

Caregiver Burden in Schizophrenia: Determinants, Assessment Tools, and Evidence-Based Interventions – A Narrative Review

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ABSTRACT

Background: Family caregivers provide long-term support for people with schizophrenia worldwide, especially in low- and middle-income countries where community mental health services remain limited. This narrative review examines contemporary and relevant historical and contextual evidence regarding caregiver burden in schizophrenia. **Methods:** A structured literature search was undertaken to identify contemporary evidence relevant to caregiver burden, assessment, and interventions. Seminal historical and contextual sources were added for relevance. Several sources — systematic reviews, meta-analyses, randomized controlled trials, cohort studies, and cross-sectional analyses — were selected across three areas.

Results: Caregiver burden is consistently associated with greater symptom severity, functional disability, and illness duration. Caregiver coping, expressed emotion, and perceived social support also appear to influence psychological distress. Several validated instruments — including the Zarit Burden Interview, Family Burden Interview Schedule, Burden Assessment Scale, Experience of Caregiving Inventory, and Involvement Evaluation Questionnaire — are widely used but are not psychometrically interchangeable, likely contributing to the variation in reported burden across studies. Structured family psychoeducation has evidenced benefits in reducing caregiver burden and indirectly lowering relapse risk. Other psychosocial and problem-solving approaches show moderate benefit, while digital and telepsychiatry-based interventions need to be explored as emerging interventions.

Conclusion: Caregiver burden in schizophrenia is a measurable, multidimensional construct requiring standardized, disease-specific assessment and scalable, evidence-based family interventions to support integration into psychiatric care.

Keywords: *Schizophrenia; Caregiver Burden; Family Caregivers; Expressed Emotion; Assessment Instruments; Family Psychoeducation; Psychosocial Intervention; Narrative Review*

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INTRODUCTION

Schizophrenia is a chronic neuropsychiatric disorder which manifests as disturbances in thought, perception, affect, cognition, and behavior that produce lasting deterioration in personal, social, educational, and occupational functioning¹⁻³. The World Health Organization estimates that it affects approximately 23 million people, or roughly 1 in 345 individuals worldwide⁴. The Global Burden of Disease Study ranks schizophrenia among the most disabling psychiatric conditions, accounting for 14.8 million disability-adjusted life years and 6.08 million years of life lost, with an estimated 1.22 million new cases annually, and rising prevalence across South-

East Asia, Central and Eastern Europe, and Western Sub-Saharan Africa⁵. Affected individuals have a reduced life expectancy of 10 to 20 years relative to the general population, attributable to preventable medical illness, suicide, and inequitable healthcare access^{4,6}. Despite advances in pharmacological and psychosocial treatment, several patients continue to suffer functional disability, negative symptoms, cognitive impairment, or recurrent relapse, resulting in prolonged reliance on family support^{2,3,7}. Globally only one-third of people with psychosis receive specialist mental healthcare⁴. Low- and middle-income countries (LMICs) face wider treatment

inaccessibility, and limited community infrastructure shifts caregiving onto family networks^{8,9}.

In India, the treatment gap for schizophrenia is approximately 72%, reflecting workforce shortages and limited rehabilitation infrastructure that necessitate heavy reliance on family-based care¹⁰⁻¹². This parallels a global shift from institutional to community-based psychiatric care^{13,14}, under which family caregivers routinely assume medication supervision, relapse monitoring, crisis management, and daily-living support over extended periods¹⁵⁻¹⁸.

Caregiver burden — the cumulative physical, psychological, emotional, social, and financial strain of caring for a person with chronic illness — comprises both objective burden (observable caregiving demands, time, and cost) and subjective burden (the caregiver's internal distress and coping capacity)¹⁵⁻¹⁸. An estimated 36% of family caregivers of people with schizophrenia face moderate-to-severe burden, with wide variation depending on the assessment instrument, cultural context, illness severity, and healthcare infrastructure^{21,22}. Caregiving has been associated with depression, anxiety, social disruption, reduced occupational functioning, and financial strain²³⁻²⁶.

