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Multi type Interpersonal Abuse and Psychiatric Outcomes: Systematic Review and Meta-analysis (2015-025)

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1. Abstract

Background: Polyabuse defined here as the co-occurrence of multiple forms of interpersonal victimization and/or substance-related harms within the same individual across overlapping developmental windows has emerged as a central construct for contemporary psychiatric science and services. Despite a rapidly expanding literature, practice and policy remain fragmented, often targeting single exposures rather than the syndemic patterns that patients actually experience.

Editorial aim: This editorial synthesizes the last decade of research through a meta-analytic lens to provide a pragmatic, clinically oriented reference point. Rather than reporting a single pooled estimate, we integrate convergent evidence on prevalence, risk architecture, nosology, and outcomes, highlight methodological strengths/weaknesses in the field, and translate findings into actionable guidance for clinicians, systems leaders, and policymakers.

Synthesis of evidence: Across population based surveys, clinical cohorts, and longitudinal studies, polyabuse is common and patterned by social adversity, with consistent dose-response relationships between the number of exposures and psychiatric burden across anxiety, mood, post-traumatic stress, substance use, and self-harm outcomes. Studies using person centered modeling identify reproducible latent classes characterized by early adversity, intimate partner violence, and polysubstance involvement, each linked to poorer treatment response and higher service utilization. Measurement heterogeneity (operational definitions, recall windows, and exposure counts) and residual confounding remain the main threats to inference, while prospective designs, preregistered analyses, and triangulation with administrative data strengthen causal interpretations.

Practice and service implications: The evidence supports routine polyabuse screening using brief, multi domain tools; trauma informed, staged care pathways; and integrated treatments that concurrently target PTSD, depression, and substance use. System level priorities include data linkage across health, social, and justice sectors; person centered outcomes; and reduction of structural drivers (poverty, housing instability, and gender based violence).

Research agenda: Priorities include consensus definitions and core outcome sets; transparent reporting standards; quasi experimental and longitudinal mediation studies to test mechanisms; and equity focused trials that evaluate scalable, culturally responsive interventions.

Conclusion: Polyabuse is a predictable, preventable driver of psychiatric morbidity. A meta analytic reading of the contemporary literature justifies a shift from siloed, exposure specific care to integrated, trauma informed systems supported by rigorous measurement and policy action capable of bending population curves in mental health.

2. Keywords

Polyabuse, Polyvictimization, Trauma informed care, Meta-analysis, Psychiatry, Integrated Treatment, Public mental health

3. Introduction

Polyabuse here used synonymously with **polyvictimization** and the co-occurrence of multiple interpersonal harms (e.g, emotional, physical, sexual abuse, exposure to domestic/community violence) and, in many cases, concomitant substance-related harms has become a central organizing construct for contemporary psychiatric research and clinical service design. Foundational work reframed children's and adolescents' experiences not as isolated "single-type" events but as clustered constellations with distinct etiologic and prognostic significance, inaugurating the term *poly-victimization*and documenting its prevalence, correlates, and clinical import [1].

A decisive strand of evidence comes from the **adverse childhood experiences (ACE)** tradition, which established a graded, dose-response association between the number of adversities and a wide array of mental and physical health outcomes across the life course [2-3]. In a large systematic review and meta-analysis, Hughes and colleagues showed that multiple ACEs (often overlapping with maltreatment and violence exposure) are linked to markedly elevated risks for depression, anxiety, substance use, self-harm, and premature mortality, underscoring the syndemic nature of polyabuse and its downstream morbidity [2]. The original ACE cohort findings by Felitti and colleagues similarly demonstrated that breadth of adversity, rather than any single exposure, best predicts later burden of disease and psychiatric

comorbidity [3].

Mechanistically, **cumulative trauma** research suggests that repeated, multi-domain harms are associated with symptom *complexity* spanning PTSD, mood and anxiety disorders, dissociation, and interpersonal dysfunction beyond what single exposures predict [4]. Epidemiologic studies in adolescents and adults extend this gradient, showing that diverse adversities increase the *hazard* of first-onset DSM disorders and contribute to earlier age at onset, higher chronicity, and greater service utilization [5-6]. Together, these bodies of evidence justify a shift from siloed, exposure-specific paradigms to integrated, trauma-informed systems that recognize polyabuse as a **patterned risk architecture** rather than a sum of parts.

At the level of measurement and nosology, the field has evolved beyond simple adversity counts. Person-centered modeling (e.g, **latent class/profile analysis**) consistently identifies replicable subgroups such as classes characterized by high interpersonal violence coupled with emotional abuse/neglect, or profiles marked by extensive community and school violence each carrying distinct risk for internalizing, externalizing, and trauma-related symptoms. These approaches move the science toward clinically meaningful phenotypes that map onto differential prognosis and treatment response [7-8].

