Linking abuse and recovery through advocacy: an observational study

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Aims. High numbers of psychiatric service users experience domestic violence, yet limited interventions exist for these victims. We piloted a domestic violence intervention for community mental health services to explore the feasibility of a future cluster randomized controlled trial.

Methods. Quasi-experimental controlled design within five Community Mental Health Teams (three intervention and two control teams). The intervention comprised domestic violence training for clinicians' and referral to domestic violence advocacy for service users. Clinicians' (n = 29) domestic violence knowledge, attitudes and behaviours were assessed before and 6 months post-training. Service users' (n = 34) safety behaviours, unmet needs, quality of life and frequency/ severity of abuse were examined at baseline and 3 months follow-up. Process evaluation data were also collected.

Results. Clinicians receiving the intervention reported significant improvements in domestic violence knowledge, attitudes and behaviours at follow-up (p < 0.05). Service users receiving the intervention reported significant reductions in violence (p < 0.001) and unmet needs at follow-up (p < 0.05).

Conclusions. Interventions comprising domestic violence training for clinicians and referral to domestic violence advocacy may improve responses of psychiatric services. Low rates of identification among teams not receiving training suggest that future trials using service user outcomes are unlikely to be feasible. Therefore, other methods of evaluation are needed.

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Introduction

Domestic violence – threatening behaviour, violence or abuse between adults who are relatives, partners or ex-partners – is associated with substantial psychiatric morbidity (Golding, 1999; Campbell, 2002). Recent systematic reviews have found a high prevalence of domestic violence among female and male psychiatric service users (Oram *et al.* 2013) and, across all diagnostic categories, an increased likelihood of being a victim of domestic violence among women and men with psychiatric disorders (Trevillion *et al.* 2012*b*).

Less than a third of domestic violence cases are detected by psychiatric services (Howard *et al.*

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2010b), and NHS mental health guidance on routine enquiry about a history of abuse may result in a focus on childhood abuse (NHS Confederation, 2008). To date, studies on the identification and response to abuse by mental health professionals although including adult abuse, have tended to focus on childhood abuse. These studies report that clinicians often overlook questions of abuse and cite barriers to enquiry including a fear of offending service users and a fear of inducing 'false memories' (Read & Fraser, 1998a; Young et al. 2001; Read et al. 2007). When violence is detected, these studies have found that clinicians' diagnostic formulations and treatment plans are often incomprehensive (Read & Fraser, 1998b; Agar & Read, 2002; Posner et al. 2008). Preliminary evidence suggests that mental health professionals' barriers towards the identification and management of domestic violence include a perceived lack of knowledge and expertise to address abuse (Rose et al. 2011; Trevillion et al. 2012a).

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In the UK, a recent cluster randomized controlled trial (RCT) of a primary care training intervention and pathway for referral to domestic violence advocacy reported a three-fold increase in clinicians' identification of domestic violence (rate ratio 3.1 [95% CI 2.2–4.3]), and a six-fold increase in rates of referral to advocacy services (rate ratio 6.4 [95% CI 4.2–10.0]) (Feder *et al.* 2011). Presently, there are no studies that examine domestic violence advocacy interventions for victims in contact with psychiatric services (Feder *et al.* 2009; Howard *et al.* 2010*a*). Therefore, this study sought to develop and pilot a domestic violence advocacy intervention within community mental health services.

Objectives:

- (1) To conduct a preliminary exploration of the intervention's effect in:
 - i. raising clinicians' awareness, knowledge and readiness to respond appropriately to domestic violence
 - iii. improving psychiatric service users' outcomes, including frequency and severity of domestic violence, safety behaviours, unmet needs and quality of life.
- (2) To explore the feasibility of a future cluster RCT and outcome and cost measures.

Methods

Study design

Quasi experimental controlled design, employing quantitative and qualitative methods. The study is registered on the ISRCTN database (http://www.controlled-trials.com/ISRCTN79430721/).

Setting

Community Mental Health Teams (CMHTs) in a UK south London borough were eligible for participation between May 2009 and May 2011. Five CMHTs were recruited to the study: three were allocated to the intervention arm and two to the control arm (usual care). The five CMHTs had a caseload of around 1220 service users: approximately 600 cases in the control arm and 620 in the intervention arm. As this was a pilot study we did not randomly allocate teams and instead determined allocation by grouping teams that shared the same building (to avoid problems of contamination).

Participants

Clinicians

Clinicians were invited to complete the Physician Readiness to Manage Domestic Violence Scale (PREMIS) (Short *et al.* 2006), which assesses their knowledge, attitudes and behaviour towards domestic violence. All clinicians were eligible to participate and no exclusion criteria were assigned.

Mental health service users

Service users were recruited via: (1) referral from carecoordinators (key workers) by post or telephone, whichever was considered safest by the referee; (2) self-referral, via telephone, from study advertisements and (3) face-to-face researcher screening sessions. Screening sessions were conducted at CMHT waiting rooms over 12 (non-consecutive) days. Researchers asked CMHT attendees if they would complete a survey about 'safety at home' in a private room; there was no mention of domestic violence to ensure the safety of participants. In private, patients were asked to complete a validated measure of partner violence (the Composite Abuse Scale (CAS) (Hegarty *et al.* 1999, 2005).

A standard operating procedure (see Appendix 1) and safety protocol was designed to minimise risk for service users (e.g., establishing safe and secure times to contact service users, provision of information on support services). Service users were interviewed alone in private settings, either at their home (following prior risk assessment) or at CMHTs.

Inclusion criteria: male and female CMHT service users (aged ≥ 18 years) experiencing domestic violence in the previous year, and scoring above the cut-off point (i.e., ≥ 3) on the CAS (Hegarty *et al.* 1999, 2005). Domestic violence is defined as 'any incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional) between adults who are or have been intimate partners or family members regardless of gender or sexuality' Home Office (2005). Domestic violence: a national report (p7). Home Office: London. Exclusion criteria: Service users deemed by clinicians to be too unwell to enter the study and those living outside the catchment area.