Caregiver burden has been associated with treatment adherence, expressed emotion (EE), relapse, and patient functioning, making it an important consideration in schizophrenia management²⁵⁻²⁷. Accurate assessment is therefore essential to identify vulnerable families and evaluate intervention efficacy²⁸⁻³⁰; several validated instruments — including the Zarit Burden Interview (ZBI), Family Burden Interview Schedule (FBIS), Burden Assessment Schedule (BAS), Experience of Caregiving Inventory (ECI), and Involvement Evaluation Questionnaire (IEQ) — are widely used in clinical research^{19,20,31-33}. Psychoeducation, psychosocial, and problem-solving approaches have been studied for their role in reducing caregiver burden and improving patient outcomes^{25,34,35}. This review explores published literature regarding caregiver burden in schizophrenia.

METHODOLOGY

A narrative literature review was conducted to examine epidemiological, psychometric, and interventional aspects of caregiver burden in schizophrenia. Literature was searched in PubMed/MEDLINE, Scopus, Google Scholar, and the Cochrane Database of Systematic Reviews, with supplementary searches of relevant journal platforms and reference lists of identified articles. Search terms combined *schizophrenia* or *psychosis* with *caregiver burden*, *family caregiver*, *caregiver stress*, *determinants*, *expressed emotion*, *caregiver-burden*

instruments, and *psychoeducation*, *family intervention*, or *psychosocial intervention*.

The primary search covered publications from January 2019 to July 2026. Earlier seminal studies and foundational instrument-validation papers were included where necessary to provide historical and conceptual context. Peer-reviewed systematic reviews, meta-analyses, randomized controlled trials, observational studies, and relevant qualitative studies involving adult informal caregivers of people with schizophrenia spectrum disorders were considered. Contextual information from authoritative books and reports was also used where relevant.

Titles, abstracts, and full texts were assessed for relevance, and the literature was narratively synthesized under three domains: (1) determinants of caregiver burden, (2) assessment instruments and their psychometric characteristics, and (3) psychosocial, psychoeducational, and emerging digital interventions. Several key sources were selected for detailed synthesis.

RESULTS AND DISCUSSION

1. DETERMINANTS OF CAREGIVER BURDEN

Fifteen studies examined factors associated with caregiver burden, comprising two meta-analyses, eight cross-sectional studies, three qualitative or mixed-methods studies, and two narrative reviews from across the globe^{15,16,36,38,40-50}. Study designs and variables are summarized in Table 1, and the mapped clinical, demographic, coping, and system-level domains are detailed in Table 2. These studies indicate that clinical severity and functional disability — rather than diagnosis alone — are the strongly associated with caregiver burden (Figure 1).

Table 1. Determinants studies

Study	Year	Design	Main variable / domain examined
Magliano et al.	1998	Multicentre observational	Family burden
Martens & Addington	2001	Observational	Psychological well-being
Saunders	2003	Review	Family experience
Awad & Voruganti	2008	Review	Caregiver burden
Caqueo-Urizar et al.	2009	Review	Caregiver quality of life
Kate et al.	2013	Observational	Coping, social support,

Study	Year	Design	Main variable / domain examined
			psychological morbidity, QoL
Kulhara et al.	2012	Review	Positive caregiving experiences
Grover et al.	2014	Comparative study	Caregiver vs clinician burden ratings
Shamsaei et al.	2015	Observational	Family caregiver burden
Arun et al.	2018	Observational	Spousal burden and disability
Peng et al.	2022	Systematic review / meta-analysis	Disease-related risk factors
Issac et al.	2022	Systematic review / meta-synthesis	Needs, challenges and coping
Rahmani et al.	2022	Observational	Factors associated with burden
Yasuma et al.	2021	Cross-sectional	Care difficulties / contextual stress
Grover et al.	2025	Meta-analysis	Indian caregiver burden

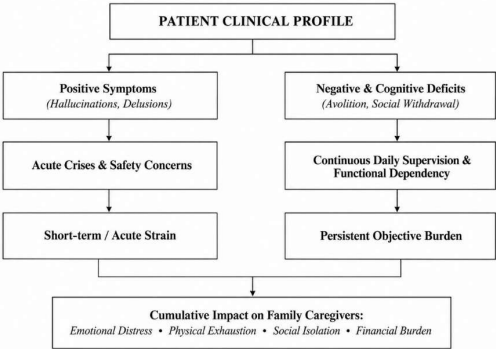


Figure 1. Patient clinical profile driving caregiver burden.

