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REVIEW ARTICLE

Interventions that support unpaid carers of adult mental health inpatients: a scoping review

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ABSTRACT

Background: Unpaid carers of adult mental health inpatients often lack support for their well-being and feel excluded from decisions about patient care.
Aims: This scoping review aimed to: synthesise the peer-reviewed literature evaluating the outcomes of brief interventions for unpaid carers of adult mental health inpatients, identify transferable lessons for evidenced-informed practice, and establish future research priorities.
Methods: PRISMA scoping review guidelines were followed to search 12 databases using predefined search terms. Two reviewers independently screened papers and applied exclusion/inclusion criteria. Studies were included if they evaluated the impact or outcomes of interventions. Two reviewers extracted data and assessed study quality. Data were synthesised to categorise types of interventions and evidence for their outcomes.
Results: 16 papers met the inclusion criteria, and five types of interventions were identified: those that aimed to (1) increase carer involvement in inpatient care; (2) facilitate organisational change to increase carer support and involvement; (3) provide carers with support; (4) deliver psychoeducation and offer support; and (5) reduce carer stress and improve coping skills.
Conclusions: Whilst evidence of intervention effectiveness was promising, the quality of studies was generally weak. More research is needed to develop an evidence-informed approach to supporting carers during inpatient stays.

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Mental health; unpaid carers; family carers; inpatient; hospital; support; involvement

Introduction

A global pattern of deinstitutionalisation has cemented the role of partners, family and friends in supporting people with a mental health problem living in the community (WHO, 2013). Those providing care and support are referred to as unpaid or informal "carers". There is evidence that where people are supported by carers, they experience better outcomes (Yesufu-Udechuku et al., 2015). However, this comes at a personal cost to the carer. Whilst the positive experience of caring is sometimes acknowledged (Nolan & Lundh, 1999), caring limits time for self-care, employment, and relationships, and coupled with the emotional labour involved, leads to objective and subjective burdens, including reduced income, poor physical and mental health, and lower quality of life (Carers UK, 2019; Fekadu et al., 2019; NHS Digital, 2019; Stuart et al., 2020).

Support for mental health carers

The multiple disadvantages experienced by carers of people living with mental health problems is an international concern (Rowe, 2012). An international taskforce exploring service user and carer involvement in mental health services found consensus on the need for policies to involve and support carers (Wallcraft et al., 2011), a position also supported by the World Health Organisation (Javed & Herman, 2017).

Along with the USA and Australia, the most comprehensive policies to promote carer involvement in service user care have been found in the United Kingdom (UK) (Javed & Herman, 2017; Yeandle, 2016), where the National Institute for Health and Care Excellence (NICE) (2020) provides services guidance to identify and involve carers in patient care, and offer them information, training, and support. The UK Care Act 2014 stated that all carers are entitled to an assessment of their support needs with eligible needs met, although limited funding has prevented translation into practice (Fernandez et al., 2020).

An international scoping review of support for mental health carers in both community and hospital settings found a range of interventions including day care, respite, training, psychoeducation, family interventions, mutual

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support, activity groups, counselling, and multidimensional approaches (Arksey et al., 2002). Most interventions primarily aimed to equip carers with skills for caring, though some focussed on improving carers' health, well-being, and quality of life (Petkari et al., 2021; Sin et al., 2017). Most common were psychoeducational interventions, which educated service users and carers about the illness and recovery journey (Nolan & Petrakis, 2019), and family interventions that promoted the service user's recovery, including family therapy (Arksey et al., 2002; Onwumere et al., 2011). Also common were support groups where carers could access emotional support (Arksey, 2003).

Hospital inpatient stays

Hospital inpatient stays can be a particularly stressful time for carers (Staniszewska et al., 2019). Admission is often preceded by a difficult period of caring, sometimes including police involvement or involuntary detention (Clibbens et al., 2019). Carers experience guilt and trauma which is compounded by family separation (Jankovic et al., 2011; Staniszewska et al., 2019; Stuart et al., 2020; Wakeman & Moran, 2021).

Carers may need support during the inpatient stay, and often value being involved in the inpatient's treatment. The benefits of involving carers in treatment include improved health, well-being and service satisfaction for the service user and their carer (Brimblecombe et al., 2018). In the UK, the Triangle of Care, developed by the UK Carers Trust, aims to develop a therapeutic alliance between service users, carers and mental health practitioners during inpatient stays, and includes best practice guidance for supporting carers, including training staff in carer awareness and referring carers to, or providing, support services (Worthington et al., 2013).

Yet, rhetoric about the importance of carer involvement and support is often not translated into practice (Clibbens et al., 2019). An international scoping review of the experiences of carers during inpatient stays found that carers were not being routinely involved in patient care and were not offered support (Stuart et al., 2020). Carers were excluded from decision-making throughout the inpatient journey from admission (Wyder et al., 2018), therapeutic engagement (McAllister et al., 2021), therapeutic leave (Barlow & Dickens, 2018; Barre, 2003) and discharge planning (Petkari et al., 2021). A study in Germany found that support for carers varied between wards and was sporadic (Schuster et al., 2020).

Barriers to carer involvement on wards include a culture that does not support staff to involve families (Eassom et al., 2014; Giacco et al., 2017). Staff sometimes struggle to identify or engage carers (Aylott et al., 2022; Giacco et al., 2017), have concerns with information sharing due to a perceived conflict with patient confidentiality (Giacco et al., 2017; Gray et al., 2008; Jankovic et al., 2011), or have limited confidence working with families (Stanbridge et al., 2013). To address these issues, clinicians want organisational change to prioritise engaging inpatients and carers (McAllister et al., 2021).

Evidence for interventions for carers during inpatient stays

There is a need for evidenced-informed interventions that support and involve carers during inpatient stays. However, there are no reviews of the evidence for interventions delivered to carers specifically during inpatient stays. Arksey (2003) and Yesufu-Udechuku et al. (2015) reviewed interventions for mental health carers in both community and hospital settings and found psychoeducation and support groups could improve carer knowledge and reduce distress, though the quality of evidence was generally very low. Other reviews have explored interventions for carers supporting people with specific diagnoses, such as eating disorders (Hibbs et al., 2015), schizophrenia and psychosis (Ma et al., 2018; Okpokoro et al., 2014). Petkari et al. (2021) explored interventions for carers in inpatient settings, but only at discharge.

Aims

The scoping review therefore aimed to: identify the types of interventions offered to carers of adult inpatients in mental health hospitals for which evaluations have been published; assess the evidence of their effectiveness; identify lessons for evidence-informed practice; and highlight future research priorities. We included all adult mental health inpatient settings, such as acute, psychiatric intensive care, older adults and rehabilitation wards. The focus was brief health and social care interventions supporting or involving carers, rather than psychoeducation, family intervention or family therapy, which focus more on mental health education or inpatient recovery rather than carer support (Hasan & Belkum, 2019; Onwumere et al., 2011; Sin et al., 2017; Yesufu-Udechuku et al., 2015). The quality of the evidence was also assessed due to the aim to identify effective practice and the low quality of evidence noted in other reviews (Arksey, 2003; Yesufu-Udechuku et al., 2015).

Methods

Review methodology

A preliminary scoping exercise showed that the studies exploring interventions for carers were diverse in focus, design and the outcomes they measured, and therefore a scoping review approach and narrative synthesis of the findings was appropriate. The review followed the PRISMA scoping review guidelines (Tricco et al., 2018). A protocol for the review was developed but not published. In accordance with their guidelines for scoping reviews, the study was not registered on PROSPERO (National Institute for Health Research, 2021).

