increased registrations from both lower socioeconomic backgrounds and all other SES in a similar way, therefore neither reducing nor increasing inequalities in POA registrations.

P90 IMPLEMENTATION OF STRATEGIES FOR FOSTERING STRENGTHS-BASED ADULT SOCIAL WORK IN THE UK: A SYSTEMATIC REVIEW OF RESEARCH EVIDENCE

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Background A 'strengths-based approach' focusses on peoples' goals and resources rather than their problems. Social care professionals and organisations are striving to practise in a strengths-based way, especially since the Care Act of 2014. However, challenges remain in implementing strengths-based approaches into practise, and uncertainty remains about their effectiveness. This systematic review aimed to summarise research evidence on the effectiveness and the implementation of different strengths-based approaches within adult social work in the UK.

Methods We searched seven databases: MEDLINE ALL, PsycINFO, Social Policy and Practice, HMIC, CINAHL, ASSIA and the Campbell Library. Supplementary web searches were conducted. No date or language limits were used. Eligible studies were about adults (≥18 years) being supported or assessed by social workers; or initiatives involving adult social care teams. For the effectiveness question, outcomes could be directly related to individual outcomes or outcomes at the level of families or communities. The Cochrane Risk of Bias Tool was chosen to appraise the quality of effectiveness studies, and qualitative implementation studies were assessed using the Wallace criteria. Findings were tabulated and analysed using framework synthesis. Studies that were not synthesised were summarised descriptively.

Results Of 5,030 studies screened, none met our inclusion criteria for the effectiveness question. Fifteen qualitative or mixed methods studies met criteria for the implementation question, six were assessed as 'good quality'. Seven examined Making Safeguarding Personal (MSP) and the remaining eight studies examined Local Area Coordination, Solution Focused Therapy, Family Group Conferencing, Asset-based Community Development, Strengths-based with Relationship-based Approach, Asset-based approaches, and Motivational Interviewing. Studies on Making Safeguarding Personal (MSP), were synthesised into the following themes of implementation factors: 1) *MSP as an intervention*: seen as initially demanding but with long-term advantages. 2) *Culture and Settings*: required broad cultural changes; 'outward facing' and smaller/specialist councils tended to find this easier. 3) *Individual characteristics*: related to enhancing the knowledge, skills and confidence of practitioner and stakeholders in MSP; and service user willingness to engage. 4) *Embedding and sustaining MSP*: depended on strong leadership and active engagement at all levels. For the remaining eight studies of seven strengths-based approaches, we provide a summary of findings.

Discussion There is a lack of good quality research evidence evaluating the effectiveness or implementation of strengths-based approaches. The synthesis revealed a wide range of factors that enabled or inhibited successful implementation of Making Safeguarding Personal. These may have wider relevance for implementation of other strengths-based models of social work practice.

P91 SENSITIVITY ANALYSES FOR UNMEASURED CONFOUNDING: RECOMMENDATIONS FOR POPULATION HEALTH RESEARCH

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Background Many population health research questions rely on observational data, where unmeasured confounding is a major source of bias. Sensitivity analyses for unmeasured confounding are increasingly applied, but often without sufficient consistency and transparency. We propose accessible recommendations to guide applied researchers in using two existing sensitivity analyses. 1) Bias Factor (BF), which is derived from the expected strength of associations between unmeasured confounder and exposure/outcome, based on expert knowledge and previous research. The main effect estimate (and confidence intervals, CIs) are adjusted using the BF. 2) E-value (EV), which identifies the strength of associations between unmeasured confounder and exposure/outcome required to entirely attenuate the main effect estimate (or for CIs to contain the null)

Methods We conducted a scoping review for commentaries and reviews discussing the application, strengths, and limitations of the BF and EV. We triangulated these with epidemiological guidance (e.g. STROBE) and informal discussions with quantitative researchers in applied statistics, epidemiology and social policy.

Results The BF was criticised for the potential for authors to selectively pick confounder associations that minimally impact the results. The EV removes the potential for author bias and future-proofs analyses (as knowledge of confounders advances). However, it potentially discourages authors' rigorous and transparent consideration of unmeasured confounding; and places burden upon the reader to judge whether this degree of confounding would seem feasible. Furthermore, population research typically aims to estimate an effect size (not merely the existence of an effect, which is the focus of the EV). Initial recommendations. Unmeasured confounders are identified at protocol stage. A range of exposure/outcome associations are identified for the confounder(s), from systematic reviews, high-quality individual studies, and expert opinion. At publication stage: 1) the full range of BFs are applied to the main effect size and CIs, reported in full, and the most pertinent highlighted in the discussion; 2) The EV, for the main effect and CIs, is compared with best estimates derived using the BF, observed confounders-exposure/outcome associations, and effect sizes for other important exposure/outcome risk factors; 3) The importance of the effect size after considering potential residual confounding should be assessed; 4) Results are discussed in context of other threats to bias, including measurement error among measured confounders (as applied in primary studies and systematic reviews).

