Foundations
What Works Centre for Children & Families

DEVELOPING OUTCOME MEASURES: DOMESTIC ABUSE CORE OUTCOME SET

Delivery organisations	University of Sussex
Principal investigator	Dr Emma Howarth
Protocol author(s)	Dr Claire Powell, Elizabeth Dunk, Dr Emma Howarth, Dr Jenna Harewell, Dr Lazaros Gonidis, Shivi Bains
Age or status of participants	Participants for work package 1 are all 15+ years and will either be a survivor of domestic abuse, a professional working in the domestic abuse sector or an academic. Participants for work package 2 are all 11-18 years and have lived experience of domestic abuse.
Output	To further develop the domestic abuse core outcome set. By ensuring all remaining constructs are well defined and to provide recommendations on outcome measure for each.
Contextual factors	Please note this protocol was written prior to the 2024 UK General Election. Stages 1 and 2 have been reversed due to inactivity as result of the pre-election period.
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Glossary

Acronym	Definition
CADA	Children affected by domestic abuse fund
CFA	Confirmatory Factor Analysis
COS	Core outcome set
COSMIN	Consensus-based Standards for the selection of health Measurement Instruments
DVA	Domestic violence and abuse
EFA	Exploratory Factor Analysis
ICC	Intraclass Correlation Coefficient
JLA	James Lind Alliance
LEAG	Lived experience advisory groups
OMI	Outcome measurement instruments
RAP	Rapid assessment procedure
RoB	Risk of Bias checklist
SWEMWS	Short Warwick-Edinburgh Mental Wellbeing Scale
WEMWS	Warwick-Edinburgh Mental Wellbeing Scale

Summary

This protocol document seeks to provide an overview of the research which Foundations has funded University of Sussex to complete.

This research aims to build on previous research conducted to develop a domestic violence and abuse core outcome set (DVA-COS). This work is divided into two Work Packages: 1. Identify outcome measures (OM) for three of the five outcome domains, and 2. Validate the outcome measure previously identified for use to measure two outcome domains (the short Warwick-Edinburgh Mental Wellbeing Scale).

This document provides background and rationale for this work, before introducing Work Packages 1 and 2. For each work package this protocol will outline the design, method, sample, and planned analysis to achieve the research's aim. Additionally, this protocol will outline all ethical considerations and risks associated with this research as well as methods to mitigate against these.

Contents

Background and problem statement

It is widely recognised that domestic violence or abuse is common and can have long term health and wellbeing consequences for children (Evans, Davies & DiLillo, 2008). To address this, a range of targeted interventions for children and their families affected by domestic violence or abuse have been developed and are delivered in the UK and abroad (Howarth et al, 2016; Barlow, Schrader-McMillan & Bowen, 2023; Romano et al., 2021). However, high-quality evidence for the effectiveness of these interventions is limited (Howarth et al, 2016; Barlow, Schrader-McMillan & Bowen, 2023).

This is not simply a problem stemming from a lack of research focus, but also from the inability to efficiently synthesise existing evidence owing to inconsistent outcome reporting and the wide range of measures used. In other words, it is unclear which programmes are most effective because evaluations vary widely in both what and how they measure. The outcomes measured to demonstrate a programme's effectiveness, such as 'feelings of self-esteem' or 'knowledge of safety strategies,' differ across programmes. To compare programmes effectively, we need to measure some of the same outcomes in the same way.

Over two years, we developed a 'core outcome set' (COS) —a small number of outcomes that researchers, practitioners, service providers, commissioners, policymakers, service users and survivors of domestic abuse agree are the most important to measure (Williamson et al., 2012; Williamson et al. 2017). While these are not the only outcomes that could be measured, having a core set allows for comparison across programmes. This core set will help service commissioners identify the best programmes to fund and help survivors understand the possible benefits of one programme over another.

Once a core outcome set was established, we needed to agree on how to measure these outcomes consistently. For example, if measuring 'emotional well-being' across several programmes, using different questionnaires would still prevent meaningful comparisons. This inconsistency leads to wasted research and evaluation efforts.

This protocol outlines our plan to agree on measurement tools for the core outcome set. We will search academic literature for potential questionnaires or measurement tools and consult experts. We will then conduct a consensus process, involving workshops with researchers, practitioners, and domestic abuse survivors to discuss and eliminate inappropriate measurement tools. The final set of tools will be decided in a workshop with around 30 participants through structured discussion and voting. We will also collect feedback on the tools to consider adaptations for domestic abuse programmes or individuals with additional needs.

Previous work

The lead researcher and colleagues at University College London (UCL) have already completed significant work to identify and evaluate measures that align with outcomes included in the domestic violence and abuse core outcome set (DVA-COS).

- In 2019, we commenced a study funded by the NIHR via the Children and Families Policy Research Unit at University College London. For this we adapted core outcome

methodology to develop a COS for use in evaluating targeted psychosocial interventions aimed at improving outcomes for children exposed to domestic violence or abuse.

  - Following a two-year consensus process involving over 300 survivors of domestic violence or abuse, practitioners, and researchers Powell et al, 2023; Powell et al., 2022; Howarth et al. 2021; Powell et al., 2023). We identified five outcomes: 1) child emotional health and wellbeing; 2) feelings of safety; 3) caregiver emotional health and wellbeing; 4) family relationships; 5) freedom to go about daily life. The outcome set represents a minimum measurement standard for quantitative evaluation of child focussed domestic violence or abuse interventions.
  - In 2021 we were commissioned by the Home Office to conduct a rapid review of measurement tools mapping to the COS that are used in practice settings (Powell et al., 2023; Clark et al., 2023). This study identified 55 unique tools in use that mapped against at least one of the five outcomes comprising the COS. These tools were appraised for quality, usability, and feasibility by researchers, practitioners and survivors. A consensus process resulted in the recommendation of the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWS) (Stewart-Brown et al., 2009) and the Warwick-Edinburgh Mental Wellbeing Scale (WEMWS) (Tennant et al., 2007) to measure child and adult wellbeing respectively. The methods developed for this work (building on standard guidance for outcome selection) and the selection of wellbeing measures for adults and children feed into Work Packages 1 and 2 respectively.