Eligibility criteria

To be eligible, papers had to be published or in press in a peer-reviewed journal to ensure quality; in the period

2010–2020 to focus on contemporary mental health policy and practice; and describe the practice, and measure the impact of, support or interventions to promote the involvement of carers of adults (aged 18+) with mental health problems during inpatient stays. Carer "support" encompassed any practical, emotional, or social support provided by staff, peers, or the research team delivering an intervention, such as skills courses, informal support on the ward, support groups or referrals to external services. Carer "involvement" included interventions that aimed to include carers in inpatient care, ranging from asking carers' perspectives to co-creating patient care plans. Studies were excluded if they: focussed on outpatients as well as inpatients; described psychoeducation, or family therapy without an additional support component, and were longer than 8 weeks, as the focus was on brief interventions. Studies were not excluded by country of origin, but due to budget constraints, were excluded if not available in the English language.

Search strategy

We searched 12 databases: Web of Science, Scopus, MEDLINE, PsychINFO, ASSIA, EMBASE, Social Policy and Practice, Social Care Online, Google Scholar, Social Services Abstracts, Sociological Abstracts and PubMed on 3 December 2020. Citation lists in eligible studies and relevant literature reviews were also searched.

Search terms covered four categories which were combined using Boolean operators: carers; interventions for carers; inpatient stays; and various terms for mental health problems including a wide range of diagnoses. Following a pilot in two databases, additional criteria were applied to exclude a range of medical conditions; terms relating to the psychiatric care of children and adolescents; and settings such as nursing homes or emergency departments. We refined the search terms after consulting with practitioners, carers, and service users in a research advisory group. The final list of search terms is presented in Figure 1. Search terms were adapted for Google Scholar and Social Care Online due to word limitations. All references were imported into Endnote (version X9) for screening.

Selection of sources of evidence

Duplicates were removed and abstracts screened for inclusion by two reviewers. Papers were reviewed concurrently and retained at this stage if eligibility could not be determined from the abstract.

Following initial screening, full papers were retrieved to assess eligibility based on more detailed inclusion criteria. This was done in two stages; papers were first excluded if they were not relevant; were conference abstracts; described a review; or the full paper was not available in English. The remaining papers were then read in full and summarised in a spreadsheet that recorded intervention type and study design.

Data extraction and quality appraisal

Data was extracted in two spreadsheets designed and piloted by the research team. First, information about the types of intervention was recorded. This included: a brief description of the intervention; its aims; whether it included carers and inpatients; who delivered it, where and with what training; at what stage during the hospital stay it was offered; for how long; and with what outcomes (Table 1). Another table extracted information about the methods used in the study and included: the country of origin; study design; recruitment; sample of carers, including demographics and characteristics; when data was collected; outcome measures; how data was analysed; and the quality appraisal score (Table 2).

Studies were quality appraised using the approach by Petkari et al. (2021) which similarly reviewed a range of quantitative, qualitative, and descriptive case study designs. The Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies developed by Thomas et al. (2004) and the Critical Appraisal Skills Programme (CASP) for qualitative studies (CASP, 2018) were used. Other studies, such as descriptive case studies with post-test data only, were evaluated narratively, assessing design and risk of bias. Where studies used combinations of approaches, the tools were applied to assess components of the study. The quality appraisal was completed by two researchers and any differences in scores were resolved through discussion.

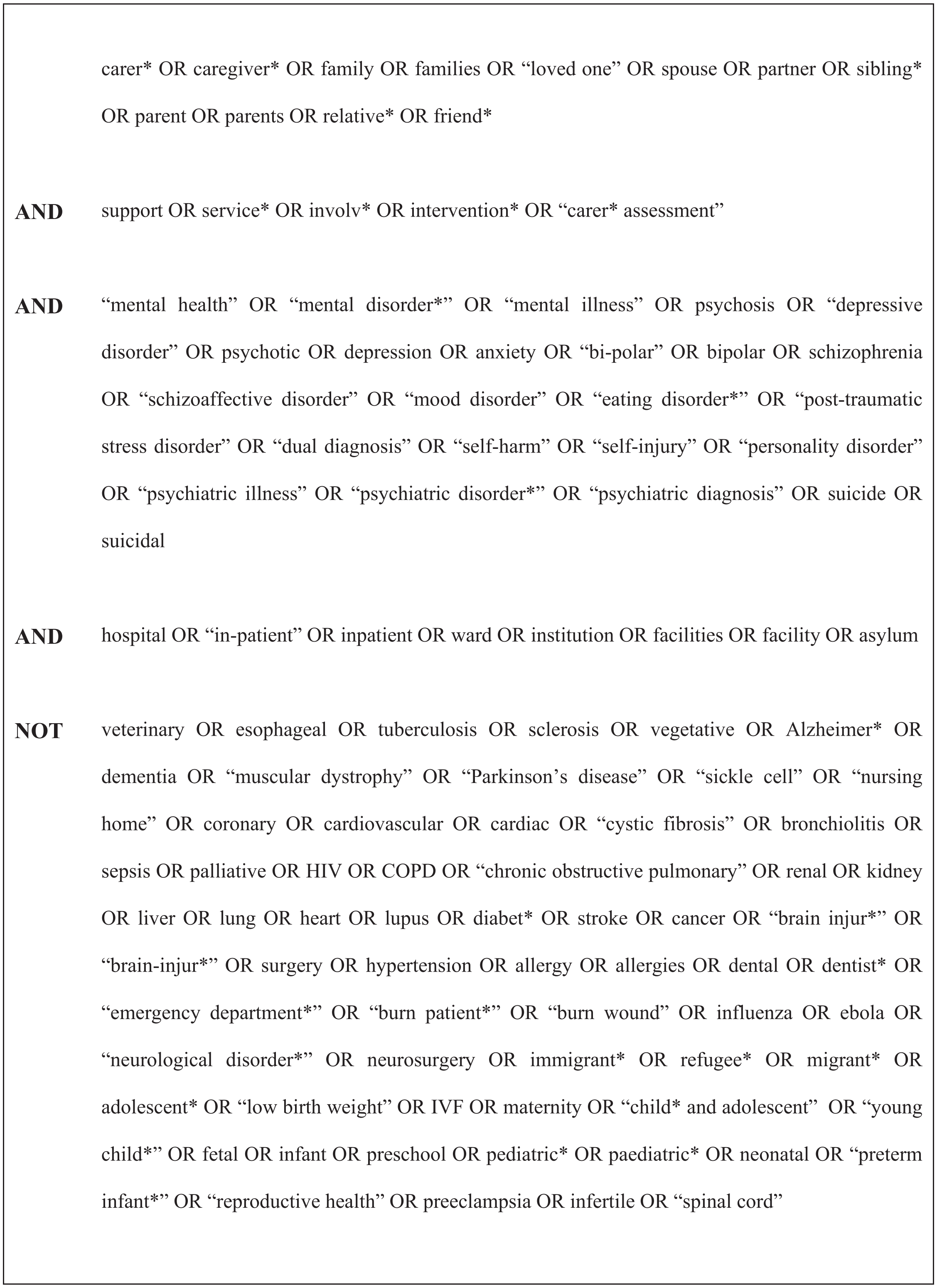
Data synthesis

A narrative approach was used to synthesise the characteristics of interventions and the evidence of their effectiveness. A categorisation of different types of interventions was devised from the data extraction tables and refined by the research team. The interventions within each category were then summarised through responding to questions designed by the research team to extract data from the identified papers (Table 1): how were the interventions implemented? What is the evidence of their feasibility? and what are their outcomes? Quality appraisal findings were also synthesised.