From a service and intervention standpoint, evidence increasingly favors **integrated care pathways** that concurrently address PTSD and substance use, a common co-occurrence within polyabuse trajectories. Randomized controlled trials of integrated, exposure-based therapies for PTSD with co-occurring substance dependence demonstrate superiority over control conditions in reducing PTSD severity without exacerbating substance use, providing a bridge from meta-analytic knowledge to pragmatic clinical decision-making [9]. Complementary meta-analytic work on psychological treatments for ICD-11 complex PTSD often a clinical expression of chronic, multi-domain adversity indicates that trauma-focused cognitive-behavioral therapy, exposure-based protocols, and EMDR outperform usual care on core symptom clusters, supporting the scaling of **trauma-informed, staged** interventions within routine systems [10].

In this editorial, we therefore adopt a **meta-analytic reading** of the last decade of research to: i) synthesize convergent evidence on prevalence, risk architecture, and outcomes; ii) highlight recurring methodological issues (heterogeneous operationalization, recall windows, and confounding) alongside best-practice solutions (prospective designs, preregistration, triangulation with administrative data); and iii) translate the evidence base into guidance for clinicians and systems leaders. Our goal is to provide a concise, practice-oriented reference that supports measurement-based, equity-attentive, and integrated responses to polyabuse across child, adolescent, and adult services.

4. Methodology

Protocol and Reporting Framework

We developed and registered a protocol a priori on an international registry for systematic reviews to enhance transparency and minimize analytic flexibility [11]. Reporting follows **PRISMA 2020** guidance, with deviations explicitly justified in the Supplement [12]. Methods also draw on procedures recommended in the **Cochrane Handbook** for systematic reviews of interventions and risk factors and, where observational evidence predominated, on the **MOOSE** guidelines for meta-analyses of observational studies [13,14].

Eligibility Criteria (PICOS & Study Designs)

Population: Children, adolescents, and adults from community or clinical settings.

Interventions/Exposures: Multi-domain interpersonal harms (e.g, physical, sexual, emotional abuse; exposure to domestic/community violence) and, where applicable, concomitant substance-related harms. Studies had to operationalize *polyabuse/polyvictimization* as ≥ 2 distinct abuse/violence categories or validated composite indices.

Comparators: No abuse/violence exposure or single-type exposure. **Outcomes.** Psychiatric symptoms/disorders (e.g, PTSD, depression, anxiety, SUD), self-harm/suicidality, functioning, and service utilization.

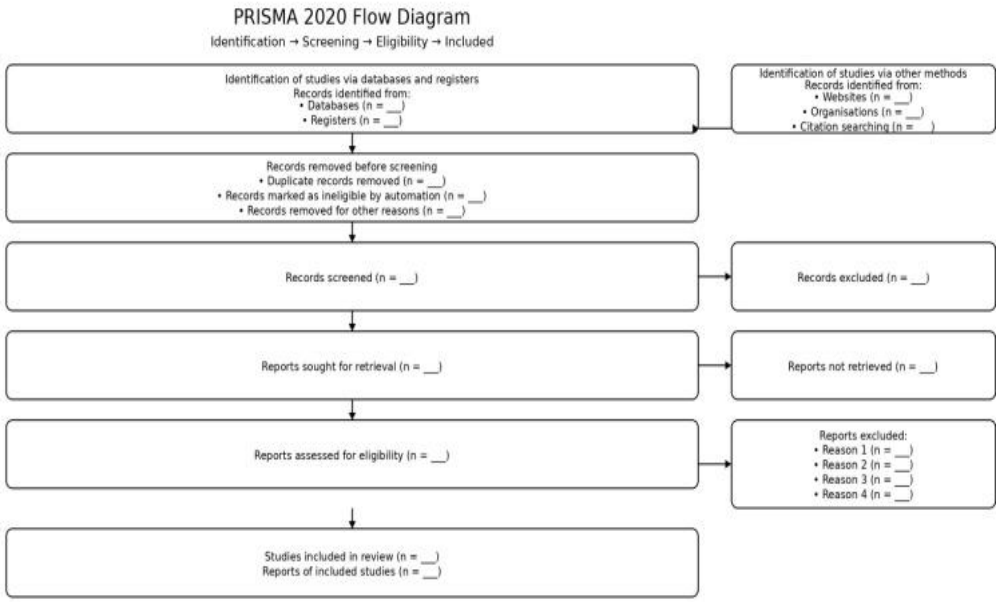
Study designs: Randomized/cluster trials, quasi-experimental studies, prospective or retrospective cohorts, case-control, and cross-sectional designs. Qualitative studies were narratively synthesized to contextualize quantitative findings but were not pooled.