- A recent and ongoing programme of Home Office funding for services for children affected by domestic abuse (CADA) stipulated that programmes would only be considered eligible for funding if they were: 1) able to map how interventions might facilitate change in each of the five outcomes included in the DVA-COS; and 2) agreed to evaluation of impact against the five outcomes. This evaluation is being led by University of Central Lancashire, with this study's lead researcher as a senior member of the research team. To support the evaluation of these services against the COS, a rapid Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) process was undertaken to identify acceptable tools to assess the three outcomes (family relationships, safety, freedom to go about daily life) for which outcome measurement instruments (OMIs) were not identified in the rapid review study mentioned above. This new work identified a range of candidate measures that were reduced to shortlists for each outcome. Shortlists were discussed by service providers, with a final consensus reached on OMIs for safety and quality of family relationships, albeit with adaptations to enhance acceptability and feasibility(manuscript in preparation).

All pieces of research provide important insights as to how outcomes comprising the COS are currently measured across different contexts, as well as attitudes to measurement within services working with people experiencing domestic violence or abuse. However, whilst both studies were informed by COSMIN guidance (Prinsen et al., 2016), neither constituted an optimal methodology for selecting OMIs for outcomes included in a COS. The aim of the study described below therefore, is to consolidate and build on the work that has already been undertaken to develop comprehensive guidance as to how the DVA-COS should be measured.

Work Package 1: Identifying outcome measures

Aims

To build on previous work to identify OMIs to measure three of five outcomes included in the DVA-COS.

Design and methods

We will draw on the four-step, mixed methods process set out in COSMIN guidance (Prinsen et al., 2016) as well as rapid review methods (Tricco, Langlois & Straus, 2017).

Co-production

We will consult Voices Bath, a survivor led domestic abuse charity in an advisory capacity. Voices have advised on all earlier stages of COS development and was part of the Home Office study of practice-based tools. Their role in this project is to oversee the study procedure and will support us to conduct the study in a trauma-informed way.

Expert advisory group

We will form an expert advisory group comprising academics, practice and policy experts, and relevant people who have been part of the COS development. This group will oversee study procedure and support with dissemination and implementation. We aim to invite: six to eight expert academics and practitioners.

Sampling – Stakeholder Groups

We will recruit three stakeholder groups (n=5 per group) to give specific input into stages 1, 3b and 4 set out below.

1. The researcher group will be recruited from our networks and will comprise experienced researchers who are familiar with the COS development project or who have specific expertise in measurement in the context of research on domestic violence or abuse.
2. Professional stakeholders will be recruited via services taking part in the CADA project as well as through the network of professionals who participated in earlier stages of the COS development project. We will aim to recruit a mix of frontline service leaders and practitioners, as well as professionals with a role in service commissioning.
3. Survivors of domestic violence or abuse will be recruited via SafeLives Changemakers, as well as other lived experience advisory groups (LEAG) with which the research team are affiliated. This will form a separate group to that formed by Voices. We will seek to recruit survivors who have experience of seeking support for their children following domestic violence or abuse, or who are adult survivors of child exposure to domestic violence or abuse. Due to the nature of the research tasks, survivors must be aged 15 or over. Survivors will be approached via SafeLives to form a group for the study, representing survivors from diverse backgrounds, including ethnic, cultural, social and geographical. We will invite

survivors involved in other LEAGs to the final consensus session to ensure that there is a balance between professionals, academics and those with lived experience.

The research team will send individual invitations to relevant researcher and professional contacts and ask them to suggest replacements if they are unable to take part.

We have devised terms of reference for the stakeholder groups which will be sent to potential participants before they confirm their participation.

Our total stakeholder involvement (N=15) is based on previous work (Powell et al., 2023) to ensure equal participation from everyone involved. We will take a key informant approach to recruitment, i.e. ensuring target organisations, such as Women's Aid, are represented, as well as ensuring diversity in the survivor group where possible through work with SafeLives. These organisations have been selected as they support the implementation of recruitment, both offering reach beyond their immediate organisation as they are well situated in a network of nationally provided services. We will aim to recruit a minimum of two 'by and for' organisations to ensure that minoritised voices are a central part of the process.

The research team will collect demographic information from all stakeholder groups and will report an amalgamation of this data to avoid the identification of individual stakeholders.

Data collection

Stage 1: Defining concepts

The first step in the selection of OMIs for outcomes included in a COS is to agree in detail upon the construct (i.e. outcome or domain) to be measured and the target population (e.g. age, gender, disease characteristics) before starting to search for OMIs. A detailed definition of the construct and the target population, that are based on the context of use of a COS (i.e. the specific area of health or healthcare to which a COS is to apply), is a prerequisite for selecting an appropriate OMI (Williamson et al., 2012). This is relevant given the constructs identified through the COS development process are broadly defined. In this instance this task will be undertaken by three stakeholder groups recruited by the study and will use discussion and nominal group techniques to define target population (adult, child, and where child OMI are lacking or inappropriate for use a proxy adult will be utilised) and facets of the construct which are most important (e.g. number of family relationships vs perceptions of quality).

Stage 1 will involve three two-hour online workshops (including two-hours preparation), one with each stakeholder group, facilitated by the research team. The structure of the workshop will be based on discussions around the construct and the target population focused on COSMIN guidelines. Using our previous work, we will synthesise information on the different aspects of the construct that could be measured. We will then discuss and expand this list to include stakeholder views concerning aspects of the construct that could be measured. We will then use nominal group techniques, a four-stage consensus method (McMillan, King & Tully, 2016; Sinha et al., 2008) , to identify the most important aspects to measure, allowing each person to list their top three aspects with justification. Finally, we will use an anonymous voting/prioritisation process to identify the top three aspects for measurement.

We aim to run the survivor workshop first so that the researcher and professional groups build on their perspectives. The research team will take detailed notes of the workshops and summarise the key decisions reached. If there are any irresolvable issues between the stakeholder groups, we will take these to Voices and the expert advisory group for resolution, whilst prioritising survivor perspectives. If we are unable to schedule the survivor workshop before the researcher and professional groups, we will commit to prioritising their preferences if there are any differences between stakeholder perspectives.