Results

Eligible studies

Sixteen studies evaluating the outcomes or impacts of support for mental health carers met the criteria for inclusion (see PRISMA flow diagram in Figure 2). The studies were from a range of countries including England (7), Iran (3), Australia (1), Brazil (1), Iceland (1), India (1), Taiwan (1) and the USA (1) (Table 1). Most interventions were delivered to carers of inpatients admitted to hospital with any mental health diagnosis, but one focussed on perinatal mental health (Cohen et al., 2021), two on schizophrenia (Lin et al., 2018; Vaghee et al., 2017) and two on psychosis (Petrakis & Laxton, 2017; Sadath et al. 2017). Of the four papers that reported age range of carer participants, ages ranged from 18 to 68 years, and of the 14 papers that reported mean age, this ranged between 31–50 years (Table 2). Participants were predominantly female other than in the perinatal intervention which was specifically designed for male partners. Most of the participants in these studies were the parents of people with



carer* OR caregiver* OR family OR families OR "loved one" OR spouse OR partner OR sibling* OR parent OR parents OR relative* OR friend*

AND support OR service* OR involv* OR intervention* OR "carer* assessment"

AND "mental health" OR "mental disorder*" OR "mental illness" OR psychosis OR "depressive disorder" OR psychotic OR depression OR anxiety OR "bi-polar" OR bipolar OR schizophrenia OR "schizoaffective disorder" OR "mood disorder" OR "eating disorder*" OR "post-traumatic stress disorder" OR "dual diagnosis" OR "self-harm" OR "self-injury" OR "personality disorder" OR "psychiatric illness" OR "psychiatric disorder*" OR "psychiatric diagnosis" OR suicide OR suicidal

AND hospital OR "in-patient" OR inpatient OR ward OR institution OR facilities OR facility OR asylum

NOT veterinary OR esophageal OR tuberculosis OR sclerosis OR vegetative OR Alzheimer* OR dementia OR "muscular dystrophy" OR "Parkinson's disease" OR "sickle cell" OR "nursing home" OR coronary OR cardiovascular OR cardiac OR "cystic fibrosis" OR bronchiolitis OR sepsis OR palliative OR HIV OR COPD OR "chronic obstructive pulmonary" OR renal OR kidney OR liver OR lung OR heart OR lupus OR diabet* OR stroke OR cancer OR "brain injur*" OR "brain-injur*" OR surgery OR hypertension OR allergy OR allergies OR dental OR dentist* OR "emergency department*" OR "burn patient*" OR "burn wound" OR influenza OR ebola OR "neurological disorder*" OR neurosurgery OR immigrant* OR refugee* OR migrant* OR adolescent* OR "low birth weight" OR IVF OR maternity OR "child* and adolescent" OR "young child*" OR fetal OR infant OR preschool OR pediatric* OR paediatric* OR neonatal OR "preterm infant*" OR "reproductive health" OR preeclampsia OR infertile OR "spinal cord"

Figure 1. Search terms used in databases.

mental health problems, but spouses, children and siblings were also common.

Quality appraisal

There were few robust studies that measured changes to carer outcomes following an intervention. Ten studies used quantitative designs, of which three were rated moderate on the EPHPP Quality Assessment Tool and seven were rated weak (Table 3). Whilst all these studies used strong or moderate designs, including randomised or controlled trials, no studies used blinding, very few adjusted for confounding variables, and many did not adequately report dropouts.

The four studies using qualitative designs were generally robustly designed, though one had a risk of bias in recruitment of participants, and inadequate explanation of

Table 1. Interventions that support unpaid carers of adult mental health inpatients: types and outcomes.

Intervention type	Author (Date) Country	Aims and brief description of intervention	Where it took place	Who it was for	Who delivered the intervention	Training and tools for delivering the intervention	When it was offered	How long was the intervention	What were the outcomes of the intervention
Increase carer involvement in inpatient care	Jackson et al. (2019) England	Aimed to increase the contribution carers make to risk assessments through a structured dialogue with staff about risk assessments	On the ward	Carers (with inpatient consent)	Mental health nurses on the ward	1 hour training with a test afterwards, and support at first intervention	During inpatient stay	1 intervention	Carers valued being heard and contributing to care though joint risk assessment. Whilst perceptions of risk assessment did not converge, carer satisfaction with inpatient care increased.
	Kaselionyte et al. (2019) England	Aimed to maximise carer involvement through a structured carer involvement session in the first days of inpatient stay.	On the ward, or via video conference call when carer lives far away.	Carers and inpatients (with inpatient consent)	Any member(s) of ward staff; ward managers, charge nurses, staff nurses, junior doctors, social workers and therapists.	1 hour training and a 32-page manual with standardised procedures for stages of carer involvement, training on communication and facilitating three-way meetings, and clinical supervision	First week of inpatient stay	1 meeting	Carers and staff valued the family meeting, felt listened to and supported. Improved communication with staff, and between inpatient and carer, and there was more carer involvement on the ward. Carers wanted to be seen without inpatients present. It was hard to implement on the ward. Intervention was delivered to 53% of eligible carers, but staff, carer or inpatient availability, withdrawal of consent from inpatient or discharge prevented higher levels of implementation.
	Sedgwick et al. (2019) England	Aimed to improve family involvement in an NHS psychiatric intensive care unit through a relatives' and carers' clinic run 'out of hours'	Off the ward	Carers, but inpatients could also attend the meetings (with inpatient consent)	Psychiatrist, and any other relevant staff	No training was specified	First week of inpatient stay, and also offered throughout stay.	1 30–50-min meeting but could be more. Ranged from 1-7 in this study, most commonly 2.	Families felt more informed and valued after the clinic. Families appreciated the meetings being held off the ward and out of hours. 100% of the 50 carer participants found the meeting with the psychiatrist 'very useful'. The clinic was a useful intervention for meeting triangle of care standards.
Facilitate organisational change to increase carer support and involvement	Lin et al. (2018) Taiwan	Aimed to improve carer involvement in discharge planning for inpatients with schizophrenia through a nurse-led discharge service that included providing support and referrals to other services	On the ward	Carers (with inpatient consent)	Nurse/care coordinator	8 weeks of staff training and a workbook with intervention checklist was provided.	Through-out inpatient stay	Throughout inpatient stay	Caregiver burden, information, support, respite and emotion, and health improved more in the intervention group. Mental health nurses can serve as the main care coordinators for carer assessment, support and referral.
	Radcliffe et al. (2012) England	A service that aimed to provide carers with emotional support, more involvement in inpatient care and referrals for support through structured sessions to carers.	On the ward, in a designated office to protect time.	Carers (inpatient consent not required) but the inpatient could attend one session	A nurse on each ward led the sessions, with the service managed by a lead nurse three days a week	Nurses were trained in two afternoon workshops, were apprenticed to the lead nurse, and attended group supervision. There was a protocol for the first four sessions, but this could be deviated from.	Through-out inpatient stay	Between 1-8 structured sessions were offered. Most had 1 or 2 sessions (69%), and the max amount used was 4.	Of 145 families offered the service in the first year, 54% were seen. There were high levels of satisfaction, 24/25 families said the meetings were helpful or very helpful. Families valued the emotional support, improved communication, help and advice. Some were referred for further support (26%). Staff also valued the service; it helped to provide protected time to support families, improve communication and there were fewer complaints.
	Stanbridge (2012) England	A Family Liaison Service that aimed to improve communication between staff and families and improve staff confidence when working with families through a family meeting as part of admission, offering information and support, and ward champions raising awareness of carer issues.	On the ward	Carers and inpatients attended the meeting (with inpatient consent).	A specialist family liaison officer, employed one day a week, worked alongside inpatient staff to hold joint meetings.	All staff received 3 days training in a separate programme prior to the Family Liaison Service. The Service was delivered with specialist family liaison officer	First week of inpatient stay	1 meeting, but ward champions work was ongoing.	The service led to an increase in staff-family meetings, more carer involvement, increased staff confidence, and there was positive feedback from families. Families valued being listened to, receiving information, and being involved in care. Staff felt that meetings improved inpatient care, including discharge planning, and led to more carer awareness on the ward. 94% of staff said intervention helpful or very helpful. Some carers wanted time alone with staff.
			On the ward				N/A	N/A	

(*continued*)

Table 1. Continued.