Intervention

- (1) Four hours domestic violence training for clinicians (on entry to study), illustrating how to identify and respond to domestic violence (delivered by a senior clinical psychologist (author RAD) who specializes in supporting victims of domestic violence).
- (2) Domestic violence manual for clinicians (developed by the research team), incorporating good practice guidance and local/national domestic violence services.

- (3) Six hours mental illness training for domestic violence advisors (who provided domestic violence advocacy), including definitions of disorders, treatments and service provision (delivered by a senior psychiatrist (author LH)).
- (4) Direct referral pathway to domestic violence advocacy (developed by the research team) for service users experiencing past year violence.
- (5) Provision of integrated domestic violence advocacy for service users, modified for this study and delivered by domestic violence advisors (seconded from a local voluntary sector organization). Advocacy comprised emotional and practical support, including domestic violence education, facilitation of support groups, safety planning and legal/housing support. In this study, each CMHT had a named advisor who was available to discuss/take referrals and feed outcomes back to the team and to regularly attend clinical meetings to discuss cases and provide domestic violence education.
- (6) Information campaign (posters and leaflets in waiting rooms and toilets) highlighting the problem of domestic violence and support available.

Usual care

Service users in the two control CMHTs received usual care, which could include referral to domestic violence services. Clinicians were provided with information on domestic violence support services but did not receive the domestic violence training provided to the intervention teams and did not have named domestic violence advisors available.

Measures

Clinicians

PREMIS, demonstrating strong internal consistency (Cronbach's $\alpha \ge 0.65$) (Short *et al.* 2006), adapted for use in CMHTs. The PREMIS comprises five sections: (1) Respondent Profile, including items on previous domestic violence training; (2) Background, including items on perceived preparedness/knowledge in identifying signs of domestic violence, appropriately asking about and responding to abuse and creating safety plans; (3) Domestic Violence Knowledge, including items on signs indicative of domestic violence, stages of change among victims and knowledge of resources; (4) Opinions, including items on the association between substance misuse and abuse and (5) Practice Issues, including items on experiences of identifying, asking about and making referrals for domestic violence. Data were collected an hour prior to training (baseline) and 6 months later (follow-up).

Service users

Baseline and 3 months follow-up interviews comprised the following measures:

- (1) CAS –a 30-item questionnaire assessing the frequency/severity of abuse and harassment in the previous year. Items are rated from 1 = 'Never' to 5 = 'Daily', with total scores ranging from 0 to 150. A cut-off point of three is assigned, with scores of three or more indicating domestic violence; the measure demonstrated strong internal consistency (Cronbach's $\alpha \ge 0.90$) (Hegarty *et al.* 1999, 2005). At follow-up, service users were asked to complete a modified version of the questionnaire so that they were only asked about experiences that had occurred since baseline (i.e., the previous 3 months).
- (2) Manchester Short Assessment of Quality of Life (MANSA) a 25-item questionnaire measuring quality of life among people experiencing mental illness. The questionnaire contains items including details of housing/employment status, satisfaction with quality of life and physical/mental health status, rated on a scale between 1 = 'Couldn't be worse' and 7 = 'Couldn't be better'; the measure demonstrated strong internal consistency (Cronbach's $\alpha = 0.74$) (Priebe *et al.* 1999).
- (3) Social Inclusion Scale a 16-item questionnaire assessing three domains: (1) Social Isolation (four items), (2) Social Relations (nine items) and (3) Social Acceptance (five items). Each item is rated from 1 = 'Not at all' to 4='Yes definitely', with total scores ranging from 16 to 64; the measure demonstrated strong internal consistency (Cronbach's α =0.85) (Secker *et al.* 2009).
- (4) Camberwell Assessment of Need for Mothers (short version) (CAN-M(S)) – incorporating the full 22 items of the original CAN measure (Phelan *et al.* 1995) plus four additional items measuring the needs of pregnant women and mothers experiencing mental illness (i.e., pregnancy care, practical/emotional demands of childcare); the 22 generic domain items are applicable to men. Scores of either 1 = 'Met need', 2 = 'Unmet need' or 0 = 'No problem' are assigned per item; Spearman's *r* correlation coefficients were moderate with the GAF-S (-0.36) and GAF-D (-0.52) (Howard *et al.* 2008).
- (5) Post traumatic stress disorder Scale (PDS®) a 49-item questionnaire, with six components: (1) PTSD diagnosis, (2) symptom severity score, (3) number of symptoms endorsed, (4) specifiers related to onset and duration of symptoms, (5) symptom severity rating and (6) level of impairment in functioning. Criterion must be met for

each of the six components; the measure demonstrated strong internal consistency (Cronbach's $\alpha \ge 0.78$) (Foa, 1995; Foa *et al.* 1997).

- (6) Safety Behaviour Checklist a 15-item questionnaire measuring use of safety behaviours among people experiencing domestic violence. Items score either 'yes', 'no' or 'not applicable'. The total number of behaviours scored are adjusted for applicability, so that each participant's total score falls within the range of 'No Behaviours Performed' (0) to 'All Behaviours Performed' (15); the measure demonstrated strong internal consistency (Cronbach's α = 0.71) (McFarlane *et al.* 2002).
- (7) Adult Service Use Schedule (AD-SUS) an economic evaluation questionnaire measuring use of resources (i.e., the number and length of contacts with health/social services/criminal justice sector) and productivity losses resulting from time off work due to illness (Byford *et al.* 2000; Barrett *et al.* 2006; Kuyken *et al.* 2008). The AD-SUS was adapted through discussions with clinicians and baseline testing, to cover all services relevant to the current population. At baseline, cost data were collected for the 3 months preceding the interview. At follow-up, cost data covered the period from baseline to follow-up.
- (8) EQ-5D a preference-based measure of health-related quality of life measured on five dimensions (i.e., mobility, self-care, usual activities, pain/discomfort and anxiety/depression), each rated on three levels (i.e., no problems, some problems and severe problems). Participants are classified into one of 243 health states, each associated with a score that can be used to calculate quality adjusted life years (QALYs) (EuroQol Group, 1990). The measure has been extensively used in health economic evaluations and its psychometric properties are adequate (see Brooks, 1996 for a summary).
- (9) Qualitative Interviews semi-structured interviews were conducted at follow-up to explore service users' experiences of mental health services response to domestic violence. Interviews were conducted by a trained researcher (KT) and checked for quality and consistency by two senior researchers (DR and LH). Interviews lasted between 15–30 min and were audio-taped and transcribed verbatim.