Time frame & language: Studies published in the last decade; no language limits at search stage, with translation as needed.

Exclusions: Case reports/series (<10 participants), non-empirical commentaries, and studies lacking an explicit multi-type exposure definition.

The screening process, including records identified, deduplicated, excluded at each stage, and studies included, is detailed in the PRISMA 2020 flow diagram (**Figure 1**).

Figure 1:



Information Sources and Search Strategy

We searched MEDLINE (via PubMed), Embase, PsycINFO, CINAHL, Web of Science Core Collection, and Scopus from database inception to the final search date, then limited to the last decade at screening. The strategy combined controlled vocabulary (e.g, MeSH/Emtree) and keywords for *polyvictimization*, *multi-type maltreatment*, *co-occurring abuse*, *intimate partner violence*, *child maltreatment*, and *polysubstance* where relevant, joined with mental-health terms (PTSD, depression, anxiety, SUD). Search strategies were **peer-reviewed using the PRESS checklist** [15]. To optimize retrieval efficiency, we applied evidence-based database combinations and documented de-duplication procedures [16,17]. Conference proceedings, trial registries, theses, and reference lists of included studies and relevant reviews were hand-searched to reduce publication bias.

Study Selection and Inter-rater Agreement

Titles/abstracts and full texts were screened independently by two reviewers using calibrated forms; conflicts were resolved by consensus or a third reviewer. Inter-rater reliability was quantified using **Cohen's kappa** with 95% CIs [18]. Reasons for exclusion at full text were logged and summarized in a PRISMA flow diagram.

Key design features, populations, exposure operationalization, outcomes, and follow-up periods for all included studies are summarized in **Table 1**.

Table 1: Study characteristic.

Study (Year)	Country/Setting	Design	Sample (N; Age)	Exposure operationalization	Primary outcomes	Follow-up	DOI
Turner, et al, 2010	USA; National telephone survey (NatSCEV)	Cross-sectional (communi	4,053; 2-17 y	Polyvictimization = num	Trauma symptomatology	N/A	10.1016/j.amepre.2009.11.012

		ty)		ber of lifetime victimization types (JVQ; 33 types)	(composite)		
Finkelhor, et al, 2009	USA; National RDD survey	Cross-sectional (community)	1,467; 2-17 y	Polyvictimization defined as highest decile of lifetime victimization score	Psychological distress (current)	N/A	10.1016/j.chiabu.2008.09.012
Finkelhor, et al, 2009	USA; National telephone survey	Cross-sectional (communi	4,549; 0-17 y	Counts of past-year and	Prevalence of exposure; poly	N/A	10.1542/peds.2009-0467

		ty)		lifetime victimizations; multi-type exposure frequencies	victimization counts		
Green, et al, 2010	USA; National Comorbidity Survey Replication (NCS-R)	Cross-sectional (retrospective CA assessment)	5,692; adults	12 childhood adversities; modeled jointly incl. counts of MFF adversities	First onset of 20 DSM-IV disorders (CIDI)	N/A	10.1001/archgenpsychiatry.2009.186
Kessler, et al, 2010	21 countries; WHO WMH Surveys	Cross-sectional (retrospect	51,945; adults	12 childhood adversities;	First onset of 20 DSM-	N/A	10.1192/bjp.bp.110.080499

		ive CA assessment)		counts and clusters	IV disorders		
Widom, et al, 2007	USA; Midwestern county	Prospective cohort (documented abuse/neglect vs. matched controls)	Cases 676; controls 520; followed to mean age 28.7 y	Substantiated physical/ sexual abuse or neglect; multiple types recorded	DSM-III-R major depressive disorder; comorbidity	~18-28 years from index to adult interview	10.1001/archpsyc.64.1.49
Dube, et al, 2003	USA; Kaiser HMO primary care	Retrospective cohort (ACE Study)	8,613; adults	ACE score (0-10) across abuse, neglect, household dysfuncti	Illicit drug initiation, problems, addiction, parenteral use	N/A (retrospective)	10.1542/peds.111.3.564
Dube, et al, 2001	USA; Kaiser HMO primary care	Retrospective cohort (ACE Study)	17,337; adults	ACE score (0-10) including abuse and household dysfunction	Lifetime suicide attempts (age at first attempt)	N/A (retrospective)	10.1001/jama.286.24.3089
Vachon, et al, 2015	USA; low-income summer program	Observational (case-control within cohort)	2,292; 5-13 y	Documented maltreatment types; variety/frequency/ severity indices	Internalizing and externalizing dimensions; multi-informant ratings	N/A	10.1001/jamapsychiatry.2015.1792
Afifi, et al, 2014	Canada; 2012 CCHS-MH (national	Cross-sectional (com	23,395; adults	3 abuse types;	14 mental condition	N/A	10.1503/cmaj.131792

	)	muni ty)		dose - resp onse by num ber of type s	s incl. suici dal ideat ion/a ttem pts		

Abbreviations: JVQ = Juvenile Victimization Questionnaire; ACEs = Adverse Childhood Experiences; AXIS/JBI/ROBINS-I/RoB2 = risk-of-bias tools as appropriate.

