primary healthcare settings, for example, time and resource constraints, service demands, staff turnover and burnout.

NPT is a middle range theory sometimes used during intervention development, helping designers to anticipate and avoid “translational gaps” and enhance the potential for normalisation, or embedding within routine practice – for example, understanding which aspects of a complex intervention may have low coherence for implementors and working to make these aspects more meaningful and salient for them24 (Murray et al, p. 2). By offering a more collaborative approach to identifying knowledge gaps and shortcomings in current practice, we hypothesised that self-assessment may promote positive behavioural change by increasing coherence and supporting sense-making.

Drawing on our understanding of the contextual barriers present across primary and specialist healthcare contexts, implementers’ own account of programme mechanisms, and NPT, we formulated a second revised PT:

Participatory self-assessment approaches (I) enable healthcare service providers to view their practice through a ‘trauma lens’ and understand where - and why - changes are needed (M1). The non-judgemental and immersive nature of the approach helps staff to engage in the sense-making work necessary for change to become successfully normalised or embedded in routine practice, increasing its coherence and sustainability24 (M2). In a supportive organisational context with dedicated time and resources for training and reflective practice (C), this promotes lasting changes to practice, achieving better outcomes for patients (O).

**Discussion**

Realist reviews highlight the importance of context and offer a more pragmatic approach to synthesising evidence25. While the review has taken a rigorous and transparent approach, there are inevitably trade-offs due to time constraints and the need to boundary the enquiry. For example, while the purposeful focus on adult survivors and healthcare settings was designed to give researchers a richer understanding of the contextual pressures that shape implementation and to exclude literature which focuses on primary or secondary prevention/safeguarding, it may also have led to potentially useful information being excluded – for example, evidence from social care settings or in relation to children and young people. This is an issue that almost all realist reviews encounter26.
Secondly, while extensive efforts were made to identify all potentially relevant literature, researchers encountered a dearth of articles specifically in relation to CSA/E. In addition to this, the majority of items which were judged to be relevant for inclusion lacked the kind of rich, detailed information about implementation contexts that would allow for a more robust mapping of CMOcs – identified programme theories may therefore represent a more ‘idealised’ and provisional account in need of further interrogation and refinement.

However, this dearth of evidence represents a significant finding or ‘answer’ of sorts, underlining a critical lacuna in the literature and a potential gap in medical curricula/CPD. Researchers’ initial research questions emerged in consultation with practitioners/advocates for CSA/E survivors, and from prior research articulating adult survivors’ unmet needs in relation to healthcare. While it is not a forgone conclusion that dedicated self-assessment tools or protocols are needed as part of an adequate healthcare response to adult CSA/E survivors (as opposed to employing TIP/C or other umbrella approaches), it is a question that merits further exploration, ideally as part of a participatory research programme with HCPs, advocates and survivors.

**Conclusion**

This realist review was designed to investigate the role of CSA/E and DVA self-assessment tools in improving healthcare responses to survivors, asking ‘Which self-assessment tools and protocols are currently in use?’, ‘Does the available literature on these tools/protocols yield transferable theories regarding how, for whom and under what circumstances such tools/protocols are effective?’, and exploring what ‘good practice’ in the use of such tools entails.

Available evidence suggests that individual self-assessment tools such as PREMIS are commonly used to document knowledge and confidence deficits, track progress over time and demonstrate differences between groups. Notably, there was limited evidence regarding the use of PREMIS for one of its specified purposes: supporting self-directed learning by sensitising HCPs to the issue and alerting them to gaps in their present knowledge. Instead, researchers discerned an implicit, intervening mechanism mediating changes: promoting accountability by highlighting areas where the current curriculum/training strategy is lacking. Conversely, our revised PT for the organisational self-assessments reviewed suggests that these may fulfil a sensitising – and sense-making – role for staff, allowing changes in practice to become normalised.

Interestingly, we found limited evidence on self-assessments as an intervention *per se*; in each of the eight articles/studies included in our final synthesis these were implemented as part of wider educational efforts, or in order to highlight educational/practice deficiencies. This finding may reflect the wider literature on self-assessment, which suggests that self-assessments are more accurate when they incorporate detailed guidance and external benchmarks. Accordingly, self-assessment may be more likely to yield positive behavioural/practice outcomes when scaffolded by complementary educational strategies such as didactic or skills-based training.

Contextual barriers identified during full text review and data extraction included constrained time and resources for training, and staff burnout. To a certain extent, sustainability is contingent on “interventions being congruent with existing policy-driven demands placed on clinicians” (Horwood *et al*., p. 91). Similarly, as research with clinicians has demonstrated that they “infrequently enquire about DVA, typically citing discomfort in raising the issue” (Dowrick *et al*., p. 2), interventions designed to promote ‘trauma work’, even if only in the form of facilitating disclosures and making referrals, will need to anticipate and negotiate this resistance – for example by incorporating time and resources for debriefing and reflective practice.

Our findings suggest that self-assessment tools could potentially play a role in improving health service responses to CSA/E survivors and that further research is warranted. Available evidence indicates that ‘good practice’ in the use of self-assessment tools and protocols involves external guidance and benchmarking, complementary educational strategies and an organisational context whose leadership is responsive to feedback and willing to invest the time and resources necessary to surmount common contextual barriers such as high staff turnover and burnout.

While it is plausible that the identified mechanisms are transferable, none of the tools identified via the review were developed specifically in relation to CSA/E. This point is important as the review was not able to ascertain whether the differences between CSA/E and DVA will mean that the DVA-focused tools like PREMIS will be easily transferable. Given the reported difficulties in encouraging physician enquiry about DVA, in part due to its sensitive nature as a subject, it is likely that developing an analogous tool for assessing CSA/E knowledge, attitudes, beliefs and behaviours could present additional challenges. Future research could aim to explore the need for CSA/E-specific tools, develop and test an accessible self-assessment tool with HCPs and service users, and to identify the extent to which the explanatory model is supported in practice and achieves impacts across all the necessary domains.

**Abbreviations**

HCP
Healthcare professional
CSA/E
Child sexual abuse/exploitation
CMOc
Context-mechanism-outcome configuration
DVA
Domestic violence and abuse
TIP/C
Trauma-informed practice/care
IPT
Initial programme theory
Declarations

Ethics approval and consent to participate
Not applicable

Consent for publication
Not applicable

Availability of data and materials
The datasets generated and analysed during the review process are available from the corresponding author on reasonable request.

Competing interests
The authors declare that they have no competing interests.

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Authors’ contributions
OA originated the idea for the research in consultation with stakeholders, and is the review guarantor. OA and KA devised the research protocol. OA, KA and KT undertook data extraction and analysis. OA and KA developed models and wrote the manuscript with input by KT. All authors read and approved the final manuscript.

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