Process evaluation

Data were collected on the number of clinicians' referrals to domestic violence advocacy and the uptake and engagement of advocacy by service users. Data were also collected on the type/frequency of advocacy delivered (e.g., safety planning, civil/criminal remedies and custody/childcare issues).

Analysis

Statistical analysis

Descriptive statistics were calculated for demographic characteristics and process measures. Medians were calculated as a summary statistic for service user and professional outcomes and Wilcoxon signed rank tests were performed. All analyses were conducted using SPSS 15.

Economic analysis

The economic evaluation took a broad perspective, including all hospital and community health and social services, criminal justice sector resources and service-provided accommodation, such as hostels and refuges. All unit costs were calculated for the financial year 2009-10. Intervention session costs were calculated on the basis of the salary of the domestic violence advisors plus overheads (administrative, managerial and capital) (Curtis, 2010). Indirect time associated with the intervention, including preparation, supervision and training, was based on information provided by the advisors on the ratio of direct face-to-face contact to all other activities. The Department of Health's national reference costs for NHS Trusts (Department of Health, 2011) were applied to hospital contacts. National UK unit costs, inflated where necessary using the retail price index and the pay and price index, were applied to community health and social services, supported accommodation and criminal justice resources (Dubourg & Hamed, 2005; Curtis, 2010; Royal Pharmaceutical Society, 2010; Department of Health, 2011). Discounting was not necessary due to the short follow-up period. Owing to the small sample sizes, cost-effectiveness analysis was not undertaken. Instead, resource use is presented descriptively and changes in total costs over time are analysed using the paired samples *t*-test with the validity of the results confirmed using bootstrapping (Efron & Tibshirani, 1993). The advantage of this approach, as opposed to non-parametric tests, is the ability to make inferences about the arithmetic mean, a more meaningful summary statistic for cost data than the median (Barber & Thompson, 1998).

Qualitative analysis

Qualitative analysis was conducted by two researchers (KT and SO) in NVivo8, following the principles of thematic analysis (Boyatzis, 1998). Early themes and patterns in the data formed the basis of an initial coding frame, which was iteratively refined and reapplied to earlier transcripts as analysis progressed. Themes were interrogated and a deviant cases analysis was undertaken; at each stage it was ensured that saturation of themes had been achieved.

Ethical approval

This study received ethics approval from the Joint South London and the Maudsley and the Institute of Psychiatry NHS Research Ethics Committee (ref 09/H0807/7).

Results

Sample characteristics

Clinicians

Over half of clinicians in each of the participating teams received domestic violence training: (1) 12/22 (55%); (2) 17/25 (68%) and (3) 33/52 (63%).

Twenty nine clinicians completed both baseline and follow-up interviews: 23 in the intervention arm and six in the control arm. Clinicians' mean age was 43 years (s.D. 6.71), 17 (61%) were female. A total of 13 (50%) nurses, nine (35%) social workers and four (15%) doctors participated, with an average number of 13.5 years (s.D. 5.88) qualified. Nineteen (76%) clinicians had received some previous training on domestic violence.

Service users

Of 139 service users assessed for eligibility, 83 did not meet the inclusion criteria and 13 declined to participate (10 intervention and three control arm participants). We were unable to establish contact with eight service users (see Fig. 1).

Recruitment of service users via care-coordinators was high in the intervention group (21/27) but low in the control arm (1/7); four self-referrals were recruited in both arms. During researcher screening sessions a total of 87 service users (n = 37 in the intervention arm and n = 50 in the control arm) were interviewed: four of the five eligible service users in the intervention arm and two of the four in the control arm agreed to participate.

Results are presented on the 34 service users (27 intervention and seven control participants) who completed interviews at baseline and 3 months follow-up. Service users' mean age was 38 years (s.d. 10.77); 33 (97%) were female, 13 (38%) were white and 21 (62%) were of black and minority ethnic origin. A total of 27 (79%) service users were single/separated or divorced and seven (21%) were married; 17 (50%) lived alone and 12 (35%) with a partner and/or children. In all, 11 women had children. Primary diagnoses included depressive disorder (n = 13 (39%)), bipolar disorder (n = 5 (15%)) and schizophrenia and related disorders (n = 6 (18%)).

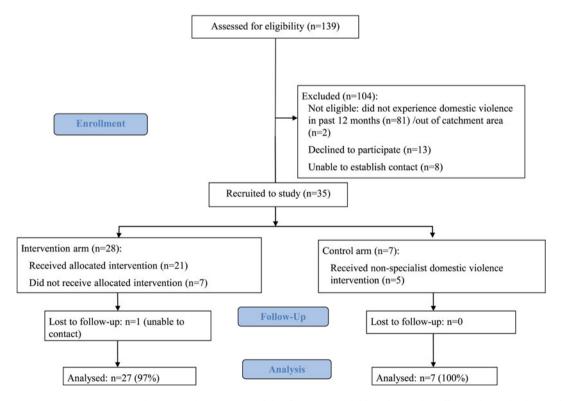


Fig. 1. Service users recruitment chart. (A colour version of this figure is available online at http://journals.cambridge.org/eps)