Stage 2: Identifying candidate measures

The team will first search for any systematic reviews of any domestic violence or abuse outcome measures, as well as systematic reviews pertaining to any of the three outcomes of interest. However, our work in the context of the CADA programme indicates there are no reviews that adequately cover the outcomes of interest. Therefore, it is likely that we will need to conduct literature searches to identify OMI for each outcome of interest. Here we will build on and expand rapid searches that have been conducted as part of our previous work, as well as integrating the results of these searches into the list of candidate OMIs to be appraised.

We will also feed in measures identified via additional sources of information (considered optional in guidance), such as searches of grey literature and UK websites, a call for evidence survey, and expert recommendations (Powell et al., 2023. We will record and account for the routes through which OMIs are identified. We will develop search strategies based on previous work and on relevant terms proposed in the workshops in stage 1. Stage 2 will not involve the stakeholder groups so we will refer to Voices and the expert advisory group for input where needed. We seek to identify and categorise measures that are appropriate for completion by one or more of the following groups: child self-report, adult self-report and adult proxy. Following the process used in the CADA evaluation, we would hope to identify a shortlist of measures for each reporter per outcome as adapted measures for each reporting group may not be available.

Stage 3a: Quality appraisal of studies and properties of OMIs

The third step in the selection of OMIs is a quality assessment of the OMIs that result from Step 2. Quality assessment will be carried out by the research team and includes two distinctive parts:

1. The evaluation of the methodological quality of the included studies by using the COSMIN checklist, (Terwee et al., 2007)
2. The evaluation of the quality of the OMIs themselves (i.e., their measurement properties and feasibility aspects) by applying criteria for good measurement properties.

Here we will draw on the COSMIN (Consensus-based Standards for the selection of health Measurement Instruments) Risk of Bias (RoB) checklist to evaluate overall study quality. (Dobson et al., 2012) Measurement properties of individual tools will be extracted and scored according to COSMIN guidance. To prevent the exclusion of relevant OMIs that have yet to be validated with DVA populations (such as OMIs identified from stage 2), the COSMIN scoring process will be weighted in favour of studies that have applied an OMI to a DVA population but will not exclude measures on this basis. Where measures have been identified through previous searches, we will seek to check our information and update where new data/studies are available. Two scores

representing RoB and tool quality will be generated for each measure. We will aim to take no more than six tools per outcome through to the next stage. If the number of tools is greater, we will combine the RoB and tool quality scores to identify the highest scoring tools.

Stage 3b: Stakeholder assessment of feasibility and acceptability

The acceptability and feasibility of OMIs, particularly to those completing and administering them, is of critical importance if we are to minimise the risk of harm associated with research and evaluation in and of itself. To give appropriate weight to this aspect of measure evaluation we will refine checklists for researchers and professionals developed by Powell et al. (2023) and develop a similar checklist for use with survivors. The research team will refine the checklists and take to the survivor advisory group (Voices) in an online meeting to refine and then to the expert advisory group for final agreement.

The research team will score all tools for feasibility using the relevant checklists. Depending on the total number of tools identified in stage 2, we will take the highest scoring (based on stage 3a and the stakeholder checklists) measurement tools for evaluation by our three stakeholder groups in online workshops. To aid transparency, where a shortened list is provided, we will also provide a list of excluded tools (with reasons) which individuals can review and challenge if they wish.

For each measure, the overall quality score along with acceptability and feasibility scores by stakeholder group will be calculated and those OMIs meeting the following minimum standards (based on COSMIN recommendations) will be highlighted and put forward for discussion in stage 4:

- High content validity (Prinsen et al., 2016)
- High internal consistency (Prinsen et al., 2016)
- Feasible and acceptable to at least one stakeholder group
- An absence of high-quality evidence that any of the measurement properties of the tool are low.

We will aim to take a shortlist of two to four, tools per outcome through to the consensus process, therefore if the above process identifies more than this, we will select the two to four highest scoring (based on a combination of quality, feasibility and acceptability scores). Again, we will provide a list of excluded tools and associated scoring.

Our previous work has demonstrated that few tools have been validated with adult or child populations experiencing domestic violence or abuse, therefore a lack of evaluation of the tool with this group will not prevent discussion during stage 4. Where relevant we will draw on validation studies with other populations who have experienced adversities.

Stage 4: Consensus process

In line with previous work, we will hold an online multistakeholder consensus meeting to determine the degree of consensus around shortlisted tools; this will be facilitated by a James Lind Alliance (JLA) expert. The consensus process will involve nominal group discussions in small groups, which will be assisted by the research team, and will conclude with voting for each outcome.

Recommendations from consensus meetings will be collated. Tools that are recommended by all groups will be recommended for use. Where the selected tool lacks evidence relating to some measurement properties, then a provisional recommendation will be made, with clear direction as to the further validation studies that are needed. If a tool is only endorsed by two of the three stakeholder groups, a partial recommendation for use will be made with clear reporting of the reasons for non-endorsement by a particular group. In this scenario, accompanying recommendations about monitoring of acceptability and feasibility will be made. Where no OMI is recommended, either because evidence on quality is lacking or where existing tools are not deemed acceptable or feasible to at least two stakeholder groups, recommendations will be made regarding further research or measure development.

We will collect attendance data for each workshop in stages 1, 3b and 4 and demographics anonymously. Lived experience workshop participants will be offered £175 per workshop. Lived experience participants taking part in all three stages: 1 (definition of concept), 3b (rating of feasibility and acceptability for a short list of tools) and 4 (consensus workshop) will receive a maximum of £500. Other representatives will receive an honorarium (where appropriate based on role) of £250 for participation in all 3 stages. Researchers will not be reimbursed for their participation, although where appropriate may be offered the opportunity to contribute to publication.

Analysis

Stage 1: Defining concepts

In stage 1 the research team will take detailed notes during the stakeholder workshops, these will be summarised and agreed by the team. An adapted form of a rapid assessment procedure (RAP) sheet (Beebe, 2001) will be used to structure the notes and enable easy tracking of decisions. The final agreed concepts and participant definitions will be used to input into the search strategy for the identification of candidate measurement tools. All workshop notes and decisions will be clearly recorded and stored as a document trail until the end of the study.