Table 2. Determinant domains examined across included studies

Study	Symptom severity	Functional impairment	Illness duration	Caregiver age /sex	Coping/social support	Family functioning /EE	Financial/access factors
Peng et al., 2022	✓	✓	✓	—	—	—	—
Grover et al., 2025	✓	—	—	✓	—	—	—
Issac et al., 2022	✓	✓	—	✓	✓	✓	✓
Magliano et al., 1998	✓	✓	—	—	✓	✓	—
Kate et al., 2013	—	—	—	—	✓	—	—
Rahmani et al., 2022	✓	✓	✓	✓	—	—	—
Yasuma et al., 2021	—	—	—	—	—	✓	✓

Study	Symptom severity	Functional impairment	Illness duration	Caregiver age/sex	Coping/social support	Family functioning/EE	Financial/access factors
Arundt et al., 2018	—	✓	—	✓	—	—	—
Grover et al., 2014	✓	✓	—	—	—	—	—

1.1 Patient-Related Determinants

Peng et al.'s meta-analysis pooled 34 studies between 2000 and 2020, and found that overall symptom severity, general psychopathology, functional disability, and illness duration were significantly associated with heavier caregiver burden, with pooled effect sizes ranging from -0.390 to 0.751 ³⁶. This substantial heterogeneity limits the strength and generalizability of these associations³⁶. These findings complement earlier narrative reviews by Awad and Voruganti¹⁵ and Caqueo-Urizar et al.¹⁶, which established that daily supervisory demands and management of patient disability generate greater objective strain than acute psychotic symptoms alone. Positive symptoms — hallucinations, delusions, and agitation — tend to precipitate acute crises, interpersonal conflict, and safety concerns, whereas negative symptoms (avolition, social withdrawal) and cognitive deficits drive persistent daily dependence by reducing patient autonomy and requiring continuous prompting and supervision^{15,36,38,40}. Thus, symptom control alone may be insufficient to substantially reduce caregiver burden when functional disability persists^{15,16,36}. Grover et al. found that increasing patient age was associated with reduced burden in BAS-based and ZBI-based studies⁴⁰.

1.2 Caregiver-Related Determinants and Psychological Mediators

The effect of illness-related demands on subjective distress also varies according to caregiver characteristics. Female caregivers — predominantly mothers and wives — consistently report higher subjective strain, anxiety, and depressive symptoms, reflecting structured domestic expectations, greater

cumulative caregiving hours, and restricted personal time^{38,45,46,48}. The association between caregiver age and burden is less consistent: while Grover et al. found an inverse relationship between caregiver age and burden on BAS-based studies⁴⁰, Kate et al. identified coping strategies and perceived social support — rather than demographic variables per se — as the primary protective factors against psychological morbidity⁴⁵. Caregivers relying on emotion-focused or avoidant coping (denial, wishful thinking) report significantly higher burden and lower quality of life than those using problem-focused coping, and unmet social support needs correlate with subjective distress as isolation impairs personal resilience^{16,38,45}. A qualitative meta-synthesis identified recurring themes of illness unpredictability, disrupted family roles, and unmet support needs³⁸, while comparative studies have examined spousal burden in relation to patient disability and discrepancies between caregiver- and clinician-rated burden^{48,50}.

1.3 Family, Health-System, and Contextual Determinants

Caregiving occurs within specific health-system and socio-economic contexts that shape both objective and subjective burden (Figure 4): objective burden includes direct medical costs, indirect employment loss, and routine household disruption, while subjective burden encompasses emotional distress, clinical anxiety and depression, and the loss of anticipated life plans^{15,20,32,38,42,45}. In LMIC settings, limited community mental health infrastructure, minimal residential support, and scarce financial safety nets shift long-term care onto family units^{38,40,44}. Family communication patterns — particularly EE, characterized by critical remarks, hostility, and emotional over-involvement — create a cyclical strain pattern in which high-EE environments increase relapse risk, which in turn escalates family crisis management and reinforces negative communication^{45,51-54}. Limitations in mental health services may further increase this burden: during COVID-19 lockdowns, 73.5% of caregivers worried about continuity of care should they themselves fall ill, and 38.6% reported heightened relational strain from confinement and service disruption⁴⁷. Cross-national comparisons further show that absolute burden estimates reflect healthcare access and recruitment setting rather than static population metrics: in a tertiary-hospital sample of 215 Iranian caregivers assessed with the ZBI-22, 38.2% scored in the severe-burden range⁴⁶, a proportion not directly comparable to community-based samples in other regions⁴⁴.