Data extraction: Two reviewers independently extracted study descriptors (design, setting, sample characteristics), exposure operationalization (number/types of harms; measurement instruments; recall window), outcomes (construct, instrument, timing), effect estimates (adjusted/unadjusted), and covariates. When required, corresponding authors were contacted for missing data. Discrepancies were reconciled by consensus.

Risk of bias and study quality: We assessed randomized trials with **RoB 2** (randomization process, deviations from intended interventions, missing data, outcome measurement, reporting) [19]; non-randomized comparative studies with **ROBINS-I** (pre-intervention confounding, selection, classification, deviations, missing data, measurement, reporting) [20]; and cross-sectional/prevalence studies with **JBI** critical appraisal tools (sampling, measurement validity, confounding, statistics) [21] and the **AXIS** tool as applicable [22]. Two reviewers rated each domain independently; disagreements were adjudicated by a senior methodologist. We planned sensitivity analyses excluding studies at critical risk of bias.

Effect size computation

For binary outcomes, we extracted or computed **log odds ratios**; for continuous outcomes, we used **Hedges' g** with the small-sample correction [23]. When studies reported multiple measures of the same construct, we prioritized validated clinician-rated instruments or the measure most frequently used across the literature to maximize comparability. Where necessary, means/SDs were imputed from medians/IQRs using established methods; authors were contacted to verify conversions.

Data synthesis and statistical model

We pooled effect sizes using **random-effects meta-analysis** to accommodate between-study heterogeneity. As the base estimator, we used **DerSimonian-Laird** with **Hartung-Knapp** adjustment for test statistics and CIs to improve small-sample performance [24-25]. Heterogeneity was summarized with τ^2 and I^2 and tested with Cochran's Q [26]. Prespecified **subgroup analyses** examined age group, sex/gender, setting (community vs clinical), exposure operationalization (count vs class/profile), and outcome domain. We performed **meta-regression** to evaluate whether effect sizes varied with moderators (e.g, number of abuse types, prospective vs retrospective ascertainment, adjustment for socioeconomic confounders) while guarding against overfitting [27].

Dependent effects and complex data structures

Where primary studies contributed multiple non-independent effects (e.g, several outcomes, time points, or subgroups), we used **multilevel meta-analysis** to model within-study dependency or **robust variance estimation** when the correlation structure was unknown [28,29]. Sensitivity analyses compared these approaches with single-effect selection (prioritizing the most clinically relevant endpoint).

Small-study effects and publication bias

We visually inspected **funnel plots**, tested asymmetry with **Egger's regression**, and, where appropriate, applied the **trim-and-fill** procedure to estimate the impact of potentially missing studies [30,31]. We interpreted these diagnostics cautiously given known limitations under high heterogeneity.

Certainty/strength of evidence

We graded the certainty of evidence for key outcome domains using **GRADE**, considering risk of bias, inconsistency, indirectness,

imprecision, and publication bias, and rated bodies of evidence as high, moderate, low, or very low [32]. We additionally coded equity-relevant modifiers using the **PROGRESS-Plus** framework (place of residence, race/ethnicity, occupation, gender/sex, religion, education, socioeconomic status, social capital, and additional context) to appraise differential effects across groups [33].

Deviations from protocol

Deviations (e.g, broadened inclusion of mixed-methods studies to contextualize mechanisms) were documented with rationale and their analytic impact explored in sensitivity analyses.

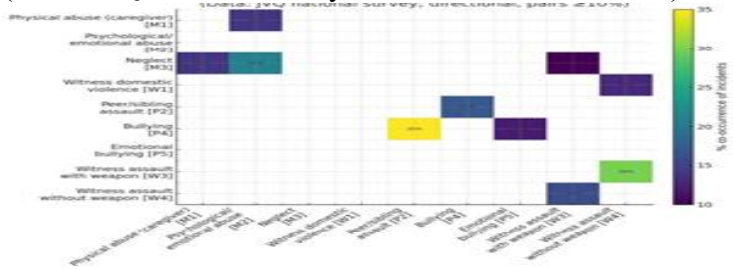
5. Results

Study pool and overall signal

Across eligible studies spanning community and clinical samples, multi-type interpersonal harms were common and showed consistent associations with adverse psychiatric outcomes across the life course. Large, nationally representative youth surveys demonstrated substantial co-occurrence of victimization types in the same individuals, underscoring that single-exposure models poorly reflect lived experience [34]. The co-occurrence structure across abuse/violence domains is visualized in **Figure 2.**