Stage 2: Identifying candidate measures

All searches will be recorded and saved in Excel spreadsheets so that each stage of the process is clearly replicable. We will draw on recording structures devised in previous studies which follow stages of scoping and systematic reviews.

Stage 3a: Quality appraisal of studies and properties of OMIs

Quality appraisals will be carried out by the research team and saved in Excel spreadsheets so that each OMI has its own set of scores for both the COSMIN checklist and RoB.

Stage 3b: Stakeholder assessment of feasibility and acceptability

All stakeholder checklist scores will be saved in the same Excel file as the COSMIN scores so that a total score can be calculated. Discussion notes from the stakeholder workshops will be taken in adapted RAP sheets (Beebe, 2001) and where appropriate additional scores/notes will be added to

the Excel file with clear records of any decisions made (e.g. when tools are excluded because they do not meet the minimum requirements).

Stage 4: Consensus process

The research team in attendance will take notes during consensus discussions to capture comments and any details relevant to decision making. Notes will be summarised in a workshop report so that the process is transparent and will be shared with all parties. The consensus decision making will be verbal and through voting during the workshop.

Limitations

This study aims to reach consensus on measurement tools for the DVA-COS. Whilst we will aim to involve as wide a range of survivors, researchers and practitioners, time and budgetary constraints will necessarily limit the scope of involvement. Given the abstract nature of the tasks included, it will not be possible to involve young people under the age of 18.

Ethics

Prior to the study commencing, it will undergo the necessary university approvals and ethics processes. The Principal Investigator or designee will ensure that appropriate approvals from participating host organisations are in place.

Consent will be seen as an ongoing process and participants will be able to withdraw at any stage without detriment. We will collect names and contact information to facilitate organising workshops and making payments. We will also be collecting anonymous demographics information using Qualtrics to enable us to report on aggregated characteristics of participants. We will see taking part in the workshops as active consent, with the limits of confidentiality discussed at the beginning of each online or face to face workshop; this includes discussions around respecting each other's privacy and not sharing information disclosed during workshops

Whilst the focus of the study is on outcome measurement, we acknowledge that some participants will have lived experience of domestic abuse. Although the workshops themselves should not be unduly stressful, talking about outcome measurement may relate to participants' personal experiences. This will be explicitly acknowledged during the preparation for workshops, and we will work closely with our main contact at SafeLives to ensure that the workshop content is appropriate. We will follow Foundations' safeguarding procedures, which states that if a concern is raised during data collection which suggests a risk to the participant or someone else this information will be reported to the Principal Investigator and DSL. Steps will be taken to respond to in line with the safeguarding procedure to minimise risk.

We have developed trauma-informed guidelines for multi-stakeholder workshops and will follow our procedure for the final mixed stakeholder consensus workshop.

We are offering £25 to people with lived experience per hour of participation, in line with our previous studies, to acknowledge the time taken. We feel that ethically we should offer something to participants to take part, however we do not think that the amount is so much that participants

will take part just for the incentive. Payment will be made after each stage to allow participants to withdraw and still receive compensation for the time contributed.

Any publications will refer to organisations (with their consent) and no individual participant names will be reported. Where there is any doubt about participant identification, this will be checked with the participant directly before sharing findings.

The Principal Investigator or designee will submit and, where necessary, obtain approval from the above parties for all substantial amendments to the original approved documents.

Work Package 2: Psychometric assessment of the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS) for use with children and young people who have experienced DVA

Aims

To validate the SWEMWBS for use with children and young people who have experienced any and recent domestic violence or abuse.

Design and methods

Design

We will use a mixed methods design, as it has been found that this approach increases validity (McKim, 2017). Furthermore, mixed methods can provide additional insights that surpass the benefits of employing strictly quantitative or qualitative methods (McKim, 2017; Grand-Guillaume-Perrenoud et al., 2023). Our design will incorporate:

1. Focus groups with CYP to explore aspects of feasibility, acceptability, and content validity
2. Secondary analysis of cohort data to explore content validity, internal consistency, measurement invariance, convergent validity and discriminant validity.

1. Focus groups with children and young people

Building on methods used in our previous work to explore aspects of feasibility and acceptability with adult survivors and domestic violence and abuse professionals, as well as in other work to explore these aspects of WEMWBS, we will hold four qualitative focus groups to explore content validity, acceptability and comprehensibility with children and young people (Powell et al., 2023; Clarke et al., 2011). Children and young people will be asked to complete the measure individually before engaging in a semi-structured group discussion.

2. Secondary analysis of cohort data

We will use data from the OxWell student survey (OSS) lead by the University of Oxford's department of psychiatry (Mansfield et al., 2021) to explore content validity, convergent validity, discriminant validity, internal consistency, and measurement invariance across DVA exposed and non-exposed participants. The OSS is a panel survey involving over 40,000 children and young people in Year 5 to Year 13 (school years; aged 8-18), living in four English counties. Around 30,000 of which are secondary school-aged children and young people (aged 11-18).The survey is repeated every year, although its repeated cross-sectional design means it does not permit evaluation of wellbeing over time.

The survey included the SWEMWBS in its 2023 data collection cycle and asks questions about children and young people's exposure to physical forms of domestic violence or abuse in their lifetime, and in the last 12 months. This will allow us to identify a sample of children exposed to domestic violence or abuse and facilitate comparison of psychometric properties for children who have been exposed to recent as well as any domestic violence or abuse. This is useful in evaluating the effectiveness of the measure in frontline domestic violence and abuse services where exposure is more likely to be closer in time to the measure completion. Furthermore, we want to explore whether the scale measures consistently across exposed children and the general population of children and young people. Establishing this measurement invariance across groups will strengthen the validity of the scale and will help us identify the magnitude of the effect of domestic violence and abuse in exposed children. Ensuring that the measure assesses the same construct across groups allows us to make comparisons on wellbeing scores between children who have and have not been exposed to domestic violence or abuse.