Intervention type	Author (Date) Country	Aims and brief description of intervention	Where it took place	Who it was for	Who delivered the intervention	Training and tools for delivering the intervention	When it was offered	How long was the intervention	What were the outcomes of the intervention
	Stanbridge et al. (2013) England	The intervention aimed to improve partnership working with families in inpatient services for older people with a training initiative for staff.		Carers – inpatient consent not required as the intervention was to improve work with carers across inpatient services	The research team delivered the training	3 days of training for the ward staff			The intervention increased family involvement: more carers were registered; more information was recorded; and more families were referred for carers' assessments. Carers and staff were all positive about the training. Outcomes included increased carer awareness, development of skills working with carers and improvements to staff confidence (25% to 79% for professionally registered staff). These improvements were maintained one year post training. There was no increase in family meetings, and staff wanted protected time for these.
	Taylor et al. (2016) England	The intervention aimed to encourage carer involvement and support through a weekly carers' clinic, a family intervention and staff training. This review focusses on the carer's clinic and staff training.	On the ward	Carers could attend the clinics without inpatient consent. Inpatients could also attend the clinics, but carers could ask for time alone with staff.	Ward staff; psychology, nursing and medical teams	Staff were trained in a 60–90-min workshop	Weekly	Families could book 30-minute slots	All carers who returned the satisfaction questionnaire were very satisfied or satisfied with the clinic. Carers valued meeting the ward staff and accessing support. The service led to an increase in family meetings in one ward, but not in two. There was an increased in staff confidence in involving carers. Carer complaints decreased. Staff appreciated the training and wanted more.
Provide carers with support	Duarte et al. (2018) Brazil	The intervention aimed to provide information and support for carers through a support group on an inpatient ward	In a meeting room on the ward	Carers. Unclear if inpatients had to consent for their carers to receive the intervention.	A nurse and psychologist facilitated the group	No training was specified	Weekly	Ongoing	The carers perceived the group was a place to share experiences with peers, gain information and support. Carers felt safer, calmer, and less isolated after the groups.
	Sveinbjarnardottir et al. (2013) Iceland	The intervention aimed to provide information and support for carers and families through short therapeutic conversations between nurses, inpatients and families.	On the ward	Carers and inpatients, with inpatient consent.	Nurses	One day of training and 3–5 supervisions	Inpatient asked 2–5 days after admission	2–5 sessions lasting between 30–60 min	The intervention increased perceptions of cognitive and emotional support, but not family support. There was no change to family functioning or general well-being. To achieve greater changes, the authors recommend a longer or more intense intervention.
Deliver psychoeducation and offer support	Cohen et al. (2021) USA	The intervention aimed to improve partner understanding and support of perinatal distress through a brief relationship and psychoeducation session that included support and coping skills for the carer.	On the ward	Carers received the intervention, but the aim was primarily to support inpatients (with inpatient consent).	Clinical Psychologist (also the researcher)	No training was specified	Within 2 days of admission	1 60-90 min session	The intervention was feasible with a high take up rate (20/21) indicating that partners wanted support. It was rated highly satisfactory by partners; when asked if it met their needs, 15 rated almost all, and 5 rated most. Though the intervention was primarily about supporting inpatients, partners appreciated receiving support themselves. There was no change to partner well-being scores or expressed emotion, but partners' response to patient improved.
	Petrakis and Laxton (2017) Australia	The intervention aimed to improve carers' understanding of psychosis during a first episode and connect carers to support through one session of psychoeducation accompanied with information booklets, DVDs and information about support.	Inpatient unit	Carers. Unclear if inpatients had to consent for their carers to receive the intervention.	Senior nurse specialising in early psychosis care / (also the researcher)	No training was specified; a manual was used to aid delivery	The first week of inpatient stay	1 session lasting between 45-150 minutes	There was a 100% uptake for psychoeducation in inpatient settings which indicates the desire for support. Family members valued the information and support during inpatient stay. Where carers recalled receiving referrals for support, 100% said it was helpful. Carers wanted more information, peer support and support for discharge.

(*continued*)

Table 1. Continued.

Intervention type	Author (Date) Country	Aims and brief description of intervention	Where it took place	Who it was for	Who delivered the intervention	Training and tools for delivering the intervention	When it was offered	How long was the intervention	What were the outcomes of the intervention
	Sadath et al. (2017) India	The intervention aimed to provide information and support to carers during a first episode of psychosis through group psychoeducation that was designed to encourage help seeking behaviours and mutual support amongst group members.	Unclear	Carers primary focus, but in a few instance inpatients also attended. Unclear if inpatients had to consent for their carers to receive the intervention.	Psychiatric Social Worker (also the researcher)	No training was specified	Unclear	7 sessions	Expressed emotion and social support improved for both groups, more for intervention at first, but these improvements were lost. Author suggests that follow-on social support is needed as gains may have been a consequence of group interaction during the sessions, which were lost when it stopped.
Reduce carer stress and improve coping skills	Abedi et al. (2020) Iran	The intervention aimed to improve carers' coping styles through a group training course focussing on problem-solving and decision-making tools.	Unclear	Carers. Unclear if inpatients had to consent for their carers to receive the intervention.	Researcher (also mental health nurse)	No training was specified	Unknown	8 1-h sessions over 4 weeks	Problem-solving training programs helped family caregivers of psychiatric inpatients better cope with stress. There was a significant improvement in coping at 1 month follow up. Further work is needed to find out why this is happening and what parts are the most effective.
	Mollasalehi et al. (2016) Iran	The intervention aimed to improve family functioning through a stress coping course.	Not reported	Carers. Unclear if inpatients had to consent for their carers to receive the intervention	Researcher (also psychologist/ lecturer)	No training was specified	Unknown	4 consecutive days	Family functioning improved in the intervention group but not in the control group. Stress coping skills courses can improve family functioning.
	Vaghee et al. (2017)	The intervention aimed to improve the stress management skills of carers' of inpatients with schizophrenia through a group training course with a life skills booklet.	In a training room at the hospital	Carers. Unclear if inpatients had to consent for their carers to receive the intervention	Researcher	No training was specified	Unknown	6 1-h workshops over 3 weeks	There was no statistically significant difference between intervention and control group, though the intervention group did see improved scores. The authors suggest that improved outcomes may need a longer term follow up and/or more long-term support targeting the reduction of mental stress and caregiving burden.

methods (Table 4). Whilst the qualitative studies provided useful insights, they only explored participants' experiences after interventions without comparing this to a baseline or control, which limited their potential to determine impact.

Two studies (Radcliffe et al., 2012; Stanbridge et al., 2013) used descriptive case study designs to measure feasibility and satisfaction with services and these studies could not be quality appraised using existing tools. The reliability and validity of their findings were affected by their limited description of methods, selection bias, having no control or baseline data, or their use of untested tools to measure impact. These papers gave accounts of new interventions in NHS services in England using opportunistically collected audit and satisfaction data rather than using a robust design to measure outcomes for carers.

Types and outcomes of interventions

The characteristics of the eligible interventions explored during data extraction were used to inform five categories of intervention (Table 1). These were interventions that aimed to: (1) increase carer involvement in inpatient care; (2) facilitate organisational change to increase carer support and involvement; (3) provide carers with support; (4) deliver psychoeducation and offer support; or (5) reduce carer stress and improve carer coping skills.

Increase carer involvement in inpatient care

Three studies from England evaluated one-off interventions delivered by staff on inpatient wards that aimed to increase carer involvement (Table 1). Two of the studies explored family meetings involving the inpatient and carer shortly after admission to either a general ward (Kaselionyte et al., 2019), or Psychiatric Intensive Care Unit (PICU) (Sedgwick et al., 2019). The other assessed a meeting between nurses and carers that aimed to increase their involvement in risk assessment (Jackson et al., 2019). Inpatient consent was required for carers to participate in these interventions, and in one study 55% of approached inpatients did not give consent which may have biased the findings (Kaselionyte et al., 2019).