	Intervention a	(Control arm $(n=6)$	5)				
Outcome PREMIS sub-scale items	Baseline score median (range)	Follow-up score median (range)	Z	р	Baseline score median (range)	Follow-up score median (range)	Z	р
Perceived preparation	3.9 (2.9–4.4)	5.0 (4.1–5.5)	3.04	0.002	4.5 (2.9–5.2)	4.1 (3.4–4.9)	0.21	0.833
Perceived knowledge	3.7 (2.8–4.1)	5.1 (3.9–5.7)	2.78	0.005	4.7 (2.9–5.0)	4.2 (3.2–4.8)	0.31	0.753
Actual knowledge	24.0 (21.0-28.0)	26.5 (22.8-31.0)	2.29	0.022	26.5 (23.8-28.5)	25.0 (21.3-27.5)	0.41	0.680
Staff preparation	4.0 (3.4-4.8)	4.8 (4.5-5.4)	2.52	0.012	3.9 (3.2–5.1)	3.8 (2.8-5.5)	0.41	0.686
Legal requirements	3.0 (3.0–5.0)	5.0 (3.0–5.3)	2.60	0.009	2.0 (1.5–5.0)	2.5 (1.8–5.3)	0.37	0.715
Workplace issues	4.2 (3.7-5.0)	4.9 (4.5-5.4)	2.61	0.009	4.3 (3.8-5.1)	4.5 (3.3-4.8)	0.32	0.752
Self efficacy	3.7 (3.0-4.2)	4.3 (4.0-5.0)	2.90	0.004	3.8 (2.3-4.3)	3.5 (2.8-4.4)	0.00	1.000
Alcohol/drugs	4.0 (3.7-4.7)	4.0 (3.3-4.6)	0.33	0.743	4.7 (4.0-5.0)	4.2 (3.9-4.4)	2.02	0.043
Victim understanding	4.7 (4.4–5.5)	4.8 (4.5–5.3)	0.34	0.737	5.0 (4.5–5.8)	5.0 (4.3-6.0)	0.55	0.581
Practice issues	16.3 (9.0-26.6)	24.2 (13.0-34.9)	2.01	0.044	15.4 (10.7-26.2)	10.5 (5.5-25.6)	0.73	0.463

Table 1. Clinicians baseline and follow-up PREMIS results by grouping

Among the intervention arm, 22 of the 27 service users elected to receive domestic violence advocacy. Five of the seven service users in the control arm were referred to domestic violence services. attitudes and behaviours towards domestic violence (see Table 1).

Outcomes for services users

Frequency/severity of violence

Outcomes for clinicians

Knowledge, attitudes and behaviour towards domestic violence

At follow-up, clinicians in the intervention arm reported improvements (across eight of the 10 PREMIS sub-scales) in relation to their knowledge, At follow-up, service users in the intervention arm reported reductions in total violence on the CAS (Table 2). Analysis of qualitative interviews was consistent with these findings, and service users described how domestic violence advisors supported them to take actions to reduce their risk of harm:

Table 2. Service users violence and abuse outcome scores at baseline and follow-up by grouping

Intervention group $(n = 27)$					Control group $(n = 7)$				
Outcome (CAS)	Baseline score median (range)	Follow-up score median (range)	Z	Р	Baseline score median (range)	Follow-up score median (range)	Z	р	
Total violence score	32.0 (23.0-44.0)	4.0 (0.0–19.0)	4.28	< 0.001	30.0 (11.0-47.0)	14.0 (0.0-20.0)	1.86	0.063	
Severe combined abuse sub-scale	1.0 (0.0-4.0)	0.0 (0.0–1.0)	2.52	0.012	1.0 (0.0–9.0)	0.0 (0.0–1.0)	1.49	0.136	
Physical abuse sub-scale	6.0 (2.0–11.0)	0.0 (0.0–1.0)	4.21	< 0.001	6.0 (0.0–14.0)	0.0 (0.0–0.0)	2.02	0.043	
Emotional abuse sub-scale	18.0 (15.0–23.0)	4.0 (0.0–13.0)	4.18	<0.001	19.0 (7.0–22.0)	10.0 (0.0–15.0)	1.78	0.075	
Harassment sub-scale	3.0 (2.0–6.0)	0.0 (0.0–2.0)	2.89	0.004	3.0 (2.0–4.0)	2.0 (0.0–2.0)	1.29	0.197	

Needs

Service users in the intervention arm reported reductions in the number of unmet needs on the CAN-M(S) at follow-up (Table 3). These findings were supported by the qualitative data, and several service users described how domestic violence advisors and trained clinicians provided assistance for their needs:

"She [advisor] looked at other areas of help, like support for the children and things to help me financially... They [advisor and clinicians] knew the right people to put you in contact with" (SU12, accessed advocacy)

Interestingly, however, one woman explained that once clinicians were aware that she was receiving assistance from the advisors they no longer facilitated any discussions about the abuse:

"Knowing that I was already in touch with them [advisors] and I was getting enough support I just think they [clinicians] just dealt with the medical side of things" (SU12, accessed advocacy)

Social inclusion

Service users in the intervention arm reported increases in perceptions of social inclusion on the social isolation sub-scale of the Social Inclusion measure at follow-up (Table 3). During qualitative interviews, service users spoke about the importance of the intervention in enhancing their sense of social inclusion:

"He [clinician] said 'we'll get you to associate with local organisations; get you meeting other people'...There are art classes, shiatsu, and cookery class...I said 'yes I will try and do that', try and get involved again with people" (SU31, accessed advocacy)

Quality of life

Service users in the intervention arm reported increases in satisfaction with life as a whole (MANSA) at follow-up, but little change was observed

Table 3. Service users' secondary outcome scores at baseline and follow-up by grouping