Possible supplementary analyses

In addition to the above, we are also aiming to conduct the following two analyses:

Developers recommend that children aged <15 years complete the Stirling measure of wellbeing which is suitable for children aged 8 to 15 years old (Liddle & Carter, 2015). This measure is completed by primary school children, aged 9 to 11 years old, participating in the OxWell survey. The primary school children did not complete the child maltreatment questionnaire to determine if they had witnessed domestic violence or abuse, but did complete a question on feelings of safety at home. This may permit some exploratory analysis of the psychometrics for children endorsing that they do not feel safe, however this would be indicative only, owing to the multitude of reasons as to why children may not feel safe, and the fact that some children exposed to domestic violence or abuse may feel safe in this setting.

We will also explore the possibility of validating the SWEMWBS for use with adults experiencing domestic violence or abuse. To achieve this, we will first need to identify secondary datasets containing the scale along with measurement of domestic violence and abuse experience. This requires some work to identify candidate datasets to establish access requirements and costs. This information will be shared with Foundations so that a decision can be made as to whether it is feasible to undertake evaluation for an adult population.

Sampling

1. Focus groups with children and young people

We will recruit four groups of children and young people, two across each age range: 11 to 13 years and 14 to 16 years. Each group will contain up to eight participants. Participants will be recruited from services involved in the CADA evaluation, funded by the Home Office. Emma Howarth is a co-investigator on this study and has direct access to services; Professor Christine Barter is the principal investigator for this study and will sit on the study advisory group. All CADA services were involved in preliminary work to select measures aligned with the core outcome set to evaluate CADA funded services (manuscript in preparation) and have been using the SWEMWBS to collect evaluation data. Where possible existing children and young people advisory groups will be approached to participate in the study, although if this is not possible, we will seek to recruit individual children and young people.

An initial invitation will be made to parents of children and young people, via the service. Parents will be given a short information sheet about the study and asked to give written consent to participate and/or approach their child regarding participation. Children will be sent accessible materials explaining the study and invited to attend a group meeting with two researchers. After reiterating study information, children's verbal assent/consent will be audio recorded. Topic guides will be developed, informed by broad concepts of acceptability and feasibility drawn on in previous work to evaluate patient reported outcome measures (PROMs), as well as concepts drawn from cognitive interviewing (Evans et al., 2015). Attention will be given to the potential for questions to retraumatise respondents and more general issues concerning confidentiality and data usage – issues commonly raised by young people in the context of measure completion. Participants will be offered to attend these interview in-person or online and they will be audio recorded and transcribed. Demographic information will be anonymously collected from all participants.

2. Secondary analysis of cohort data

Access to anonymous OSS data will be arranged via Professor Fazel (PI OSS). The 2023 panel of data (secondary school sample) includes roughly 18,000 respondents that completed both the domestic violence and abuse measure and the SWEMWBS (around 1200 that have experienced domestic violence or abuse), providing more than adequate power for the planned analyses.

Analysis

1. Focus groups with children and young people

Analysis of focus group and interview transcripts will be undertaken using framework analysis, (Gale et al., 2013) with an a priori framework based on the topic guide structure. These results will provide context and supplement the quantitative analysis.

2. Secondary analysis of cohort data

Analyses will be undertaken using complete case and imputed data sets, the latter being important given non-response on domestic violence or abuse items may be associated with experiencing

domestic violence or abuse (Skafida, Morrison & Devaney, 2022). More specifically the following steps and timelines are proposed:

Statistical analysis

Following the data collection, we will proceed with examining the psychometric properties of the **SWEMWBS**. We will report descriptive statistics, correlations, exploratory and confirmatory factor analysis. We will also provide relevant statistics on reliability and validity. These analyses will be conducted for the non-DVA sample and for the DVA sample to identify the validity of the SWEMWBS in each population.

Data collection and preparation (month 1)

Reliability analysis (month 2)

Reliability analysis will allow to investigate whether **SWEMWBS** can consistently measure mental well-being in young people who have experienced **domestic violence or abuse**.

- **Internal consistency**: Calculate Cronbach's alpha for SWEMWBS. A value above 0.7 indicates acceptable reliability.
- **Split-half reliability**: Due to the cross-sectional nature of the OSS it is not possible to measure test-retest reliability. To best counter this we will measure split-half reliability by correlating the totals of each half of the SWEMWBS scale.

Validity analysis (months 3-6)

- **Construct validity**
  - **Confirmatory Factor Analysis (CFA)**: Test the one-factor model of SWEMWBS using CFA. This is in line with previously published work on validating the SWEMWBS, where initially a one-factor model was tested to investigate how well all seven items would load to a one factor model (Haver et al., 2015). This will be completed separately for children who have and have not been exposed to DVA to ensure that the factor structure fits for each group.
  - **Exploratory Factor Analysis (EFA)**: If CFA is not satisfactory, conduct EFA to explore the underlying factor structure. For a satisfactory CFA, we will be looking at the model chi-square being non-significant ($p > .05$), CFI > .90, RMSEA > .08.
  - **Measurement invariance**: The measurement invariance of the SWEMWBS model will be tested between groups based on exposure to domestic violence or abuse (compared to no exposure) and based on recency of exposure (past year compared to previously in lifetime).
- **Convergent validity**
  - Where possible, we will establish convergent validity by exploring the correlations between SWEMWBS and other scales that measure wellbeing or other constructs related to wellbeing. The OSS also measures mental health in addition to wellbeing using the Revised Children's Anxiety and Depression Scale (RCADS) which has been shown to relate to other wellbeing measures in the literature (Piqueras et al., 2017.

Due to the RCADS being negatively framed whilst the SWEMWBS is positively framed, a significant negative correlation is predicted between these scales.

- **Discriminant validity**
    - Where possible, we will establish discriminant validity by examining for no correlation between well-being and unrelated measurements. In other words, well-being should not be associated with other measurements that are not related with it.

Sensitivity analysis (month 7)

- **Known-groups validity**: Compare SWEMWBS scores between different groups (e.g., varying levels of domestic violence exposure) to assess sensitivity in detecting differences.