The interventions were mostly one session and perceived as straightforward to facilitate. Two took place on the ward at any mutually convenient time, and one offered a video-link for non-local carers. The intervention in a PICU met carers off the ward and out of hours, which carers appreciated (Sedgwick et al., 2019). In one study, carers gave feedback after the intervention that they wanted time to talk to staff without the patient being present (Kaselionyte et al., 2019). To help staff deliver the interventions, two studies reported providing staff with specific training and supervision (Jackson et al., 2019; Kaselionyte et al., 2019).

Two studies highlighted difficulties with organising the interventions in the clinical setting, and in one study, only 53% of the carers who requested a meeting had one (Kaselionyte et al., 2019). Barriers described by Jackson et al. (2019) and Kaselionyte et al. (2019) included staff or

Table 2. Research methods used to measure outcomes and/or impact in studies evaluating interventions for unpaid carers of mental health inpatients.

Intervention type	Author (date) and country	Study design	Recruitment	Number of carer participants	Demographics (age, gender and relationship to cared for)	Other carer demographics and characteristic collected	What was measured	When data collected	How were outcomes measured
Increase carer involvement in inpatient care	Jackson et al. (2019) England	Controlled trial (pragmatic control)	All carers of inpatients who had capacity to consent to the intervention could be approached by staff.	60 (Intervention) 30 (TAU*)	No demographic information as the ward did not collect carer information.	None	Carer experience, satisfaction with carer involvement and discrepancy between GRIST scores.	Satisfaction surveys: 2–3 weeks 7–10 days since admission. GRIST discrepancy: before and after intervention	Research team designed ‘Carer Experience Data Capture Survey’ and theGRIST risk assessment tool
	Kaselionyte et al. (2019) England	Qualitative study exploring the feasibility of the intervention	Consecutive sampling of carers of inpatients who had capacity to consent.	29	Female (63%) Mean age = 47 Parents (43%) Sibling (20%) Child (10%) Partner (13%) Other (13%)	Marital status Country of birth Education Employment status	Carer and staff experiences of the intervention.	Immediately after the intervention. Interviews shortly after the meeting (not specified)	Semi-structured interviews
	Sedgwick et al. (2019) England	Case study evaluation with mixed methods; a post-intervention satisfaction survey with open questions	Consecutive sampling of carers of inpatients who had capacity to consent, or where there was a clinical need, could be approached by staff.	50 surveys 9 interviews	No demographic information was collected to protect anonymity of carers	None	Carer satisfaction with the service.	Surveys after the intervention. Interviews not specified	In-house carer satisfaction survey and structured interview questions
Facilitate organisational change to increase carer support and involvement	Lin et al. (2018) Taiwan	Controlled trial (pragmatic control)	All carers of inpatients with schizophrenia who met eligibility criteria where the patient had consented.	57 (Intervention) 57 (TAU)	Female (54%) Mean age = 53 (range 24-65) Parents (50%) Siblings (24%) Spouse (11%) Child (8%) Other (7%)	Education Religious (Y/N) Marital status Number of members living with caregivers Employment Caregiver burden Health status Care for other family Family share patient care	Caregiver burden and health.	Day of admission and day of discharge	Chinese Caregiver Burden Inventory Chinese Health Questionnaire
	Radcliffe et al. (2012) England	Case study service evaluation with a post-intervention satisfaction survey for carers including open questions, and interviews with staff	All families that had used the service were sent detailed feedback questionnaires.	78 families used the service	Parents (55%) Partners (17%) Children (12%) Siblings (10%) Carers (7%)	None	Carer satisfaction with inpatient stay and feedback about the intervention. Staff experiences of the intervention.	Unclear, but following the admission	In house routine satisfaction survey and a feedback survey. Interviews with staff (tool not specified)
	Stanbridge (2012) England	Case study service evaluation with mixed methods	All families that had used the service were asked to provide written feedback.	204	No demographic information was collected	None	Number of family meetings, carer and staff experiences, and carer satisfaction.	Unclear- but following the intervention.	Feedback forms with families, service audit data and semi-structured questionnaire with staff
	Stanbridge et al. (2013) England	Cohort design with post-intervention	A random sample of electronic case records were examined. All staff	10 electronic case records of carers which was 40% of total records.	No demographic information was collected	None	Indicators of carer involvement and support; staff	Before the first 2 training days, between days 2 and	Pre-training and post-training audit of case notes, examination of case

(*continued*)

Table 2. Continued.

Intervention type	Author (date) and country	Study design	Recruitment	Number of carer participants	Demographics (age, gender and relationship to cared for)	Other carer demographics and characteristic collected	What was measured	When data collected	How were outcomes measured
		interviews with staff	who completed training were interviewed.				satisfaction and experience	3-, and 1-year post-training.	notes, a training package evaluation form and feedback from a staff action plan
	Taylor et al. (2016) England	Case study evaluation of a service	All carers who attended the clinics and all staff who attended the training.	30/119 carers returned the satisfaction questionnaire	Parents (31%) Partners (21%) Children (19%) Siblings (19%)	None	Carer and staff satisfaction and experience. Indicators of carer involvement and ward complaints.	After the intervention for carers clinics. Before and 3 months after the staff training	Carer satisfaction questionnaire with an open question about experiences, and staff experience questionnaire
Provide carers with support	Duarte et al. (2018) Brazil	Qualitative study exploring impacts for carers	All carers who attended the support group. Carers had to have attended at least once to be eligible.	10	Female (90%) Age range 35-63 and ages closer to 50 Parents (40%) Spouses (30%) Children (20%) Siblings (10%)	Employment status	Relatives' perceptions of the impact of the intervention.	After attending support group	Semi-structured interviews
	Sveinbjarnardottir et al. (2013) Iceland	Controlled trial	All eligible carers	74 (intervention) 74 (TAU)	Female (63%) Mean age = 45 Parent (34%) Spouse (30%) Child (11%) Sibling (8%) Other (0.2%)	Education Occupation Marital status	Support, family functioning and well-being	Baseline and at discharge	ICE Family Perceived Family Support, Expressive Family Functioning, General Well-being.
Deliver psychoeducation and offer support	Cohen et al. (2021) USA	Cohort design	All eligible carers of inpatients who had consented.	20	Male (100%) Mean age: 31 Spouse (100%) Ethnicity 90% white	Ethnicity Number of children Income Education Length of relationship	Relationship satisfaction, expressed emotion, support self-efficacy, and psychological well-being. Feasibility and acceptability of intervention.	Pre-intervention, post-intervention and four weeks afterwards	Couple Satisfaction Index-16, Support in intimate Relationships Ratings Scale, Self-efficacy scale, Edinburgh Postnatal Depression Scale, Generalised Anxiety Disorder-7, Patient-Rejection Scale, Client Satisfaction Questionnaire-8 and an open-ended acceptability question
	Petrakis and Laxton (2017) Australia	Qualitative post-intervention design exploring impacts for carers	Each family was approached and asked to nominate one family member (unclear about inpatient consent).	$N = 27$	Women (88%) Age range 18–68 Parents (78%) Sibling (15%) Partner (7%)	Patient's living status at admission and discharge	Carer experiences and impact for carers.	6 months after the intervention	14 item structured telephone interview questionnaire
	Sadath et al. (2017)	Controlled trial (pragmatic control)	All carers (unclear about inpatient consent).	31 (intervention) 28 (TAU)	Female (63%) Mean age = 47 Parent (82%) Spouse (3%) Sibling (15%)	Education Marital status Occupation Income	Perceived social support, expressed emotion and mental health.	Baseline, 1 and 3 months later	Family Questionnaire, Multidimensional Scale of Perceived Social Support and a measure of Expressed Emotion

(*continued*)

Table 2. Continued.