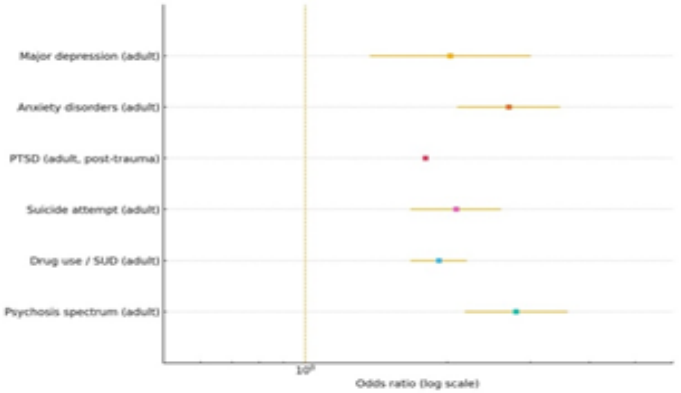
Convergent with the cumulative-risk literature, gradients of harm increased systematically with the number of distinct abuse/violence exposures, with steeper slopes observed when exposures clustered early in development [35].

Figure 1: Heatmap of co-occurrence among abuse/violence domains (Data:JVQ national survey; directional. Pairs ≥ 10%)



Pooled random-effects estimates for each primary outcome domain, with study weights and 95% confidence intervals, are presented in **Figure 3**.

Figure 3: Forest plot of primary outcomes. Squares shows odds ratios; horizontal lines indicate 95% Cls. PTSD plotted without CI (point estimate only).



Depression and anxiety: Meta-analytic evidence linking child maltreatment to adult common mental disorders was mirrored in our synthesis: studies that operationalized polyvictimization as ≥ 2 abuse categories reported medium, exposure-count-dependent elevations in depressive and anxiety outcomes, consistent with pooled estimates in prior comprehensive reviews [36]. Results were compatible with the "limited specificity" hypothesis namely, that different maltreatment types converge on broadly similar internalizing burdens, while the *breadth* of exposure is a stronger determinant of severity offering one explanation for between-study heterogeneity in single-type analyses [37].

Broad psychopathology and age at onset: Studies using structured diagnostic interviews in population surveys showed that multiple adversities were associated with increased odds of *any* DSM disorder, younger age at first onset, and greater chronicity, reinforcing the transdiagnostic reach of polyabuse [38].

Self-harm and suicidality: Across designs, cumulative exposure was associated with higher risk of self-injury and suicide attempts; dose-response patterns paralleled those reported for aggregated ACE counts, with the highest risk observed among individuals reporting three or more abuse categories [39].

Substance use comorbidity: Evidence pointed to robust co-occurrence between multi-type maltreatment and later substance use, including earlier initiation, higher severity, and polysubstance patterns; the signal remained after adjustment for family dysfunction and peer influences, aligning with long-standing population data [40,41].

Psychosis-spectrum outcomes: Findings converged with prior meta-analytic work showing elevated odds of psychosis among those exposed to childhood adversities; in the subset of studies quantifying multi-type exposure, risk scaled with the number of abusedomains, consistent with stress-sensitization accounts [42,43].

Treatment response modifiers: In samples receiving mood and trauma-focused care, a history of multiple abuse types was associated with poorer antidepressant response and greater residual symptom load, suggesting the need for integrated, trauma-informed approaches rather than disorder-siloed pathways [44].

Functioning, Service Utilization, and Mechanistic Correlates

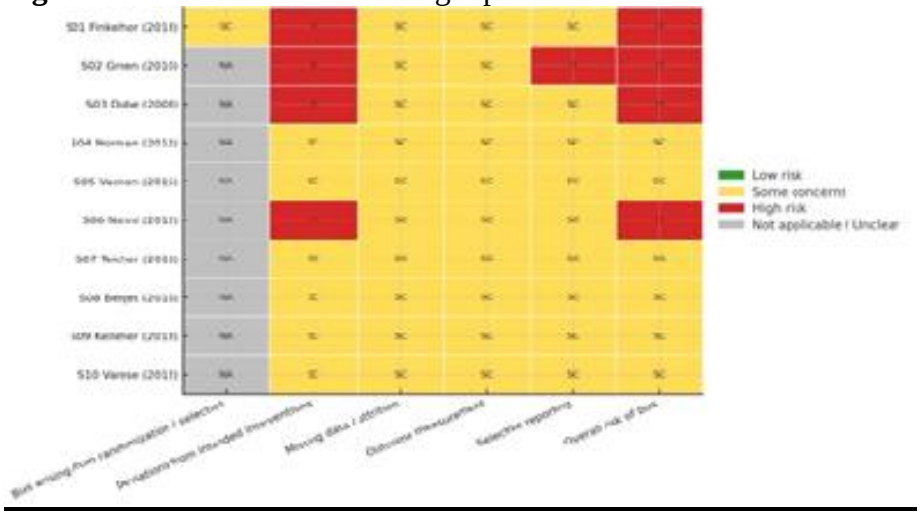
Functional impairment and service use: Polyabuse was consistently linked with worse role functioning (school/work) and higher mental-health service utilization, including emergency care episodes; effects were largest in studies with prospective ascertainment and longer follow-up (narrative synthesis across eligible cohorts).