Interpretation and reporting (month 8)

- **Descriptive statistics**: Report means, standard deviations, Cronbach's alpha, and score distributions for SWEMWBS.
- **Reliability and validity results**: Present findings with appropriate statistical measures, the following list identifies some of the key statistical figure that will be reported, however this is not exhaustive.
    - Model fit indices for all tested model, these will include at least chi-square, CFI, and RMSEA. We will also report all factor loadings, as well as correlation coefficients between all items and constructs.
- **Discussion**: Interpret the results in the context of existing literature and discuss implications for using SWEMWBS in this population.

Limitations

As this will be secondary analyses, we will be constrained by data that has already been collected. Therefore, we lack the flexibility to go through an iterative process of expanding the collection of measurement items beyond the ones already presented in the survey. Furthermore, as the sample only includes secondary school-aged children it will not provide evidence to validate measurement using the SWEMWBS in younger children.

Ethics

Even though WP2 involves primarily secondary data analysis, we will have to undergo the necessary university approvals and ethics processes before any data analyses can take place. The Chief Investigator or designee will ensure that appropriate approvals are in place before analyses commence. Ethics will also be sought from the University of Sussex ethics board for the cognitive interviews being conducted with children and young people.

Data protection for Work Package 1 and 2

Demographics data will be stored separately from workshop/focus group transcriptions by the lead researcher (EH) in a password protected file on The University of Sussex's secure server. There will be separate file linking participant initials to ID numbers. Names will be saved in the secure survey

software Qualtrics (Qualtrics, Provo, UT) and transferred to the server in encrypted format. Transcripts will be anonymised (by deleting identifying details and applying the relevant ID number) either directly after downloading from Teams or on receipt from the professional transcriber. They will be saved on Sussex's server as individual encrypted files and deleted at the end of the study. All study metadata will be archived on the University of Sussex Research Data Repository.

Risk assessment

The University of Sussex has insurance in place to cover its legal liabilities in respect of this study.

Risk	Likelihood (L/M/H)	Impact (L/ M/ H)	Mitigations
Protecting participants from harm	M	H	A safeguarding procedure will be followed if participants mention possible harm to themselves or other. A debrief will be offered to participants, signposting them to support services if needed. Researchers will have DBS checks and be experienced in facilitating research with survivors of abuse. We will follow sensitivity and trauma-informed protocols developed in previous work and we will be guided by our survivor advisory group.
Protecting researchers from harm	L	M	We will follow the university's guidelines for risk assessment. As well as able to access wellbeing support from our various institutions.
Not getting access to the Oxwell data	L	H	Identifying alternative sources of data.
Key member of staff becomes unavailable	L	M	Identifying alternative professionals at University of Sussex to take on responsibilities and saving documents in share folders. Can utilise floating RA support.
COSMIN study for DVA-COS already completed	L	H	Include question in call for evidence to identify if anyone is already aware of similar work being completed. Divert resources to Work Package two.

Timeline

Dates	Activity	Staff responsible/ Leading	Work Package 1 or 2?
2024			
2 April	Project initiation: • Grant agreement signed • Agreement of project aims, outcomes and outputs • Kick-off meeting attended • Agree schedule of Progress Meetings	Emma Howarth	WP 1 and 2
29 April	Work with Foundations to draft and review: • Data Protection Impact Assessment (DPIA) • Data Sharing Agreement (DSA) • Data Privacy Notice • Memorandums of Understanding (MOUs) with • relevant partners (if relevant)	Emma Howarth	WP 1 and 2
21 May	• First draft of protocols submitted to Foundations for revision. • Ethics Approval submitted.	Emma Howarth	WP 1 and 2
28 June	• Final draft of protocols submitted to Foundations • Ethics approval attained	Emma Howarth	WP 1 and 2
25 July	Honorary contract for Prof Mina Fazel signed for secondary data analysis.	Emma Howarth	WP 2
22 August	• Literature searches completed. List of Outcome • Measurement Instruments (OMIs) shared with Foundations. • Recruitment of 3 stakeholder groups (n=15) completed to enable the start of the consensus exercise, including: - Researcher group: 5 stakeholders - Professional group: 5 stakeholders - Survivor group: 5 stakeholders	Emma Howarth and Claire Powell	WP1
31 October	Identify a data source for the possible exploration of the WEMWBS for use with adults.	Lazaros Gonidis	WP2
8 November	Recruitment of CYP for focus groups and interviews completed.	Lazaros Gonidis	WP2

2 December	Quantitative data (OxWell survey) accessed and analysis of child OMI data (likely SWEMWBS) completed, preliminary results shared with Foundations	Lazaros Gonidis	WP2
15 December	• Appraisal of OMI studies and OMIs themselves completed. • Preliminary results shared with Foundations	Emma Howarth and Claire Powell	WP1
2025			
3 February	Consensus process complete, first draft shared with Foundations	Emma Howarth and Claire Powell	WP1
21 February	Analysis of adult OMI data	Lazaros Gonidis	WP2
3 March	First draft of report submitted	Emma Howarth and Claire Powell	WP1
28 March	First draft of report submitted	Lazaros Gonidis	WP2
28 April	Final draft of report submitted	Emma Howarth and Claire Powell	WP1
23 May	Final draft of report submitted	Lazaros Gonidis	WP2

Conclusion

This study will reach consensus on outcome measurement tools for the DVA-COS.