Intervention type	Author (date) and country	Study design	Recruitment	Number of carer participants	Demographics (age, gender and relationship to cared for)	Other carer demographics and characteristic collected	What was measured	When data collected	How were outcomes measured
Reduce carer stress and improve coping skills	Abedi et al. (2020) Iran	Randomised controlled trial	All eligible carers (unclear about inpatient consent).	36 (intervention) 36 (TAU)	Female (65%) Mean age = 38 Spouse (19%) Parent (24%) Other (57%)	Marital status Hospitalisation history Housing status Occupation	Changed to coping styles.	Baseline, after the intervention and 3 months later	Persian Coping Inventory for Stressful Situations
	Mollasalehi et al. (2016) Iran	Controlled trial	Unclear.	41 (intervention) 41 (TAU)	Female (63%) Mean age = 40	Education Marital status	Family functioning.	Baseline and 14 days after the intervention	Family Assessment Device
	Vaghee et al. (2017) Iran	Randomised controlled trial	Unclear, but convenience sampling at hospital	28 (intervention) 29 (TAU)	Female (60%) Mean age = 43	Education Marital status	Experiences of caregiving.	Baseline and 3 months later	Adjusted Experience of Caregiving Questionnaire

*TAU: treatment as usual.

carer availability or the inpatient's early discharge. Staff hesitancy was also a problem; the authors in both studies attributed reluctance to competing clinical pressures where carers were not prioritised and confusion about confidentiality. The study evaluating the PICU family meeting held off the ward did not report these difficulties, although some participants noted the high costs of this model (Sedgwick et al., 2019).

None of these studies collected data that measured changes to carer outcomes, but instead recorded carer experiences and/or satisfaction (Table 2). Family meetings increased carer involvement in inpatient care (Kaselionyte et al., 2019; Sedgwick et al., 2019) and were valued by both staff and carers. All participants in a family meeting on a PICU found the meeting very useful (Sedgwick et al., 2019). Although the risk assessment intervention did not meet its aim to increase consensus of risk between staff and carers, satisfaction with the inpatient stay following the intervention increased by 41.6–88.2%, which suggested that carers valued the opportunity to have their concerns heard (Jackson et al., 2019).

Facilitate organisational change to increase carer support and involvement

Five studies included interventions on inpatient wards that aimed to facilitate long-lasting organisational change to create a culture that encouraged staff to involve carers during inpatient admissions and provide them with support (Table 1). Inpatients had to consent for the carer to receive support in two studies (Lin et al., 2018; Stanbridge, 2012) and the remaining three were available to carers without inpatient consent. One study was conducted in Taiwan (Lin et al., 2018) with the remaining four papers in England (Radcliffe et al., 2012; Stanbridge, 2012; Stanbridge et al., 2013; Taylor et al., 2016).

One study evaluated a discharge planning service that worked with carers throughout the inpatient stay (Lin et al., 2018). Another offered all carers one to eight structured support sessions during the inpatient stay (Radcliffe et al., 2012). The remaining three studies were linked; two evaluated different aspects of the "Family Liaison Service" model developed in Somerset, England, that trained staff to work with carers, aimed to hold family meetings with carers and inpatients within seven days of admission, and installed ward carer champions (Stanbridge, 2012; Stanbridge et al., 2013). Another study explored a version of this model that provided shortened staff training and a weekly carers clinic where inpatients and families met with staff (Taylor et al., 2016).

Two interventions, including the Family Liaison Service, employed specialist workers to lead the intervention. This created valuable extra resource which also helped to facilitate meetings (Radcliffe et al., 2012; Stanbridge, 2012; Stanbridge et al., 2013). Two studies reported that a nurse-led service with protected time for meeting with carers was effective at assessing, involving, supporting, and referring carers to other services (Lin et al., 2018; Radcliffe et al., 2012).

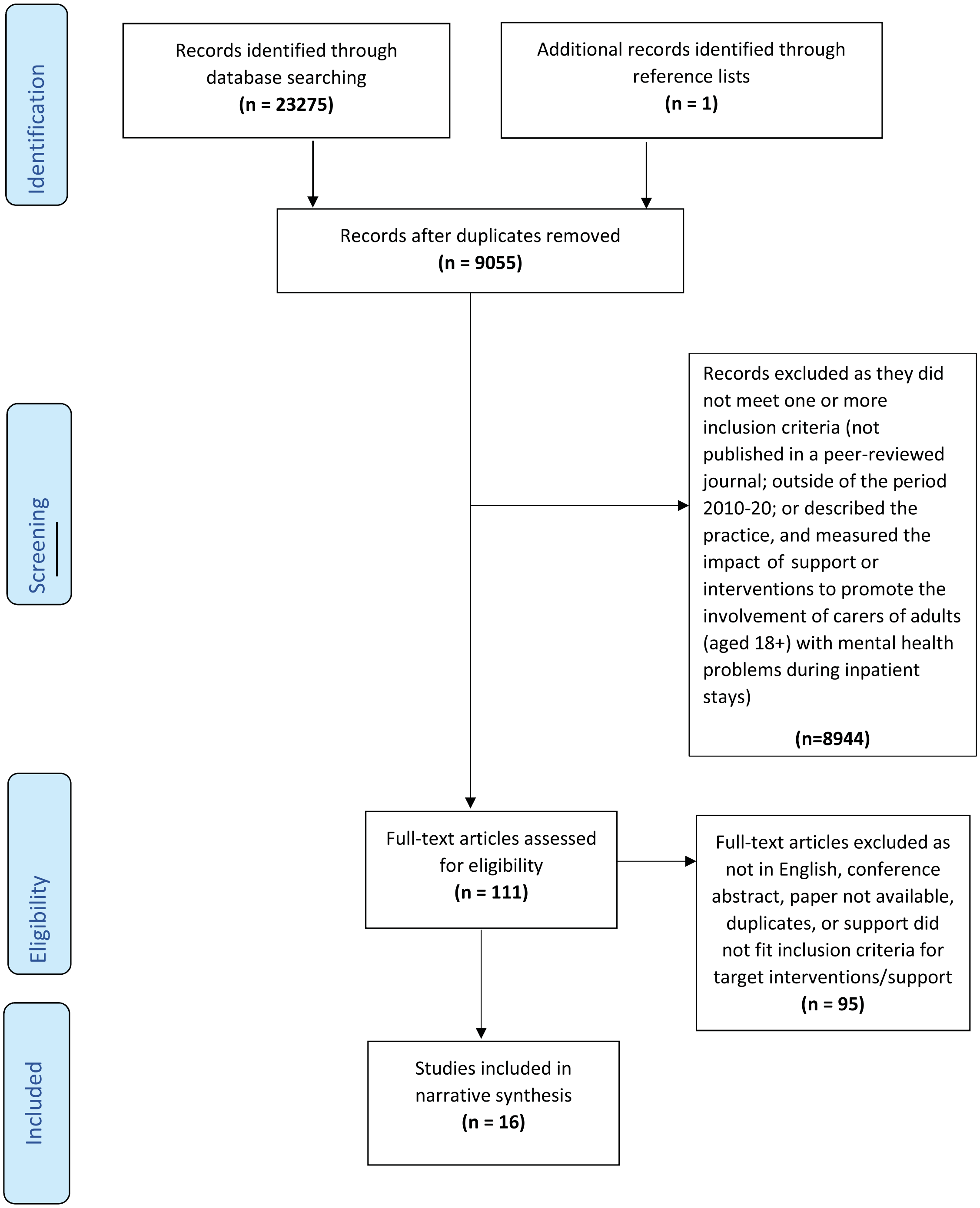


Figure 2. Prisma flow diagram.

Table 3. Effective Public Health Practice Project Quality Assessment Tool for quantitative studies that measured the outcomes of interventions for unpaid carers of mental health inpatients.