Conclusion These simple recommendations, supported by a real-life research example, can improve sensitivity analyses for unmeasured confounding and reduce the potential for selective reporting, thereby improving the quality of population health research.

P92 CAUSAL INFERENCE-INFORMED RE-ANALYSIS TO GAIN INSIGHTS INTO FACTORS ASSOCIATED WITH DROP-OUT FROM WEIGHT-LOSS PROGRAMMES

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Background Understanding the factors that predict/cause individuals' withdrawal, or dropout, from weight loss can provide useful insight into adaptations that could ensure that such programmes have greater impact. If one event follows another, conclusions are drawn that the first event caused the second. However, these associations may be observed due to chance, confounding, or selection bias. Although a lot of research has been conducted to identify factors related to attrition and adherence in weight management/loss programmes, their findings do not have a concrete (causal) interpretation beyond recognising that some predictors are often favoured over others from an initial pool of candidate predictors.
Methods Dalle Grave et al. (2015) recruited 634 patients seeking obesity treatment at Italian medical centres. They performed logistic regression to assess the association between demographic, personality characteristics, eating disorder features, psychological well-being, and attrition. This study aims to illustrate the key issues through directed acyclic graph (DAG) informed re-analysis of the Dalle Grave et al. (2015)'s data to explore if and by how much conclusions might vary between common prediction approaches and a causal inference approach.
Results According to Dalle Grave et al. (2015), personality traits, which were assessed through the Temperament and Character Inventory (TCI), are less relevant in predicting attrition. In contrast, causal inference analysis suggests that temperament scores (harm avoidance (Probability=0.33; CI=0.29, 0.37), novelty seeking (Probability=0.34; CI=0.30, 0.38), persistence (Probability=0.30; CI=0.26, 0.34), and reward dependence (Probability=0.30; CI=0.26, 0.33)) and character scores (self-transcendence (Probability=0.34; CI=0.30, 0.39), cooperativeness (Probability=0.32; CI=0.27, 0.36), self-directedness (Probability=0.32; CI=0.27, 0.37)) are causally associated with higher probability of drop-out. Additionally, Dalle Grave et al. (2015) considered body uneasiness scores to be irrelevant in predicting drop-out. Whereas, causal inference analysis indicated that higher body uneasiness scores are causally associated with the highest probability of drop-out (Probability=0.39; CI=0.34, 0.44).
Conclusion New insights into factors that predict/cause drop-out from weight-loss programmes can be gained through causal inference-informed analysis. On the basis of this re-analysis, factors previously identified as irrelevant or excluded with respect to a traditional prediction perspective appear to be important from a causal perspective. Dalle Grave et al. (2015)'s analysis can be considered a case of the 'table 2' fallacy, where mutually adjusted coefficients in a prediction model are (inappropriately) inferred to have an equivalent interpretation. Different causal models must be generated, based on a DAG, to derive 'correct' (causal) inferences.

P93 THE DANGERS OF CAUSALLY UNAWARE ETHICAL FRAMEWORKS FOR HEALTH DATA

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Background During the COVID-19 pandemic we have seen various disastrous approaches regarding the use an implementation of measures and studies that performed on past and current health data. Accordingly, in this study, we criticize the lack of conceptual engineering to integrate ethical principles and values into the design and application of data-driven endeavours, with a particular examination at health data. We argue how we cannot strive for a robust ethical assessment without a critically causal framework
Methods Firstly, we analyse the translational gap and conceptual conflation of the terms: 'bias and fairness' and 'transparency and explainability', highlighting the misleading definitions and uses given to these concepts at a technical and ethical level. The main distinctions presented clarify the moral expectations given to these concepts and criticise the insufficient development of a conceptual analysis that targets them. We suggest that a fundamental part of a solution to reduce this translational gap implies embracing and applying a causal framework. Thus, we show why using causal models and, most importantly, a causal narrative cannot only help to prevent unethical effects, but it can also influence the efficiency of prediction models and their outcomes. Efficiency, in this case, transforms into an ethically laden concept that demands a causal narrative to align with ethical principles. Finally, we go through examples of COVID-19 decision-making that could have benefitted from a causal approach, highlighting the negative consequences of the NHS electronic health records platform and an OpenSAFELY publication in Nature that substantially suffers from the Table 2 Fallacy.
Discussion This analysis puts into discussion an interdisciplinary approach to increase critical ethical awareness about fairness. Providing robust and reliable frameworks to analyse and present data, especially in sensitive times like a world pandemic, requires trustworthy practices.
Conclusion Integrating ethics into data-driven solutions cannot be limited by the bias-aware fairness formalisations or the naïve applications of transparency and explainability. When it comes to the real-world application of models, their effects can harm individuals in society. Non-causal approaches tend to dissipate elements of agency and responsibility, which are fundamental to the development of what we can call 'good science'.