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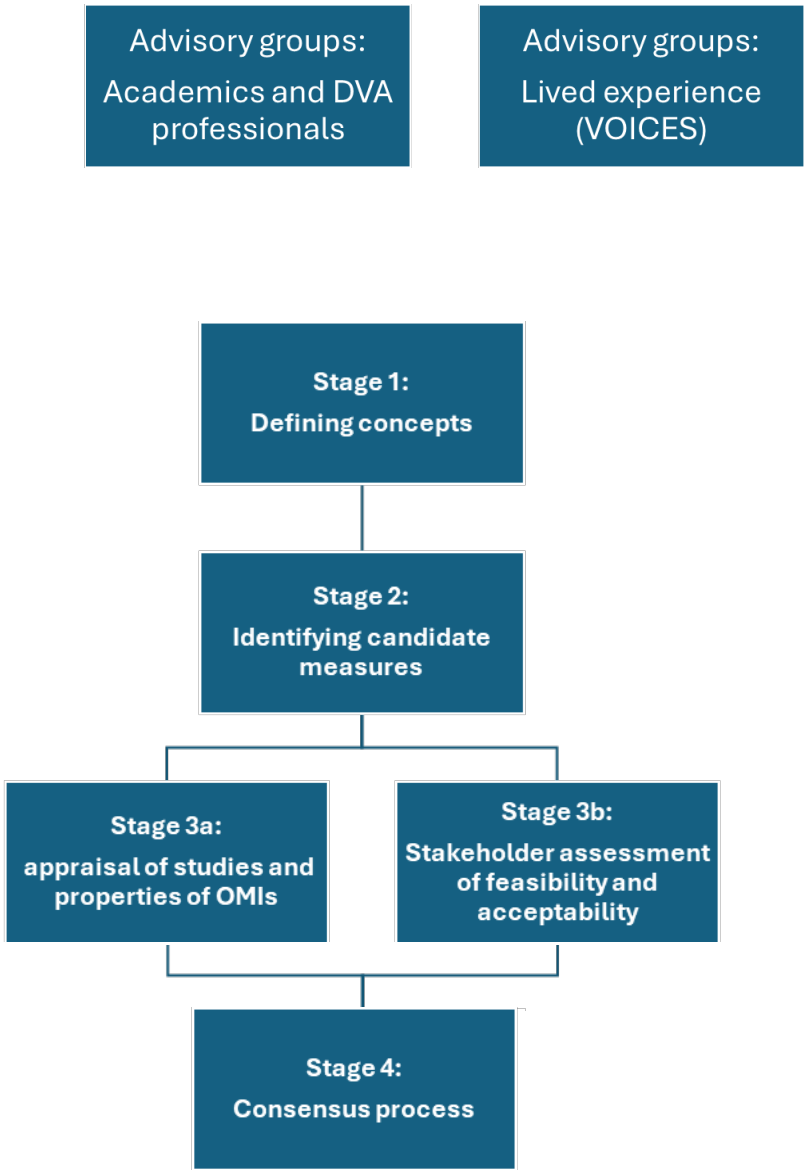
Appendix 1: Work Package 1 study flowchart



Appendix 2: Rapid review protocol for identifying candidate measures (stage 2)

Searches for systematic reviews of domestic violence and abuse (DVA) outcome measurement instruments (OMI)

As part of the COS development process, we carried out a rapid review of DVA outcomes until May 2019. We will replicate that method and update the searches.

Research question: How are outcomes defined and measured in intervention trials aiming to improve outcomes of children and families exposed to DVA and those aiming to reduce subsequent abusive behaviour by perpetrators of DVA?

Part 1 – extracting outcomes

Selecton criteria

Study type: peer-reviewed systematic reviews of randomised controlled trials or quasi experimental studies. To be eligible for inclusion in this rapid review, systematic reviews would need to have searched at least one relevant electronic database and have a structured search strategy. Published since May 2019. No restrictions by country. English language only. Individual studies must include DVA in one of the following ways: a) entry to the intervention is determined by experience, perpetration or identified by researcher/practitioner/participant as at risk of DVA; b) subgroup analysis is carried out by participants who have experiences (or are considered to be at risk) of DVA; c) DVA is measured as an exposure (this could be retro- or prospectively reported).

Exclusions: non-peer-reviewed studies, qualitative studies, general literature reviews, protocols, case reports, cross-sectional studies, general discussion papers, letters, commentaries, book chapters, conference papers, theses and dissertations.

Population: children or families with children who are experiencing DVA or are at risk of experiencing DVA. This includes unborn children, children (aged 0 to 18 years), designated as a victim or witness. Any adult family members who have a parenting role whether designated as perpetrator, victim, witness, or household member. These adults and children could either be the primary study population of interest or form a subgroup in a wider study population.

Intervention: any interventions or services where:

Experience of or increased risk of experiencing DVA is a criterion for being offered the service

OR

DVA is measured as an exposure or outcome of interest

AND

At least one child or family-level outcome is measured. Family-level outcomes do not need to be explicitly labelled as 'family' level; we will make a judgement. However, they include any outcome that affects the family/household unit. For example, worklessness in a study where at least some participants are reported to be parents would be included.

Studies must include evaluation of a defined service/programme and evaluation of a hypothesised effect. Interventions may be delivered to any family member(s) as an individual or in a group. Any duration of intervention will be included. Any setting will be considered.

Exclusion: universal interventions that do not specifically target children/families at risk of DVA; targeted interventions that do not measure any child or family level outcomes e.g. perpetrator programmes that focus solely on attitudinal change; DVA interventions focused solely on elder abuse, sibling abuse or child perpetration of domestic violence where participants have not been identified as exposed to DVA.

Comparator: Any control or comparison group with participants receiving no intervention, treatment as usual or any other treatment.

Outcome: Any child outcome related to i) the child's experience of adversity; ii) child function, including risky behaviours. Any outcomes related to the quality of the caregiving environment (e.g. parenting, maternal depression, stressful life events, maternal psychological distress, parental substance misuse). Any outcomes related to material deprivation e.g. low income, economic hardship, or stress (including perceived), social capital, hunger, food poverty, housing instability. Any other outcome judged to relate to children or families by the research team. Outcomes can be reported by professionals, child, parent or other family member and they can be retrospective or prospective. Outcomes can be end points, surrogate markers for end points or intermediate outcomes. No minimum or maximum follow-up is required.

Context: Studies from any country in any setting.

Searches

The following databases will be searched from 2019: Medline, Embase, PsycINFO, Cochrane, Web of Science.

Searching will include reference list screening of included systematic review studies.

The search strategy will include MeSH terms relating to DVA and the BMJ systematic review strategy. Key word terms for DVA abuse, violence, family members and systematic reviews will be used. These have been developed from the two main NIHR-funded studies in the area and adapted as required for different databases with guidance from an expert librarian.

Searches will be downloaded to CADIMA and deduplicated. Titles and abstracts will be screened against inclusion criteria, and then full texts. Screening will be conducted by one reviewer. 10% of excluded title/abstracts and full texts will be double screened by a second reviewer as a consistency check. Where there are any disagreements, these will be discussed by the research team and further double screening carried out if necessary.