Author (date)	Selection bias	Research design	Confounders	Blinding	Data Collection methods	Withdrawals and dropouts	Global rating
Abedi et al. (2020)	2	1	1	3	1	1	Moderate
Cohen et al. (2021)	2	2	3	3	1	2	Weak
Jackson et al. (2019)	2	1	3	3	3	3	Weak
Lin et al. (2018)	2	1	1	3	1	1	Moderate
Mollasalehi et al. (2016)	3	1	1	3	1	3	Weak
Sadath et al. (2017)	1	1	1	3	1	1	Moderate
Stanbridge et al. (2013)	3	2	3	3	3	3	Weak
Sveinbjarnardottir et al. (2013)	2	1	3	3	1	1	Weak
Taylor et al. (2016)	2	2	3	3	3	3	Weak
Vaghee et al. (2017)	3	1	1	3	1	3	Weak

*Scores: 1 = strong, 2 = moderate, 3 = weak. If two scores of 3, rate as weak. If one score of 3, rate as moderate.

Table 4. Critical Appraisal Skills Programme Quality Assessment Tool for qualitative studies that explored the impact of interventions for unpaid carers of mental health inpatients.

Author (date)	Is there a clear statement of aims?	Is the methodology appropriate?	Is design appropriate to assess aims?	Is the recruitment strategy appropriate?	Was data collected in a way that addressed the research issue?	Has the relationship between researcher and researched been considered?	Have ethical issues been considered?	Was data analysis significantly rigorous?	Is there a clear statement of findings?	Will the results help locally?
Duarte et al. (2018)	Yes	Yes	Yes	Unclear	Yes	No	Yes	Yes	Yes	Yes
Kaselionyte et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Petrakis and Laxton (2017)	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Sedgwick et al. (2019)	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes

All staff were trained to deliver these interventions and training ranged from three afternoons to eight days. Where effectiveness was measured, training improved staff confidence, and was valued, but training alone did not lead to an increase in the number of carer meetings (Stanbridge, 2012; Taylor et al., 2016). Instead, Stanbridge (2012) found that the number of meetings between staff and carers only increased after introducing a specific approach to facilitate them. Family meetings also helped to maintain improvements to staff confidence.

Only one study measured changes to carers' outcomes (Table 2). Carers receiving the discharge planning service experienced reduced feelings of burden and improved health (Lin et al., 2018). The other studies explored carer experiences and found that families valued emotional support, improved communication with staff, and information. Further, carers were highly satisfied with services and complaints on the ward decreased (Radcliffe et al., 2012; Taylor et al., 2016). In one study, carers gave feedback following a family meeting that carers wanted time with staff without inpatients present (Stanbridge, 2012).

Several studies recorded indicators of staff working more closely with carers (Table 2). The interventions that arranged family meetings showed that more information about carers had been recorded, (Stanbridge, 2012; Stanbridge et al., 2013; Taylor et al., 2016) one study evidenced an increase in referrals for carers' assessments (Stanbridge et al., 2013), and one found that 26% of carers were referred for further support, though there was no comparative baseline data (Radcliffe et al., 2012).

Provide carers with support

This group of two studies explored two types of interventions (Table 1). One offered structured sessions led by nurses trained in therapeutic intervention that used psychoeducation as a tool to create a supportive relationship with inpatients' families in Iceland (Sveinbjarnardottir et al., 2013). Nurses facilitated two to five sessions with families and inpatients lasting 30 min to 1 h. Inpatients had to consent to family involvement and attended the sessions. Nurses supported families through emotional difficulties in addition to providing information about the illness.

The other intervention was a weekly carer support group in Brazil facilitated by a ward psychologist and a nurse (Duarte et al., 2018) (Table 1). Carers participated during inpatient stays to share their experiences and obtain advice and support from other carers and the facilitators. It was not reported whether inpatient consent was required. No information was provided about how frequently carers attended these support groups, except that they had to have attended at least one group.

The study exploring a carer support group did not measure outcomes but explored the experiences of attendees (Table 2). Carers reported that the group was a helpful place to share with peers and gain information and support. Carers felt safer, calmer and less isolated following the group (Duarte et al., 2018).

The study exploring structured support sessions with nurses measured outcomes for carers (Table 2) and found that the intervention increased carers' perceptions of cognitive and emotional support, and these findings were statistically significant. Further, the authors reported nurses' practice became more relational and family-informed (Sveinbjarnardottir et al., 2013). There was, however, no change to carers' family functioning or well-being and the authors suggested a long-term intervention with more sessions may be required.

Deliver psychoeducation and offer support

Three studies evaluated psychoeducational interventions that, as a secondary aim, also provided social and/or emotional support for carers on inpatient units (Table 1). The studies were from Australia (Petrakis & Laxton, 2017), India (Sadath et al. 2017) and the USA (Cohen et al., 2021). One study evaluated an intervention that offered education and support to partners of women hospitalised for perinatal distress (Cohen et al., 2021), and one explored a similar intervention for carers during a first episode of psychosis (Petrakis & Laxton, 2017). Another study measured the impact of group psychoeducational sessions that aimed to cultivate support-seeking behaviours among carers of those hospitalised with psychosis (Sadath et al. 2017).

The support offered in addition to psychoeducation differed across the interventions. Sadath et al. (2017) described facilitating supportive relationships between carers and encouraging mindfulness, yoga and stress awareness to improve mental and physical health. Petrakis and Laxton (2017) described an intervention that referred carers to community-based services and a relative's information group on the ward, whilst Cohen et al. (2021) reported staff offering emotional support.

One study specified that the inpatient had to consent for the carer to receive the intervention (Cohen et al., 2021); the others did not report this detail. The interventions were all delivered by the research team, who were also clinicians. Two were one-off sessions lasting 45–150 min within the first week of admission (Cohen et al., 2021; Petrakis & Laxton, 2017), and the other was a series of seven structured group sessions, though it was unclear at what stage of the inpatient stay this was offered (Sadath et al. 2017).

In the two studies that reported it, the interventions had a high uptake of 95–100% (Cohen at al., 2021; Petrakis & Laxton, 2017). Carers reported valuing emotional support from staff even though it was not the main purpose of the intervention (Cohen et al., 2021). Petrakis and Laxton (2017) found that all carers who were referred for support from social workers or charities found this helpful, and many more wanted opportunities for support in the community.

Two studies measured outcomes before and after the intervention (Table 2). Cohen et al. (2021) found no differences to carer well-being and expressed emotion, but carers did feel more able to support their partner. This is unsurprising considering the primary aim of the intervention was to educate the carer rather than offering support. Sadath et al. (2017) found no difference in expressed emotion and social support three months following the intervention between the treatment and control groups, with both experiencing similar improvements, perhaps related to the patients' recovery. The carers receiving the intervention did however experience a greater increase in perceived social support after one month. Sadath et al. (2017) theorised that the group intervention itself had acted as a support mechanism, which explained why gains were lost when the group ended. They suggest a longer intervention or ongoing peer support would maintain feelings of increased social support.

Reduce carer stress and improve coping skills

Three studies from Iran evaluated the impact of stress or training on coping skills for carers of those admitted to hospital with an acute mental health problem (Abedi et al., 2020; Mollasalehi et al., 2016) or, specifically, schizophrenia (Vaghee et al., 2017). One study aimed to improve carers' coping styles through a group training course that focussed on problem-solving and decision-making (Abedi et al., 2020). Two offered a stress management course; one aimed to improve family functioning (Mollasalehi et al., 2016), the other aimed to reduce stress (Vaghee et al., 2017).

The research team delivered the intervention in each study; interventions were not incorporated as standard ward practice. It was not clear where the interventions took place except one study that specified the training room of a hospital (Abedi et al., 2020). The courses consisted of six-eight sessions; one was spread across four consecutive days, one three weeks and one four weeks.

All the studies measured changes in carer outcomes; two were randomised control trials (Abedi et al., 2020; Vaghee et al., 2017) and one was a controlled trial (Mollasalehi et al., 2016) (Table 2). The intervention that aimed to improve carers' coping styles showed statistically significant improvements one month following the group training course for the intervention group (Abedi et al., 2020). One study that explored a stress management skills course found that family functioning improved in the intervention group, but not in the control group, when measured fourteen days later, and this finding was statistically significant (Mollasalehi et al., 2016). However, this was a short follow-up period and does not demonstrate long-term efficacy. The other study reported that participation in a stress management course did not have a statistically significant impact on stress management skills when measured three months later (Vaghee et al., 2017). Vaghee et al. (2017) argued that lower educational attainment and a long duration of patient illness were significantly correlated to high carer stress and reduced the impact of the intervention in this study. Long-term and more comprehensive supportive interventions may be more effective.

