

N	Author(s)	Country	Sample (N)	Age (years)	Domain assessed	Measurements	Type of study
1	Cluver et al., 2007 [36]	South Africa	1025 children (425 orphaned by HIV/AIDS, 241 orphaned by non-HIV/AIDS causes, 81 orphaned by unknown causes, 278 not orphaned)	10 – 19	Individual	CDI; R-CMAS; SDQ using the 5-items peer problems subscale; Amaya-Jackson's Child PTSD Checklist; SDQ using the 5-items conduct problems subscale; CBCL YSR using the 11-items delinquent subscale	Quantitative study, interviews
2	Betancourt et al., 2011 [39]	Rwanda	43 children (HIV/AIDS-affected) and 31 adults	10 – 17	Individual	Free-Listing interview: "What are the problems of HIV/AIDS-affected children in this community?" Key Informant Interviews: "Tell me more about the problem of <i>agahinda kenshi</i> (persistent sorrow) among HIV/AIDS-affected children in this community"; "How does a child with <i>agahinda kenshi</i> feel?"; "How does a child with <i>agahinda kenshi</i> behave?"; "How does a child with <i>agahinda kenshi</i> think about	Qualitative study

						themselves or others?"	
3	Han et al., 2013 [20]	Uganda	297 children (orphaned by HIV/AIDS)	12 – 14	Individual	BHS; CDI	Two-arm cluster randomized controlled trial
4	Sipsma et al., 2013 [35]	South Africa	Children (HEU) and 509 mothers (395 HIV-positive, 114 HIV-negative)	6 – 10	Individual	VABS; CBCL; CDI; RCMAS; BOEQI YV	
5	Betancourt et al., 2014 [27]	Rwanda	683 children (218 HIV-positive, 228 HIV-affected, 237 HIV-unaffected)	10 – 17	Individual	WHODAS-Child; CESDC; YSR; anxiety/internalizing scale; Parental Acceptance and Rejection Questionnaire using 16-items; United Nations Children's Fund's Multiple Indicator Cluster Survey using 12-items; Post-War Adversities Index; SAFE child protection checklist using 17-items; HIV-related stigma reported on a 4-point Likert scale of <i>never</i> , <i>sometimes</i> , or <i>often/a lot</i> ; HSCL	Case-control study
6	Govender et al., 2014 [22]	South Africa	623 children (226 orphaned by HIV/AIDS, 397 not orphaned)	9 – 15	Individual	YSR; SACAS	Cross-sectional study
7	Barenbau et al. 2016	South Africa	100 children (vulnerable or	12 – 22	Individual	PAS-A; RADS-2; R-CMAS	The study investigated the

	[58]		orphaned by HIV/AIDS)				role of social support and attachment on positive well-being among orphaned and vulnerable children due to HIV/AIDS
8	Ezeamama et al., 2016 [47]	Uganda	166 children (58 HIV-positive, 55 HEU, 53 HUU)	6 – 18	Individual	BRIEF questionnaire	Comparative study
9	Milligan et al., 2017 [46]	South Africa	273 children (95 HIV-positive, 86 HEU, 92 HUU)	Mean age: 7.42, 7.36, 7.05, respectively	Individual	AWMA; ELP	Case control study
10	Nkwata et al., 2017 [48]	Uganda	168 children (58 HIV-positive, 54 HEU, 56 HUU)	3 – 18*	Individual	PedsQL; medical history; physical examination, and laboratory evaluations	Retrospective cohort study
11	Lowenthal, et al., 2018 [50]	Botswana	650 children (200 HIV-positive, 200 HEU, 250 HUU)	7 – 18	Individual	PennCNB; PSC	Case-control study
12	Robb et al., 2018 [51]	South Africa and United States of America	Three cohorts: HIV-positive, HEU, HUU	Adolescents	Individual	Higher cognition; executive, emotional and behavioural functioning; identify the determinants of resilience	Case-control study
13	Boivin, et al., 2019 [49]	Malawi and Uganda	Three cohorts: HIV-positive, HUU, HEU	12	Individual	BPG; CCRT	Case-control study
14	Cluver et al., 2012	South Africa	599 children	10 – 20	Social	Questionnaire:	Mixed qualitative

	[52]		(212 with HIV/AIDS condition at home, 140 with other- conditions at home, 247 in healthy homes)			educational outcomes when controlling for sociodemographic s	and quantitative study
15	Campbell et al., 2014 [62]	Zimbabwe	128 children	10 – 14	Social	Children story about HIV in the school context	Qualitative study draws and write story about HIV
16	Nabunya et al., 2014 [45]	Uganda	1410 children (orphaned by HIV/AIDS)	Mean age: 12.7	Social	Questions on the effects of parental loss on children's feelings: 1) How has the loss of your father affected the way you feel about life? and 2) How has the loss of your mother affected the way you feel about life?	Quantitative study; survey
17	Watkins et al., 2014 [60]	South Africa	243 children (orphaned by HIV/AIDS)	13 – 22	Social	Open ended questions to elicit individual perspective on education; risk and protective factors	Qualitative study
18	Collishaw et al., 2015 [31]	South Africa	944 children (425 orphaned by HIV/AIDS, 241 orphaned by non-HIV/AIDS causes, 278 not orphaned)	10 – 19	Social	CDI; RCMAS; CPTSDC; SDQ; CBCL	Longitudinal study
19	Skovdal, 2016 [23]	Kenya	47 children (vulnerable children and	10 – 20	Social	Interview: school experiences of HIV affected children	Qualitative study