2. ASSESSMENT OF CAREGIVER BURDEN

Ten studies addressed the development or psychometric evaluation of caregiver-burden instruments^{19,20,28,32,37,55-59}. Four described the original development of the most widely cited instruments: the Zarit Burden Interview, developed for caregivers of the cognitively impaired elderly¹⁹; the Family Burden Interview Schedule, developed in India²⁰; the Burden Assessment Scale, developed in the United States for families of people with serious mental illness⁵⁵; and the Experience of Caregiving Inventory, developed in the United Kingdom to capture both negative and positive caregiving domains³². Commonly used psychometric scales were developed between 1980 and 1996, and recent research has largely focused on validating short-form variants or conducting cross-cultural factor analyses rather than developing new tools^{28,37,56,57}: Yu et al. validated a short-form ZBI in Chinese outpatient caregivers²⁸, and Tang et al. confirmed a multidimensional factor structure for the Chinese ZBI in a rural community sample⁵⁷.

Direct comparison studies demonstrate that, despite convergent validity, established instruments are not psychometrically interchangeable (Table 3). Yu et al. compared the 24-item Family Burden Interview Schedule (FBIS-24) with the 22-item Zarit Burden Interview (ZBI-22) in the same Chinese caregiver cohort and found good convergent validity ($r = 0.74$, $p < 0.001$) but structural divergence: the FBIS-24 preferentially captured objective financial expenditure and household disruption, while the ZBI-22 primarily measured subjective emotional distress and role conflict³⁷. Similarly, Gonçalves-Pereira et al. compared the ZBI with the Involvement Evaluation Questionnaire in psychosis caregivers and found that, while both instruments held acceptable psychometric properties, the ZBI emphasized personal psychological distress whereas the IEQ measured practical behavioral involvement and supervision demands⁵⁶.

Differences between instruments may partly explain the variation in burden estimates reported across studies. In Grover et al.'s meta-analysis of Indian studies, pooled absolute burden scores varied widely by instrument (Figure 2): FBIS pooled mean 21.01 (95% confidence interval [CI] 16.63–25.40), BAS pooled mean 71.39 (95% CI 64.12–78.66), and ZBI pooled mean 53.62 (95% CI 40.02–67.33)⁴⁰. The ZBI estimate had a wider confidence interval, while high heterogeneity was reported across all three instrument-specific analyses⁴⁰. Cross-study comparisons that aggregate “high burden” without accounting for instrument selection therefore risk confounding subjective distress with objective caregiving demands^{37,40,56}.

Disease-specific instrument development remains comparatively rare. The Schizophrenia Caregiver Questionnaire (SCQ), introduced in 2015 and validated in 2016, is structured around schizophrenia-specific caregiving demands such as managing negative symptoms, cognitive deficits, and relapse unpredictability^{58,59}. The SCQ demonstrated good-to-very-good internal consistency and test-retest reliability across its major domains, although reliability varied by domain^{58,59}. A comparison of the six common instruments across domains, strengths, limitations, and suitable use is presented in Table 3.

Table 3. Comparison of caregiver-burden assessment instruments

Instru ment	Doma ins	Strengths	Limitat ions	Most suitable use
Zarit Burden Intervie w (ZBI)	Subjective distress, role strain	Widely validated, translated, short forms available	Not schizophrenia-specific; originated in dementia caregiving	Cross-diagnostic comparison; brief clinical screening
Family Burden Intervie w Schedu le (FBIS)	Objective and subjective burden across life domains	Most widely used in Indian schizophrenia research	Longer administration; cultural validation mainly in South Asia	Detailed multidimensional assessment in South Asian settings
Burden Assess ment Scale (BAS)	Caregiver routine, distress, worry	Distinguishes objective/subjective burden clearly	Less internationally validated outside India	Research requiring subjective/objective burden separation
Experi ence of Caregiv ing Invento ry (ECI)	Negative and positive caregiving experiences	Captures resilience/positive aspects, not just strain	Longer instrument; less used in South Asian samples	Studies examining caregiver growth alongside burden