Discussion

The scoping review aimed to: explore the types of interventions offered to carers of adult inpatients in mental health hospitals for which evaluations have been published; assess the evidence of their effectiveness; identify lessons for evidence-informed practice; and highlight future research priorities. Despite international consensus on the importance of supporting carers (Wallcraft et al., 2011), there were very few studies that evaluated the effectiveness of interventions to support them, which limits the potential for an evidence-informed approach. Although more research had taken place since an earlier review by Arksey (2003), only six studies measured changes to carer outcomes before and after an intervention, and three of these were rated weak during quality appraisal.

The review found five different types of brief intervention for carers of adult mental health inpatients. These were interventions that aimed to: (1) increase carer involvement in inpatient care; (2) facilitate organisational change to encourage carer support and involvement; (3) provide carers with support; (4) deliver psychoeducation and offer support; and (5) reduce carer stress and improve coping skills.

Many of the studies explored intervention feasibility, which supports existing research reporting that carer support is developing rather than established (Stuart et al., 2020).

There was a noticeable absence of studies exploring interventions where the primary aim was to meet the social and emotional support needs of carers; only two studies out of sixteen had this as a primary aim (Duarte et al., 2018; Sveinbjarnardottir et al., 2013). Instead, most studies focussed on increasing or improving carer involvement in inpatient care (Jackson et al., 2019; Kaselionyte et al., 2019; Lin et al., 2018; Radcliffe et al., 2012; Sedgwick et al., 2019; Stanbridge, 2012; Stanbridge et al., 2013; Taylor et al., 2016). Yet, there was high uptake of, and satisfaction with, interventions where carers received or were referred for support (Cohen et al., 2021; Jackson et al., 2019; Kaselionyte et al., 2019; Petrakis & Laxton, 2017; Radcliffe et al., 2012; Sedgwick et al., 2019), which shows that there is a demand and need for more supportive approaches.

Despite the international consensus on the need to involve and support carers (Javed & Herman, 2017; Wallcraft et al., 2011), there were some differences in approaches between countries. All but one of the carer involvement studies were from England, which is unsurprising due to the strong focus on inpatient and carer involvement in services in UK health and social care (NICE, 2020; Worthington et al., 2013). Despite this, only one study in England referenced the Triangle of Care even though this is a suggested model of best practice. By contrast, in Iran the studies focussed on evaluating interventions that offered skills training (Abedi et al., 2020; Mollasalehi et al., 2016; Vaghee et al., 2017), which perhaps reflects a different policy focus to help carers cope with caring.

Evidence of intervention effectiveness

It was not possible to compare the effectiveness of different types of interventions as the studies had different aims, designs and measured a range of outcomes and impacts. Some studies that measured outcomes demonstrated positive impacts for carers, such as improved family functioning (Mollasalehi et al., 2016), improved coping styles (Abedi et al., 2020), reduced feelings of burden (Lin et al., 2018), improved health (Lin et al., 2018), and improved perception of support (Sveinbjarnardottir et al., 2013). However, several studies reported no long-term improvements to carer outcomes of stress and well-being, and the authors suggested that longer-term or more comprehensive supportive interventions may be required (Cohen et al., 2021; Sadath et al. (2017; Sveinbjarnardottir et al., 2013; Vaghee et al., 2017).

There was evidence from qualitative data that interventions resulted in carers feeling heard and valued, and they appreciated being involved and supported (Cohen et al., 2021; Kaselionyte et al., 2019). Where measured, satisfaction with interventions was high (Cohen et al., 2021; Radcliffe et al., 2012; Sedgwick et al., 2019; Stanbridge et al., 2013). Carers valued receiving social or emotional support even where it was not the primary aim of an intervention (Cohen et al., 2021). However, publication bias cannot be ruled out as an explanation for an apparent over-reporting of positive findings.

Lessons for carer support interventions

The review focussed on evaluations of short interventions, and it appeared that even one-off interventions did make a difference for carers. In some cases, a short-term intervention was being used to facilitate long-term organisational change (Stanbridge, 2012; Sveinbjarnardottir et al., 2013). Many of the interventions were run by mental health nurses or other inpatient staff and this appeared to be a feasible and effective model that carers were satisfied with (Lin et al., 2018; Radcliffe et al., 2012; Sedgwick et al., 2019). Carers appreciated support being delivered in a non-clinical setting, out of hours (Sedgwick et al., 2019), and for information to be available in a range of languages (Petrakis & Laxton, 2017). Most of the interventions were initiated shortly after admission.

This review identified some factors that enabled successful carer support in mental health inpatient settings. Echoing findings by Eassom et al. (2014) scoping review that explored implementation, this review found that successful interventions needed adequate resources and management support, protected staff time away from other clinical duties, and even staff employed specifically to manage interventions, which mediated any conflicting priorities with inpatient care (Radcliffe et al., 2012). Staff also valued training to support them to work with families, which improved their confidence supporting carers, especially when they had opportunities to implement their learning (Stanbridge et al., 2013; Taylor et al., 2016).

The studies in this review support other research that carers welcome interventions to involve them in inpatient care and/or which support them (Clibbens et al., 2019; Stuart et al., 2020). Further, the review highlights that some carers cannot access individual support, even when they want it, either because interventions are only offered if the inpatient consents, or the intervention is delivered to both inpatients and carers at the same time. Whilst it is important to respect the rights of service users, carers have a right to receive independent support (NICE, 2020). There was evidence of the ongoing issue of patient confidentiality being used as a barrier to supporting carers identified by Giacco et al. (2017) and Jankovic (2011). Those seeking to design support should try to include opportunities for carers to receive support independently.

Future research priorities

Very few studies measured outcomes for carers in terms of their quality of life, well-being and health outcomes, instead focussing on service satisfaction or exploring carer experiences. Further, no studies identified which parts of interventions had impacts for which carers, and why. Some studies focussed mainly on exploring the feasibility or acceptability of interventions. Future studies should address this gap in research by evaluating the impact of interventions on carer health, well-being and quality of life using robust study design and a theory of change model.

Whilst we identified some studies in the literature searches that explored carer experiences of support in forensic mental health settings (Chemerynska et al., 2021; Robinson et al., 2017), similar to findings by Gatherer et al. (2020), there were no studies that measured the impact of interventions for this group of carers. Consequently, this could be a location for future research.

Jackson et al. (2019) raised the difficulties of doing "real world research" in the complex clinical environment of a mental health hospital, which in part accounted for some weaknesses of the studies in this review. These problems should be planned for, and mediated, in study designs to improve the evidence base.

Nearly half of the studies did not adequately report or collect carer demographic variables such as gender and age (Table 2), either because this information was not routinely recorded by the ward (Jackson et al., 2019), or to protect carer confidentiality (Sedgwick et al., 2019). Despite evidence that cultural and religious needs have profound impacts on the experiences of inpatients and carers (Kang & Moran, 2020), only one study reported ethnicity (Cohen et al., 2021) and one reported religious belief (Lin et al., 2018).

Ten studies did collect more detailed information about carers, including educational level, marital status, occupation and health status, but only one explored how these variables interacted with outcomes (Vaghee et al., 2017) (Table 2). And yet, characteristics of carers can greatly influence their experience of caring and consequently the effect of interventions; Vaghee et al. (2017) found that both low education and higher carer stress reduced the positive impact of training courses, Future research should consider how characteristics that affect caring, such as time spent caring, income, and distance to the inpatient hospital, along with ethnicity and other demographic variables, affect carers ability to benefit from interventions.

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