	Intervention a	Control arm $(n = 7)$						
	Baseline score median (range)	Follow-up score median (range)	Ζ	р	Baseline score median (range)	Follow-up score median (range)	Ζ	р
CAN-M (S)								
Unmet needs sub-scale	8.0 (5.0–10.0)	5.0 (3.0-9.0)	3.05	0.002	9.0 (5.0–14.0)	7.0 (5.0-8.0)	1.78	0.074
Social inclusion r	neasure							
Total score	41.0 (33.0-48.0)	43.0 (38.0-50.0)	1.65	0.100	39.0 (33.0-45.0)	43.0 (35.0-49.0)	0.85	0.395
Social isolation sub-scale	9.0 (7.0–14.0)	12.0 (9.0–14.0)	2.07	0.039	13.0 (10.0–13.0)	13.0 (9.0–14.0)	0.14	0.893
Social relations sub-scale	21.0 (18.0–24.0)	22.0 (18.0–24.0)	1.41	0.160	18.0 (13.0–22.0)	22.0 (16.0–26.0)	1.19	0.235
Social acceptance sub-scale	14.0 (11.0–18.0)	15.0 (12.0–17.0)	0.82	0.412	15.0 (13.0–18.0)	15.0 (12.0–17.0)	0.41	0.684
MANSA								
Satisfaction with different life domains	3.5 (2.0–4.5)	4.0 (2.5–4.5)	0.54	0.589	3.5 (2.5–4.0)	4.5 (3.0-4.5)	1.81	0.071
Satisfaction with life as a whole	3.2 (2.6–3.9)	3.7 (3.2–4.2)	2.46	0.014	3.6 (3.0-4.1)	3.7 (3.4–4.7)	1.52	0.128
Safety behaviour	checklist							
Total Score EQ-5D	8.0 (7.0–10.3)	8.0 (6.0–10.0)	0.73	0.464	10.0 (9.0–10.0)	8.0 (8.0–9.0)	2.04	0.041
Summary index	0.8 (-0.0-1.0)	0.8 (-0.0-1.0)	0.44	0.663	0.7 (0.2–0.9)	0.6 (0.1–1.0)	0.51	0.612

Note: CAN-M(S): Camberwell Assessment of Need for Mothers (Short version); MANSA: Manchester Short Assessment of Quality of Life.

in EQ-5D health-related quality of life scores (Table 3). During qualitative interviews, service users receiving the intervention described how their quality of life had improved, and many reported improvements in their well-being:

"She's [advisor] really helped me...Before I felt like I didn't really care, but now I do care...She's made me care more about myself" (SU20, accessed advocacy)

This was not consistently reported across the sample, however, as six service users identified limited changes in their health-related quality of life at follow-up:

"I feel like an absolute wreck at the moment, but I'm trying to push through, you know, trying to shut the thoughts and the feelings out, but I'm thinking 'how can I get through this?'" (SU38, accessed advocacy)

Safety behaviour

No changes were observed for utilization of safety behaviours in the intervention arm at follow-up (Table 3). Analysis of qualitative interviews did not provide insights into why the safety behaviour of service users had not improved.

Post traumatic stress

At baseline, 19 (66%) participants in the intervention arm and seven (100%) in the control arm screened positive for PTSD on the PDS[®]. At follow-up, 21 (72%) participants in the intervention arm and five (71%) in the control arm screened positive for PTSD. No participants in the control arm and only one in the intervention arm had been diagnosed with PTSD by clinicians. Analysis of the qualitative data did not provide further insights into these findings.

Feasibility and acceptability

Of the 99 eligible clinicians, 95 (96%) completed baseline interviews and 29 (31%) completed follow-up interviews. Retention rates among clinicians in the control arm were considerably lower than the intervention arm (n = 6 and n = 23, respectively).

Of the 65 eligible service users, 35 (54%) completed baseline interviews and 34 (97%) completed follow-up interviews. Recruitment of service users via care-coordinators proved to be more difficult in the control arm compared with the intervention arm (n = 1 and n = 21, respectively) and only a small number of service users were identified through researcher screening sessions and self-referrals in each of the arms.

Adverse outcomes

There did not appear to be any direct adverse effects among participants as a consequence of the intervention or the research study.

Process evaluation

Among the intervention arm, 22 (74%) participants chose to receive domestic violence advocacy. On average, service users received seven one-hour meetings and 28 twenty-minute telephone conversations with advisors. The average number of sessions arranged by advisors was nine (s.D. 6.1, range 1-31) and the average number of sessions attended by service users was seven (s.D. 5.8, range 2-26). The advisors provided a range of practical and emotional assistance to service users, including referral to Multi-Agency Risk Assessment Conferences (MARACs), which help to protect victims at high risk of harm by developing coordinated action plans between statutory and voluntary sector organizations (Robinson, 2004). Rates of referral to MARACs during the two year study period exceeded those observed from adult mental health services in the year prior to the study.

Economic evaluation

Resource use

Service users in the control arm made no use of supported or service-provided accommodation, either in the 3 months prior to study entry or over the 3 months follow-up period. Service users in the intervention arm, however, made some use of supported accommodation, refuge and bed and breakfast facilities, both 3 months before and 3 months after entry to the study.

Hospital contacts were low in both arms. Four participants (three intervention and one control participant) reported inpatient hospital stays at follow-up (from one to three nights), following a severe asthma attack, pneumonia, chronic sleep problems or drug misuse. A wide range of community-based services were accessed by service users, most often GPs, care coordinators and domestic violence services (nonintervention). Few differences were observed between baseline and follow-up.

Contacts with the criminal justice sector were low in both arms. Three participants in the intervention arm were charged with committing physical assault and one was charged with breaching a domestic violence injunction order at 3 months follow-up. One participant in the control arm was charged with possession of drugs. Contacts with solicitors increased in the intervention arm between baseline and follow-up (see Table 4).