Instru ment	Doma ins	Strengths	Limitat ions	Most suitable use
Involve ment Evaluat ion Questio nnaire (IEQ)	Practic al caregi ving involv ement and tensio n	Captures behavioura l involveme nt, not just distress	Less sensitiv e to purely subjecti ve burden	Comparati ve psychosis- caregiving studies
Schizo phrenia Caregiver Questio nnaire (SCQ)	Diseas e- specifi c burden domai ns	High content validity for schizophre nia	Newer; smaller validati on evidenc e base	Schizophre nia- specific trials and outcome studies

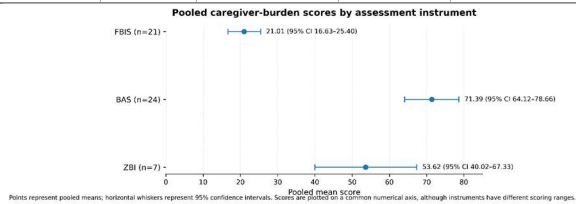


Figure 2. Pooled caregiver-burden scores by assessment instrument. Scores are plotted on a common numerical axis. Note that instruments have different scoring ranges. Based on Grover et al.'s study⁴⁰.

3. EVIDENCE-BASED INTERVENTIONS TO REDUCE CAREGIVER BURDEN

Twenty-three publications addressed interventions for reducing caregiver burden, including randomized controlled trials, one cluster-randomized trial, Cochrane and other systematic reviews with meta-analysis, and network meta-analyses published between 1982 and 2024^{25,34,51-54,60-76}. An overview of studies is presented in Table 4, and individual characteristics of important studies are detailed in Table 5.

Table 4. Intervention studies — overview

Intervent ion category	Represe ntative studies	Evidence/des ign	Main caregiver outcomes
Family psychoed ucation	Kulhara et al. [34]; Fallahi Khoshkn ab et al. [67];	RCTs; systematic reviews/meta- analyses	↓ Burden; ↑ psychological well- being/QoL; ↓ expressed emotion

Intervent ion category	Represe ntative studies	Evidence/des ign	Main caregiver outcomes
	Sharma et al. [54]; Chow et al. [62]; Okafor & Monaha n [63]		
Family- based interventi ons	Pharoah et al. [25]; Chien et al. [64]; Rodolic o et al. [51]	Systematic/C ochrane reviews; network meta-analysis	↓ Caregiver burden; ↓ relapse; improved family outcomes
Multi- family groups	Chien & Chan [60]; McFarla ne [75]	RCT; evidence- based practice	↓ Family burden; ↑ peer/social support
Problem- solving / brief psychoso cial interventi ons	Chien et al. [35]; Kumar et al. [61]	RCTs	Improved coping and psychological outcomes; burden effects variable
Expresse d- emotion- focused interventi ons	Leff et al. [72]; Shetty et al. [53]	Controlled/int erventional studies	↓ EE and family-related stress
Communi ty/brief psychoed ucation	Yasuma et al. [65]	Cluster-RCT	No significant reduction in caregiver burden
Evidence synthesis	Chow et al. [62]; Chien et al. [64]; Kim & Park [74]	Systematic reviews/meta- analyses	Most consistent evidence supports structured family- based/psycho

Intervention category	Representative studies	Evidence/design	Main caregiver outcomes
			educational approaches