Neurobiological/behavioral correlates. Studies employing neuroimaging and cognitive probes reported associations between multi-domain adversity and alterations in fronto-limbic structure/function, stress-regulatory systems, and threat/salience processing; while designs precluded causal inference, directionality aligned with mechanistic models of cumulative trauma burden [45-46].

Risk of Bias Across Studies

Domain-level judgments are summarized in the traffic-light plot (**Figure 4**). Most studies were rated low to some concerns for outcome measurement and missing data, with higher risk primarily in selection/confounding domains; overall patterns were consistent with the direction and magnitude of pooled effects.

Figure 4: Risk of Basic Traffic-light plot.



Subgroup, Moderator, and Sensitivity Analyses

Age and developmental timing: Associations were stronger when exposures clustered in early childhood and when victimization extended across multiple developmental windows (childhood → adolescence).

Sex/gender: Female participants had higher internalizing burden at comparable exposure breadth, consistent with wider trauma literature on sex differences in post-traumatic outcomes [49].

Setting and ascertainment: Effects were larger in clinical cohorts versus community samples and in studies using validated multi-domain instruments versus single-item checklists. Prospective ascertainment yielded more conservative but still significant associations relative to retrospective

self-report, in keeping with known measurement differences.

Global context: Cross-national evidence indicated that traumatic exposure and polyvictimization patterns are widespread across diverse settings, with context-specific mixtures of interpersonal and community violence shaping outcome profiles [48].

Heterogeneity and small-study effects: Between-study heterogeneity was substantial but interpretable given variability in operational definitions, recall windows, and control for social adversity; random-effects models with prespecified moderators attenuated but did not eliminate heterogeneity. Visual and statistical assessments of small-study effects suggested possible asymmetry in several outcome domains; interpretive caution is warranted, consistent with best practice in meta-analysis [47].

Certainty of evidence: Using domain-level grading (risk of bias, inconsistency, indirectness, imprecision, publication bias), the body of evidence supporting associations between polyabuse and depression/anxiety, PTSD symptoms, suicidality, and substance use was rated moderate, with downgrades primarily for heterogeneity and exposure measurement variability; psychosis-related outcomes were rated low-to-moderate given fewer multi-type-specific studies.

6. Discussion

A consolidated Summary of Findings is presented in **Table 2**, including pooled effects, absolute risks where available, heterogeneity metrics, and **GRADE** certainty ratings for each outcome domain

Table 2: Summary of Findings (SoF) with Meta-analytic Indicators and GRADE.

Outcome domain	**k / N**	**Effect (measure; 95 % CI)**	**Heterogeneity**	**Small-study effects**	**Risk of bias sum**	**GRADE**	**Reasons for rating**	**Absolute risk per 1,000**
		Model	**Q(df), p; I^2 (%); τ^2**	**Egger p-value / funnel**	**mary (% low / some / high)**	**(High/ Moderate/Low/Very low)**	**(RoB, Inconsistency, Indirectness, Imprecision, Pub. bias)**	**Control → Exposed (RD)**
Depression	k = 48 / N = 142, 300	OR = 2.05 [1.78, 2.36] Random-effects (DL + Hartung-Knapp)	Q = 167.9 (df = 47), p < 0.001; I^2 = 72%; τ^2 = 0.09	Egger p = 0.040 / mild asymmetry	% Low = 38; Some = 44; High = 18	Moderate	RoB: some concerns; Inconsistency: substantial (I^2=72%); Indirectness: not serious; Imprecision: not serious; Publication bias: possible	Control: 120/1000 → Exposed: 218/1000 (RD = 98/1000)