	Base	eline		Follow-up		
Resources	LARA (<i>n</i> = 27)	Control $(n=7)$	% using service	LARA (<i>n</i> =27)	Control $(n=7)$	% using service
Supported accommodation weeks						
Bed and breakfast, boarding house, hotel	0.0 (0.0)	0.0 (0.0)	0.0	0.4 (1.9)	0.0 (0.0)	5.9
Refuge	0.4 (2.3)	0.0 (0.0)	2.9	0.2 (1.2)	0.0 (0.0)	2.9
Staffed accommodation	0.3 (1.7)	0.0 (0.0)	2.9	0.4 (2.3)	0.0 (0.0)	2.9
Homeless: living with friends or relatives	0.1 (0.4)	0.6 (1.5)	5.9	0.1 (0.4)	0.0 (0.0)	2.9
Hospital-based health services	~ /				× ,	
Hospital nights	2.3 (11.1)	0.0 (0.0)	11.8	0.6 (1.4)	0.9 (2.3)	20.6
Outpatient contacts	1.1 (2.0)	3.1 (4.9)	38.2	1.2 (3.9)	1.9 (1.4)	41.2
Accident and emergency contacts	0.5 (0.8)	0.4 (0.5)	38.2	0.2 (0.4)	0.1 (0.4)	14.7
Community health and social service contact	. ,				× ,	
Intervention	0.0 (0.0)	0.0 (0.0)	0.0	17.8 (19.6)	0.0 (0.0)	79.4
General practitioner (practice)	4.7 (4.4)	3.0 (2.2)	94.1	3.4 (3.1)	5.5 (4.8)	94.1
General practitioner (phone)	0.4 (0.8)	1.1 (2.3)	20.6	0.5 (2.3)	2.1 (3.7)	14.7
General practice nurse	0.6 (1.2)	0.1 (0.4)	29.4	0.4 (0.9)	0.3 (0.5)	32.4
Care coordinator	4.3 (3.8)	6.3 (3.3)	88.2	4.6 (4.3)	4.4 (4.7)	76.5
Psychiatrist	0.4 (0.7)	0.4 (0.5)	29.4	0.3 (0.8)	1.0 (1.2)	29.4
Psychologist	0.3 (1.0)	1.9 (4.5)	14.7	0.3 (1.0)	1.7 (4.5)	11.8
Home treatment team	1.1 (4.3)	0.0 (0.0)	5.9	0.0 (0.0)	0.6 (1.5)	2.9
Health visitor	0.2 (0.7)	0.0 (0.0)	5.9	0.5 (2.3)	0.0 (0.0)	5.9
Counsellor	0.0 (0.0)	0.0 (0.0)	0.0	0.6 (2.5)	0.0 (0.0)	5.9
Psychotherapist	0.2 (0.8)	0.0 (0.0)	5.9	0.0 (0.2)	0.0 (0.0)	2.9
Art therapy	0.4 (2.3)	0.0 (0.0)	2.9	0.0 (0.0)	0.0 (0.0)	0.0
Drug worker	0.0 (0.2)	0.0 (0.0)	2.9	1.6 (7.0)	0.0 (0.0)	8.8
Child and family support worker	0.9 (2.0)	1.3 (2.3)	26.5	1.2 (2.7)	0.0 (0.0)	20.6
Home help	0.2 (0.6)	0.0 (0.0)	5.9	0.0 (0.0)	1.7 (4.5)	2.9
Day centre	1.8 (5.1)	9.0 (11.1)	29.4	1.8 (7.0)	12.0 (18.3)	20.6
Drop in centre	0.1 (0.4)	1.7 (4.5)	5.9	0.0 (0.0)	1.0 (2.7)	2.9
Housing support worker	0.9 (2.5)	0.0 (0.0)	17.6	1.1 (3.9)	0.1 (0.4)	17.6
Domestic violence service (non-intervention)	1.3 (1.4)	1.4 (1.4)	61.8	3.5 (3.5)	3.0 (5.2)	61.8
Advice service	0.15 (0.4)	0.4 (0.5)	20.6	0.4 (0.8)	0.7 (1.9)	17.6
Helpline	1.0 (4.1)	0.3 (0.8)	11.8	0.3 (0.7)	0.0 (0.0)	11.8
Self help	0.3 (1.2)	0.0 (0.0)	5.9	0.0 (0.0)	0.0 (0.0)	0.0
Other health or social care service	0.3 (0.9)	0.7 (1.5)	17.6	0.7 (2.4)	2.6 (4.7)	23.5
Criminal justice sector contacts	0.0 (0.5)	(1.0)	1	··· (<u>-</u> ···)	()	_0.0
Probation officer	0.1 (0.6)	0.0 (0.0)	2.9	0.0 (0.0)	0.0 (0.0)	0.0
Solicitor	0.5 (1.3)	0.9 (1.2)	29.4	0.8 (1.2)	0.1 (0.4)	35.3

Costs

The LARA intervention was estimated to cost £67 per hour and the total cost of the LARA intervention was £1,213 per participant, on average. Between baseline and follow-up, the total cost of all services per participant in the intervention arm (including the cost of the LARA intervention) increased by almost the same amount as the additional cost of the LARA intervention (£1,173), but this difference was not statistically significant (see Table 5). The total cost of services used by the control arm also increased between baseline and follow-up (mean difference £962), with an increase in the cost of both hospital and community services, but no substantial reductions in any service category. Again, this difference was not statistically significant.