Data extraction

Basic study details of systematic reviews (author, date, study design) will be extracted into CADIMA. Individual studies will be extracted from the included full-text systematic reviews. These studies will be downloaded to Zotero and de-duplicated. The remaining studies will then be screened for inclusion in full-text review and data extraction. Measurement tools from studies will be cross-checked on our longlist compiled from previous work and where they are not already present, relevant data will be extracted into Excel using a standardised form. The following data will be extracted: bibliographic information, brief description of tool. Quality control/risk of bias will be assessed at a later stage.

Part 2 – mapping to outcomes

The next stage will involve mapping all OMIs from the review to the three outcomes of interest: feelings of safety, family relationships, freedom to go about daily life. This will be added to the list of OMIs identified and mapped in the Home Office review and CADA evaluation.

One researcher will assign OMIs to one or more of the outcomes, or a 'not relevant' category. The research team will review and discuss the mapping before finalising. The inclusion criteria for relevance will be: 1) OMI captures part or all of an outcome; 2) OMI applies (or could be applied) to a family-focused DVA intervention; 3) OMI is currently in use in the UK or internationally.

Searches for grey and practice literature containing domestic violence and abuse (DVA) outcome measurement instruments (OMI)

As part of the COS development process, we carried out a rapid review of DVA outcomes until May 2019. We will replicate that method and update the searches.

Research question: How are DVA outcomes defined and measured in UK service-based evaluations of interventions and relevant policy or commissioning frameworks?

Part 1 – extracting outcomes

	Inclusion criteria	Exclusion criteria
Document type	Any national or regional policy or practice document that reports on DVA-relevant services or outcomes (e.g. measurement/theory). Participation in the service is determined by experience, perpetrator or identified by	Publication in academic journals, book chapters, conference papers, theses and dissertations.

	practitioner/participant as at risk of DVA. Published since May 2019. England-based only. English language only.	
Population	Children or families with children at risk of experiencing or experiencing DVA. This includes unborn children, children (aged 0 to 18 years), designated as a victim or witness. Any adult family members who have a parenting role whether designated as perpetrator, victim, witness, or household member. These adults and children could either be the primary study population of interest or form a subgroup in a wider study population.	
Service	Any service where experience of or increased risk of experiencing DVA is a criterion for being offered the service/intervention. Services/interventions may be delivered to any family member(s) as an individual or in a group. Any duration of service/intervention will be included. Any setting will be considered.	Universal interventions that do not specifically target children/families at risk of DVA; targeted interventions that do not measure any child or family level outcomes e.g. perpetrator programmes that focus solely on attitudinal change; DVA interventions focused solely on elder abuse, sibling abuse or child perpetration of domestic violence where participants have not been identified as exposed to DVA.
Documents of interest	Any evaluative work or outcomes framework where at least one child or family-level outcome is evaluated/discussed. Family-level outcomes do not need to be explicitly labelled as 'family' level; we will make a judgement. However, they include any outcome that affects the family/household unit. For example, worklessness in a study where at least some participants are reported to be parents would be included.	

Outcomes	Any family or child-level outcome measured or evaluated or discussed in any way. Intermediate outcomes that could feasibly represent preconditions needed to reach distal/final outcomes (including those relating to the process of service delivery) will be included, along with final/distal outcomes.	

Searches

The following databases and websites will be searched for publications since 2019

Grey databases: NICE Evidence Search and Open Grey

Organisation websites including but not limited to:

DVA: Women's Aid, Refuge, Respect, Safe Lives, Voices, AVA, Standing Together, Imkaan, The Stefanou Foundation, Women's Trust, Hestia, DVIP, Nia, The Haven, ManKind Initiative, Everyman Project, NCDV, Galop, LAWA, IDAS, Advance, Your Sanctuary, Advocacy After Fatal Domestic Abuse (AAFDA); Aurora New Dawn; My Sister's Place

General: Victim Support, Barnardo's, NSPCC, Early Intervention Foundation, NatCen, RCGP, RCN, RCM, NICE, BPS, IHV, WHO, UNICEF, Working together, gov.uk (including e.g. DA bill, 'Working together'), Public Health for any UK nation, Office of the children's commissioner for any UK nation, Big Lottery, Comic Relief, The Childhood Trust, UK College of Policing, Research in Practice, 'What Works', Joseph Rowntree Foundation, What Works for Children's Social Care.

Websites will be searched manually for relevant documents. It is anticipated that there will be an element of snowball searching as relevant organisations will have links to further organisations. All websites searched will be recorded in Excel/Access along with relevant details about any reports captured. The expert reference group will be consulted about relevant websites to search or reports to include at multiple timepoints.

Data extraction

Measurement tools from studies will be cross-checked on our longlist compiled from previous work and where they are not already present, relevant data will be extracted into Excel using a standardised form. The following data will be extracted: bibliographic information, brief description of tool. Quality control/risk of bias will be assessed at a later stage.

Part 2 – mapping to outcomes

The next stage will involve mapping all OMIs from the grey/website review to the systematic review OMIs. The same procedure will be followed.

Call for evidence survey and expert recommendations for domestic violence and abuse (DVA) outcome measurement instruments (OMI)

We will disseminate a call for evidence survey in parallel with the systematic review and grey rapid reviews to ask researchers and practitioners to share any OMIs. The survey will be designed in Google Forms and shared on social media and the research team networks. It will be open for one month. Recommended OMIs that are not already captured will be added to the mapping.

In parallel to this, the expert advisory group will be asked to share any recommended tools. They will be asked to comment on the mapping to identify any gaps or further searches needed.

Searches for systematic reviews of outcome measurement instruments (OMI) related to three outcomes of interest

Following the concept definition workshops with stakeholders, the research team will carry out a set of targeted rapid searches for systematic reviews relating specifically to the three outcomes of interest. These searches will aim to fill any gaps where there are not sufficient OMIs to review. The search strategy will be designed at a later stage but will be iterative and flexible whilst broadly following the steps outlined above.