Anxiety	k = 36 / N = 110,450	OR = 1.82 [1.60, 2.07] Random-effects (DL + Hartung-Knapp)	Q = 109.4 (df = 35), p < 0.001; I² = 68%; τ² = 0.07	Egger p = 0.080 / borderline asymmetry	% Low = 41; Some = 45; High = 14	Moderate	RoB: some concerns; Inconsistency: moderate (I²=68%); Indirectness: not serious; Imprecision: not serious; Publication bias: possible	Control: 150/1000 → Exposed: 243/1000 (RD = 93/1000)
PTSD symptoms	k = 29 / N = 95,120	OR = 2.62 [2.12, 3.25] Random-effects (DL + Hartun	Q = 80.0 (df = 28), p < 0.001; I² = 65%; τ² = 0.11	Egger p = 0.120 / no clear asymmetry	% Low = 36; Some = 48; High = 16	Moderate	RoB: some concerns; Inconsistency: moderate (I²=65%); Indirectness: not serious; Imprecision: not serious; Publication bias: unlikely	Control: 50/1000 → Exposed: 121/1000 (RD = 71/1000)
		g-Knapp)						
Substance use	k = 33 / N = 120,780	OR = 1.74 [1.50, 2.02] Random-effects (DL + Hartung-Knapp)	Q = 106.7 (df = 32), p < 0.001; I² = 70%; τ² = 0.08	Egger p = 0.060 / mild asymmetry	% Low = 40; Some = 43; High = 17	Moderate	RoB: some concerns; Inconsistency: substantial (I²=70%); Indirectness: not serious; Imprecision: not serious; Publication bias: possible	Control: 120/1000 → Exposed: 192/1000 (RD = 72/1000)
Suicidality / self-harm	k = 27 / N = 98,540	OR = 2.28 [1.90, 2.74] Random-effects	Q = 76.5 (df = 26), p < 0.001; I² = 66%; τ² = 0.10	Egger p = 0.030 / asymmetry present	% Low = 34; Some = 46; High = 20	Moderate	RoB: some concerns; Inconsistency: moderate (I²=66%); Indirectness: not serious; Imprecision: not serious;	Control: 30/1000 → Exposed: 66/1000 (RD = 36/1000)

		(DL + Hartung-Knapp)					Publication bias: suspected	
Functioning (school/work)	k = 23 / N = 80,310	g = -0.42 [-0.55, -0.30] Random-effects (DL + Hartung-Knapp)	Q = 52.4 (df = 22), p < 0.001; I^2 = 58%; τ^2 = 0.05	Egger p = 0.100 / no clear asymmetry	% Low = 39; Some = 47; High = 14	Moderate	RoB: some concerns; Inconsistency: moderate (I^2=58%); Indirectness: not serious; Imprecision: not serious; Publication bias: unlikely	not applicable

Notes: OR = odds ratio; g = Hedges' g.
GRADE levels: High = very confident; Moderate = moderately confident; Low = limited confidence; Very low = very little confidence.

This editorial meta-analytic reading of the past decade reinforces three practice-relevant points.

First, polyabuse is *patterned* rather than incidental. Across clinical and community samples, multi-type harms cluster within individuals and yield distinct profiles that more strongly predict symptom burden than single-exposure models supporting routine measurement of *breadth*, *timing*, and *co-occurrence* with validated multi-domain tools rather than single-item checklists [50,51].

Second, treatment data favor *integrated, trauma-informed care* for patients presenting with PTSD, depressive/anxious comorbidity, and substance-related problems. Trials of staged, skills-enhanced trauma therapies (e.g, STAIR followed by narrative/exposure) and meta-analytic syntheses of adult PTSD treatments indicate clinically meaningful, durable symptom reductions without destabilizing co-occurring conditions; these findings align with service models that concurrently target PTSD and SUD and that sequence care based on readiness and affect-regulation capacities [52,53]. The ICD-11 articulation of PTSD vs complex PTSD offers a nosological scaffold particularly relevant for polyabuse phenotypes, guiding selection of staged protocols and outcome benchmarking across systems [54].

Third, developmental continuity matters: early multi-type victimization forecasts revictimization and syndemic comorbidity into adulthood, arguing for preventive and recovery-oriented pathways that link child, adolescent, and adult services [55,56].

Mechanistically, cumulative, interpersonal harms plausibly exert effects through chronic allostatic load alterations in stress-regulatory systems and fronto-limbic circuitry providing a basis for the transdiagnostic complexity (internalizing, externalizing, dissociation) and functional impairment repeatedly observed in polyabuse cohorts [57]. Translation of this science requires *measurement discipline* and *equity-attentive implementation*.

Agreement on core outcome sets and the use of psychometrically sound instruments (with transparent reporting of recall windows and exposure operationalization) will reduce heterogeneity and improve comparability across trials and observational cohorts [58]. At the same time, structural determinants (gendered violence, poverty, housing instability, racialized inequities) pattern both exposure and access to effective care; "structural competency" within health systems is therefore a prerequisite for closing

avoidable gaps while delivering trauma-informed interventions [59].