Discussion

This study is the first to our knowledge to pilot a domestic violence intervention involving reciprocal training between mental health and domestic violence services, and a direct referral pathway to domestic violence advocacy for psychiatric service users. This pilot

Intervention arm $(n=27)$	Baseline mean (s.D.)	Follow-up mean (s.D.)	Difference (95% CI)	<i>p</i> -value	
Total cost health and social services	2530 (4239)	2512 (2230)	-18 (-1763 to 1726)		
Intervention	0 (0)	1213 (1340)	1213 (682 to 1743)		
Hospital services	1009 (3891)	526 (1196)	-483 (-1814 to 848)		
Community services	1119 (651)	1659 (1386)	541 (- 45 to 1126)		
Medication	200 (436)	15 (49)	-184 (-359 to -10)		
Supported accommodation	203 (860)	312 (1161)	109 (- 474 to 692)		
Criminal justice services	51 (158)	30 (62)	-21 (-87 to 45)		
Total cost	2582 (4227)	3755 (3524)	1173 (- 877 to 3224)	0.250	
Control arm $(n=7)$	Baseline mean (s.D.)	Follow-up mean (s.D.)	Difference (95% CI)	<i>p</i> -value	
Total cost health and social services	2019 (917)	3031 (1898)	1013 (- 754 to 2779)		
Hospital services	420 (449)	830 (1557)	410 (- 1280 to 2100)		
Community services	1507 (761)	2184 (1678)	677 (- 706 to 2060)		
Medication	92 (162)	17 (28)	-75 (-235 to 86)		
Supported accommodation	0 (0)	0 (0)	0		
Criminal justice services	56 (79)	5 (12)	-51 (-120 to 18)		
Total cost	2074 (951)	3036 (1891)	962 (-824 to 2747)	0.236	

Table 5. Total cost per participant 3 months prior to intervention and over the 3-month follow-up period (\pounds)

data suggests that the intervention may improve clinicians' knowledge, attitudes and behaviour and improve outcomes for service users.

Clinicians' knowledge, attitudes and behaviours

Baseline PREMIS scores among clinicians in this study were comparable with those reported by nursing, social work and dentistry professionals (Connor et al. 2010, 2011) and highlight the lack of preparedness and readiness to address domestic violence among mental health professionals. At follow-up, clinicians in the intervention arm had improved knowledge, attitudes and behaviours across eight of the 10 PREMIS sub-scale items. Findings from this study, therefore, provide further support for implementation of training on domestic violence within the psychiatric curriculum (Morgan, 2007; Hegarty, 2011). Existing research in mental health settings, which generally focuses on childhood abuse, has shown that clinicians' identification and response to abuse improves following the implementation abuse training programmes (Cavanagh et al. 2004). Initial findings from this study suggest that a domestic violence training programme may also lead to improvements in clinicians' identification and referral practices for domestic violence.

Service users outcomes

Service users in the intervention arm reported reductions in frequency/severity of violence and unmet needs and an increase in social inclusion at follow-up. Comparable findings on the efficacy of domestic violence advocacy in improving health outcomes among non-psychiatric service users have been reported elsewhere (Feder *et al.* 2009). These findings highlight the benefit of inter-agency working partnerships between mental health and domestic violence sectors in improving outcomes for service users. Research suggests that the maintenance of interdisciplinary networks requires the establishment of common therapy targets, the exchange of experience and education and mutual support (Bramesfeld *et al.* 2012).

Little change was observed in service users' use of safety behaviours at follow-up. A reason for this could be due to the fact that the measure focuses on safety behaviours adopted when preparing for separation from the abuser; a process that may not be adequately captured in a three month follow-up period.

Another notable finding was that, although only one service user had been diagnosed with PTSD by a clinician, many service users screened positive for PTSD. These results are consistent with findings that clinicians frequently fail to identify PTSD among patients (Mueser *et al.* 1998; Zimmerman & Mattia, 1999). These findings provide support for additional education to improve clinicians' identification of PTSD and the incorporation of abuse-related trauma in treatment plans. Indeed, a diagnosis of PTSD can be helpful for patients, as they can identify their symptoms as a common response to life-threatening trauma (Duxbury, 2006).

Interviews with service users highlight the extent of positive changes to health and quality of life outcomes following support from domestic violence advisors, most notably reductions in experiences of violence. These findings indicate that interventions comprising of practical and emotional support (e.g., domestic violence education, safety planning and legal/housing support), key information (e.g., information on welfare rights, housing options and legal issues) and signposting can lead to improved outcomes for service users. Similarly, a recent systematic review found that personalized support interventions for people with severe mental illness - including advocacy and emotional support - can improve psychiatric outcomes and patient satisfaction with services (Siskind et al. 2012). Some contrasting findings were identified among service users, however, and a few in the intervention arm reported limited change in perceived quality of life at follow-up. This finding mirrors research on patterns of recovery among victims of domestic violence, which is shown to be a gradual and dynamic process (Krause et al. 2008).

Cost outcomes

The total cost of health, social care and criminal justice sector contacts increased by a similar amount in both arms between the three month period prior to study entry and the three month follow-up period. The intervention arm demonstrated a decrease in the use of hospital services alongside an increase in the use of community, health and social care and supported/ service-provided accommodation services. Findings suggest that improvements in outcome may be generated at a relatively small additional cost, but this can only be tested by a larger study.

Study feasibility and process outcomes

This study aimed to assess the feasibility of a future cluster RCT. However, as few people were identified as experiencing domestic violence in control teams it suggests that evaluation of such an intervention using a cluster RCT design would be challenging as recruitment into the control arm would probably be similarly difficult. Nevertheless, we found a very high retention rate among service users (97%) indicating that it is possible to recruit and retain people experiencing severe mental illness and domestic violence in research. Service users were able to participate in multiple questionnaires with high completion rates. Other study designs may therefore be more appropriate when evaluating this type of intervention. Comparisons of routine outcome data such as rates of referrals to advocacy or MARACs and number of unmet needs at yearly multi-disciplinary reviews in areas where the intervention is available compared

with areas where it has not been introduced may be helpful.

Limitations

Despite a high retention rate of service users at follow-up (97%), the study sample size was small. Low numbers of service users experiencing domestic violence were identified in the control arm (n = 7) and a low response rate was achieved among clinicians at follow-up (29/95 (31%)).