3.1 Family Psychoeducation

Structured family psychoeducation is the most consistently supported intervention for reducing caregiver burden. Meta-analyses by Chow et al.⁶² (21 studies, 1,639 caregivers) and Okafor and Monahan⁶³ both confirm statistically significant reductions in caregiver burden (standardized mean difference [SMD] = -0.58 to -0.64, $p < 0.001$), alongside improvements in caregiver quality of life and reductions in EE; Chow et al. additionally noted unclear or high risk of bias in most included primary trials⁶². Cochrane reviews concluded that family interventions likely reduce caregiver burden at ≤ 1 month (MD -5.84, 95% CI -6.77 to -4.92; 8 RCTs, 563 participants), but the authors expressed concerns about methodological quality and rated the evidence from moderate to very low certainty depending on outcome^{25,64}. Network meta-analyses by Rodolico et al. and Bighelli et al. indicate that structured family psychoeducation provides relatives with illness education, crisis-management strategies, and communication skills training^{51,52}. This lowers patient relapse risk (Figure 3); because relapse is commonly associated with family crisis, relapse prevention also helps alleviate caregiver strain^{15,51,52}. Multi-family group models (e.g., McFarlane's approach) offer further benefit by fostering peer solidarity and reducing social isolation^{34,60,71,75}, and long-term follow-up data — such as Chien and Chan's Hong Kong trial — indicate that gains may be sustained for up to 12 months post-intervention⁶⁰. Such findings are supported by several individual trials across the globe^{34,60,67,72}. Despite strong meta-analytic support, risk-of-bias evaluations qualify these conclusions: seminal trials such as Leff et al.⁷² and Kulhara et al.³⁴ relied on small samples that, while historically influential, offer limited statistical precision by contemporary standards. These results are debated by Yasuma et al.'s cluster-randomized trial, which allocated 47 Japanese psychiatric visiting-nurse agencies to a brief family psychoeducation programme or treatment-as-usual and found no statistically significant difference in caregiver burden (Japanese ZBI, assessed at 1 and 6 months) between arms⁶⁵. Thus, brief, single-session, or nurse-led community delivery models may not reproduce the effect sizes observed in intensive, multi-session, hospital-based trials^{62,64,65}.

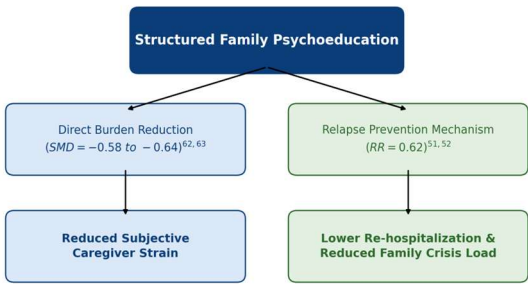


Figure 3. Therapeutic mechanisms and efficacy of structured family psychoeducation.

Table 5. Characteristics of selected intervention studies and evidence syntheses relevant to caregiver outcomes in schizophrenia

Study	Country	Design	Sample	Intervention	Key outcome
Leff et al., 1982 [72]	UK	Controlled randomized trial	24 families; 30 high-EE relatives	Structured family social intervention	Reduced patient relapse; demonstrated the clinical relevance of modifying EE and family interactions
Chien & Chan, 2004 [60]	Hong Kong	Randomized controlled trial; 3 groups	96 families: mutual support (n=32), psychoeducation (n=33), standard care	Multiple-family-group mutual-support intervention	Improved family and patient outcomes; benefits were assessed over 12 months

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			(n=31)		months
Kulhara et al., 2009 [34]	India	Randomized controlled trial	76 patient – caregiver dyads; 38 intervention, 38 routine care	Structured psychoeducation	Improvements in caregiver-related outcomes, including support and satisfaction; caregiver burden was assessed
Pharoah et al., 2010 [25]	Multi national	Cochrane systematic review and meta-analysis	53 RCTs	Family interventions	Reduced relapse and hospital admission; improved expressed emotion; evidence for caregiver outcomes was more limited
Falla hi Kho	Iran	Randomized	71 caregivers; 36	Group psychoeducation	Significant reduction

shkna et al., 2014 [67]		Controlled trial	Intervention, 35 control	on	on in family burden after intervention
Kumar et al., 2020 [61]	India	Randomized controlled trial	66 patient –key-relative dyads; 33 per group	Brief psychosocial intervention	Reduced caregiver burden and improved caregiver quality of life
Bighelli et al., 2021 [52]	Multi national	Systematic review and network meta-analysis	72 RCTs; 10,364 participants	Psychosocial and psychological interventions	Family interventions and family psychoeducation on reduced patient relapse; caregiver benefit was not a primary outcome
Sharma et al., 2021 [54]	India	Controlled clinical trial	40 patient – caregiver dyads;	Family psychoeducation	Improved caregiver psychological