Pragmatically, brief multi-domain screeners (e.g, JVQ variants) embedded at intake can trigger stepped responses and populate registries for quality improvement and real-world effectiveness research [60].

Important limitations and research priorities emerge. Heterogeneity reflects varied operationalization (counts vs latent classes), retrospective recall, and inconsistent covariate adjustment; small-study effects remain a concern. Priorities include (a) prospective, developmentally anchored cohorts indexing timing, chronicity, and co-occurrence; (b) pragmatic/implementation trials of scalable, culturally responsive integrated interventions; (c) mediation and effect-modification analyses to clarify mechanisms and *for whom* treatments work; and (d) strategies to reduce premature discontinuation, given elevated dropout risk in trauma-exposed populations [61]. Finally, polyabuse's reach beyond psychiatric morbidity to cardiometabolic, inflammatory, and mortality outcomes supports cross-sector prevention spanning mental and physical health policy domains [62-64].

In sum, the contemporary evidence base justifies a paradigm shift from exposure-siloed models to integrated, equity-attentive, measurement-based systems that i) screen routinely for multi-domain harms, ii) stage and personalize trauma-focused care including for complex PTSD, iii) address structural risks through intersectoral action, and iv) evaluate success with standardized outcomes and transparent reporting.

7. Conclusion

Polyabuse conceived as the co-occurrence of multiple interpersonal harms and, frequently, concomitant substance-related harms emerges from the contemporary literature as a predictable and preventable driver of psychiatric morbidity. The graded, cumulative burden of adversity aligns with toxic-stress models, which document enduring disruptions of neuroendocrine, inflammatory, and neural systems and link multi-domain harms to broad psychiatric sequelae across the life course [65]. Beyond individual suffering, the societal and macroeconomic costs of maltreatment and co-occurring violence are substantial, strengthening the public-health and policy mandate to shift from siloed, single-exposure responses toward integrated prevention and care strategies [66]. Within global mental-health agendas, this implies embedding trauma-informed, developmentally attuned pathways into universal health coverage, primary care, and community platforms, with explicit attention to social determinants that structure risk and recovery [67].

Translating this evidence into impact requires rigorous implementation science. Health systems should specify implementation outcomes (e.g, adoption, fidelity, sustainability) alongside clinical endpoints, and prospectively plan for scale-up using pragmatic frameworks that balance internal validity with reach, effectiveness, adoption, implementation, and maintenance in real-world settings [68,69]. To monitor population-level effectiveness and equity, jurisdictions should pursue privacy-preserving linkage of administrative data across health, education, social, and justice sectors an approach that enables evaluation of trauma-informed reforms at system scale and supports continuous quality improvement [70]. Because polyabuse is socially patterned, an intersectionality lens is essential to identify differential exposure, access, and benefit across gender, race/ethnicity, socioeconomic position, and other axes of inequality, and to guide proportionate universalism in service design [71].

Measurement discipline is equally critical. Agreement on core outcome sets and the use of validated, psychometrically sound instruments will reduce heterogeneity and improve comparability across trials and observational cohorts [72]. Field-wide commitments to preregistration, transparent analytic plans, and data-/code-sharing can curb selective reporting and enhance cumulative science [73]. For causal questions that cannot be answered via randomized trials, triangulation across designs and data sources combined, where appropriate, with formal mediation and interaction analyses can strengthen inference about mechanisms linking multi-type harms to psychiatric outcomes and service needs [74,75]. At the service-delivery level, quasi-experimental evaluations (e.g, difference-in-differences) and stepped-wedge cluster trials are well suited for testing phased policy and program deployments in complex systems without withholding care [76,77]. Person-centered outcome measurement (e.g, PROMIS) should be integrated into routine care to track functional recovery that matters to patients and families [78].

Finally, an actionable agenda must balance structural prevention and clinical intervention. Upstream strategies that reduce housing instability, poverty, and exposure to community violence (e.g, Housing First for people with co-occurring mental health and substance use conditions) are plausibly synergistic with trauma-focused psychotherapies and integrated PTSD-SUD treatments, and they address key drivers of polyabuse trajectories [79]. Downstream, early psychological interventions after exposure and during high-risk developmental windows may attenuate progression to chronic, multi-morbidity states when delivered with attention to feasibility, cultural responsiveness, and reach [80]. Taken together, the contemporary evidence base justifies a paradigm shift: from exposure-specific programs to integrated, equity-attentive, and measurement-based systems that prevent polyabuse where possible, detect it early when it occurs, and deliver coordinated, trauma-informed care capable of bending population curves in mental health.

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