The information on domestic violence support services provided to clinicians in the control arm may have diluted the effect of the evaluation of the intervention delivered to clinicians and service users in the intervention arm. In addition, only one postintervention time point measured outcomes among service users (3 months follow-up) and clinicians (6 months follow-up) and the stability of changes thereafter are unknown.

This study was carried out in a socio-economically deprived setting where there are a high proportion of people from black and minority ethnic groups and, therefore, may not be replicable to other settings. The ability to extrapolate findings from qualitative interviews on service users' experience of the intervention may be limited by the focused nature of the topic guide, which sought to address specific items relating to the intervention. Nevertheless, this study provides preliminary evidence that multi-faceted domestic violence intervention in community mental health settings may be effective in improving services user outcomes.

Implications

Further research is needed to assess the feasibility and effectiveness of interventions to improve outcomes for service users experiencing domestic violence. Interventions that address clinicians' response to domestic violence and provide targeted support for service users may lead to improvements in clinical practice. Finally, greater collaboration between mental health and domestic violence sectors may lead to improved health outcomes for service users.

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Conflict of Interest

LMH and DR are supported by the South London and Maudsley NHS Foundation Trust/Institute of Psychiatry, King's College London specialist Biomedical Research Centre. All other authors have no declarations of interest.

Ethical Standards

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

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Appendix 1. Standard operating procedure (SOP)

1.1. Scope

This document is a SOP outlining the process when in contact with mental health service users. This document applies to all researchers undertaking work with mental health service users on the Linking Abuse and Recovery through Advocacy (LARA) study.

1.2. Initial contact with mental health service users

If a service user contacts you on the telephone to arrange an appointment greet them using your pseudonym and establish with him or her that they are currently in a safe environment to speak with you. Ask the service user if it would be beneficial for you to call them back to explain the study and interview process. Ascertain an appropriate contact number and time for future contact between yourself and the service user. If you make contact with an unattended service user at the CMHT base greet them using your pseudonym and ask if they would be willing to answer a few questions related to safety in the home.

During the initial contact:

- Arrange a time and location to meet privately with the service user either in the CMHT or their home, to discuss the participant information sheet, which outlines the full implications of the study and issues of consent. In general, aim to meet at the CMHT unless the service user does not want to.
- If the service user would like to attend the CMHT, ask the team if you can use a room at the time you have agreed with the service user.

1.3. Home visits to mental health service users

Discuss with the care coordinator any safety issues that may affect your visit i.e., discuss with the care coordinator any safety issues regarding:

- the location of the service user's home
- if the service user has any previous history of violence to self or others
- if the service user's partner, family members, or pets may be dangerous
- If the service user (or any other person who is sharing the house with the service user) has a history of drug/alcohol problems
- If there is any danger from any of these sources then again ask the service user if she/he can attend the CMHT team base and ask the CMHT if you could use a room there for the interview.

If the care coordinator confirms that there is no apparent danger in the home visit, then the researchers can prepare to visit the service user's home. If a service user contacts you on the telephone to arrange an appointment, establish with him or her that they are currently in a safe environment to speak with you. Ask the service user if it would be beneficial for you to call them back on their own phone.

- Shortly before you leave for the interview you must tell a responsible person (your administrator or another LARA researcher) the address that you are going to, your mobile telephone number, the time that the meeting is likely to start and be completed and details of who to contact if you do not confirm completion of the meeting. You must be able to confirm that they have this information (leaving a message is not sufficient) and that they will be available to receive your call on completion of the meeting or act if they do not receive a call.
- This person must know the steps to take if you do not contact them on time. In the first instance they should contact you on your phone to check that you are safe. If they cannot get an answer they should contact the administrator of the LARA team or Dr Louise Howard: you must give them the relevant contact details. If they have reason to believe there is a problem they should also contact the police.
- You must have a mobile phone with you with 'speed dial' set for your contact person-and it is advisable that you carry a personal alarm. Furthermore, an alarm phrase should be agreed with your contact. Therefore, if you call your contact and you feel in anyway in danger and say 'please could you get my red folder', then the contact will know from this phrase that you are in danger without alarming the service user. Then, your contact may alert the police. Make sure you charge your phone before you do the home visit.
- Assess the area/house that you are going to. If you feel uncomfortable with the location or the circumstances even if it is at the last minute or during the meeting-make your excuse and leave.
- Make sure that you are dressed appropriately. Take into consideration cultural and gender issues. For women: wear something comfortable and not short skirts/high heels, in case you need to run.
- Do not use the bathroom. It is usually upstairs (not easy access to the front door in case you need to leave the house immediately) or you can be easily trapped in it.
- Make sure that you conduct the meeting in a 'neutral room' such as the living room. Avoid doing the assessments in the bedroom or the kitchen (danger of knives etc).
- Make sure you sit next to the door or have easy access to it.
- If you do not feel comfortable with the area/building do not use the lift to go to the service user's house.

1.4. CMHT visits with service users

Arrive at the CMHT shortly before your meeting and inform the receptionist of the purpose of your visit. Sign in at the front desk and establish where the meeting room is and where the panic alarm is located within the room. Inform the receptionist of the start and estimated finish time of the interview and the location of the room you are using. Following completion of the interview, return to reception and sign out before leaving the CMHT.

- Meet the service user in the reception area of the CMHT and greet them using your pseudonym.
- Make sure that you conduct the meeting in a 'neutral room' that provides sufficient privacy and ensure that the service user is comfortable in this setting.

- Make sure that you are dressed appropriately. Take into consideration cultural and gender issues. For women: wear something comfortable and not short skirts/high heels, in case you need to run.
- You must have a mobile phone with you, with 'speed dial' set for your contact person. If you feel in danger excuse yourself from the room and speak with a member of staff at the CMHT to discuss an appropriate response. If you feel particularly threatened use the panic alarm installed within the room.
- Make sure you sit next to the door or have easy access to it.
- After the meeting ask the service user how they feel and if they would like to discuss anything further with their care coordinator.