			20 per group		well-being
Rodolico et al., 2022 [51]	Multi national	Systematic review and network meta-analysis	90 RCTs; 10,340 participants	Family interventions	Reduced risk of patient relapse; primarily indirect evidence for caregiver benefit
Okafor & Monahan, 2023 [63]	Multi national	Systematic review and meta-analysis	5 RCTs reporting FBIS outcomes	Psychoeducation	Significant reduction in caregiver burden

3.2 Other Psychosocial Interventions

EE-focused interventions, problem-solving training, and caregiver-focused psychosocial support provide some benefit^{56-58,61,64,74}. Randomized trials by Kumar et al.⁶¹ and Shetty et al.⁵³ in India demonstrated moderate reductions in caregiver anxiety and expressed emotion using brief psychosocial models, though their impact on relapse prevention remains less evident than multi-component family psychoeducation^{51,52,61}. Additional smaller randomized trials of brief psychosocial intervention and psychoeducation conducted in India^{54,76}, along with a clinician-supported problem-solving bibliotherapy trial for caregivers³⁵, further support these findings.

3.3 Digital and Remote Interventions

Digital psychoeducation, telepsychiatry platforms, and mobile health applications represent emerging delivery modalities designed to overcome geographic and financial access barriers^{47,65}. Digital and remote delivery are plausible strategies for extending caregiver interventions, but schizophrenia-specific caregiver trials remain limited.

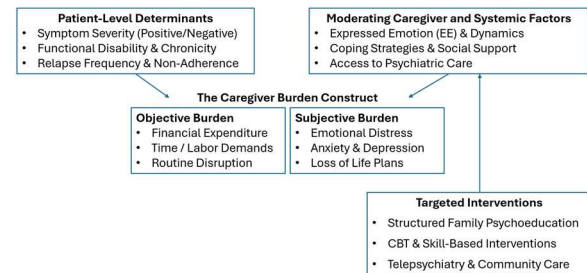


Figure 4. Conceptual framework of the caregiver-burden construct, illustrating patient-level determinants, moderating factors, objective and subjective burden dimensions, and targeted interventions.

LIMITATIONS OF THE EVIDENCE BASE

Some limitations impact the evidence presented in this study. First, risk-of-bias appraisals are inconsistently reported across meta-analyses, and positive pooled effect sizes mask inadequate allocation concealment and unblinded outcome assessment in some trials^{36,62,64}. Second, the structural divergence of measurement scales (ZBI, FBIS, BAS, IEQ, ECI, SCQ) prevents precise quantitative synthesis and cross-study benchmarking^{37,40,56}. Third, most intervention trials assess outcomes immediately post-intervention or within short follow-up windows of one to three months; some isolated trials track durability to 12 months or beyond, leaving long-term effect sustainability understudied^{60,62,64,65}. Geographical representation is also uneven: South and East Asian studies contribute substantially to the observational and intervention literature, but disease-specific instruments such as the SCQ have not been widely validated or integrated into trials for these populations^{28,34,37,40,45,58-61}.

CONCLUSION

Caregiving for a relative with schizophrenia imposes a profound, multifaceted burden encompassing both objective disruption and subjective emotional distress^{15,16,32,36,38,40}. Caregiver burden is associated with patients' functional disability and illness-related factors, while caregiver coping and social support may modify its psychological impact^{36,38,45,51,54}. Assessment of caregiver burden is marked by psychometric heterogeneity: widely used legacy instruments measure divergent factors, from objective financial disruption to purely subjective role conflict, and hence are not directly comparable^{19,20,28,32,37,40,55,56}. Future studies would benefit from greater consistency in instrument selection and from wider use of well-validated schizophrenia-specific measures where appropriate^{58,59}. Structured family psychoeducation is most favoured by evidence among psychosocial approaches evaluated for caregiver burden, although the certainty and magnitude of benefit vary across

studies^{51,52,62-64}. However, recent cluster-randomized trials indicate that community interventions may not achieve the same effect as intensive hospital-based interventions⁶⁵. Future research should prioritize adequately powered pragmatic trials, standardized disease-specific outcome measures, and evaluation of scalable digital and remote delivery platforms for more equitable geographic and financial accessibility.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflicts of interest related to this study.

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