			orphaned by HIV/AIDS) and 18 teachers				
20	Visser et al., 2012 [64]	South Africa	45 children/ HIV-positive mothers dyads	6 – 10 and 25 – 42	Individual, and family	N/A	Qualitative study
21	Orkin et al., 2013 [42]	South Africa	723 children (269 orphaned by HIV/AIDS, 103 with HIV/AIDS condition at home, 351 not orphaned)	11 – 25	Individual, and family	Educational outcome; poverty; CDI; RCMA; CPTSD	Quantitative study
22	Betancourt et al., 2014 [21]	Rwanda	39 children and 28 caregivers	7 – 17 and 30 – 70	Individual and family	Family connectedness; good parenting; CD-RIS; pro-social behaviour; MICS; CESDC; ISSB; YSR; IRQ; YCPS-RS; WHODAS-Child	Pre-post design, including 6-month follow-up; qualitative and quantitative study; Intervention
23	Sherr et al., 2014 [34]	South Africa	381 children (24 double orphans because of HIV/AIDS, 70 single orphans because of HIV/AIDS, 287 not orphans)	8 – 19	Individual and family	RSE; SEQ-C; CDI; SDQ; Adapted Community Maltreatment, Exploitation, Stigma & Discrimination Scale; P-C CTS; Externalizing and Risk Behavior Scale	Interview; quantitative study
24	Casale et al., 2015 [55]	South Africa	2477 children/ caregivers dyads	10 – 17 and >18	Individual and family	MOS-SSS; APQ – short form; SF-12; SDQ	Cross-sectional household survey
25	Skeen et al., 2016 [29]	Malawi and South Africa	588 children (HIV-affected)	4 – 13*	Individual and family	CDI; TSCC; RSE; SDQ; SAHA P-C	Cross-sectional study

						CTS; Child Abuse and Neglected screening tools	
26	Nalugya et al., 2018 [56]	Uganda	38 HIV-positive parents	18 – 61	Individual and family	First interview (unstructured): life and illness history; second interview (semi structured): life history and HIV self-management; role of children with their parents	Qualitative study
27	Cluver et al., 2008 [37]	South Africa	944 children (425 orphaned by HIV/AIDS, 241 by non-HIV/AIDS causes, and 278 not orphaned)	10 – 19	Individual and social	CDI; CMAS-R; SDQ; PTSD; CBC; Social and Health Assessment Peer Victimization Scale; self-report of past-year experience of witnessing or having been a victim of the study area's four most common community crimes; Berger Stigma Scale for HIV-positive youth—Revised	Quantitative study; interview
28	Cluver et al., 2009 [19]	South Africa	944 children (425 orphaned by HIV/AIDS, 241 orphaned by non-HIV/AIDS causes, 278 not orphaned)	10 – 19	Individual and social	CDI; CMAS; SDQ; PTSD -C	Quantitative study; interview
29	Cluver et al., 2009 [38]	South Africa	1050 children (HIV-affected)	10 – 19	Individual and social	CDI; CMAS; SDQ; PTSD-C; Social and Health	Quantitative study; interview

						Assessment Peer Victimization Scale; Berger Stigma Scale for HIV-positive youth–Revised	
30	Nordtveit, 2010 [18]	Namibia eSwatini (Swaziland)	and 70 children 40 adults	8 – 17	Individual and social	School as a protective factor and HIV context. Unstructured, semi structured, and open-ended questions	Qualitative studies: 2 cases studies in Namibia and Swaziland (eSwatini)
31	Mueller et al., 2011 [28]	South Africa	297 children (HIV- affected)	8 – 18	Individual and social	RSES; SEQ; CDI; SDQ; Snider scale for Stigma, social connection and experiencing violence; Social and Health Assessment Scale, psychosociodemo graphic characteristics	Quasi experimental project: art to increase self- esteem and self- efficacy
32	Okawa, 2011 [30]	Kenya	398 children (orphaned by HIV/AIDS) pairs with caregivers	10 – 18	Individual and social	MSPSS; CES-DC; RSES	Cross-sectional study
33	Kagotho et al., 2012 [53]	Uganda	297 caregivers	18 – 87	Individual, and social	Depression	Longitudinal study
34	Pufall et al., 2014 [65]	Zimbabwe	4577 children (HIV-affected, HIV- positive)	6 – 17	Individual and social	CWI; monitoring and evaluation facility survey	Data from a cross- sectional household survey were linked to data on schools from a parallel monitoring and evaluation facility survey

35	Thurman et al., 2014 [40]	South Africa	1487 children (HIV/AIDS-affected) 918 caregivers	10 – 17	Individual and social	CESDC; World Health Organization Quality of Life subscale	Longitudinal quasi-experimental design
36	Nicholson et al., 2015 [66]	Zambia	390 children (111 HEU, 279 HUU)	6 – 12	Individual and social	General health, school report	Cross-sectional study
37	Sseswamala et al., 2016 [69]	Uganda	346 children (orphaned by HIV/AIDS)	12 – 16	Individual and social	School primary leaving examination; child confidence in achieving educational plans; Beck hopelessness scale; Tennessee self-concept scale	Randomized experiment case control study
38	Scorza et al., 2017 [61]	Rwanda	367 children (HIV-affected)	10 – 17	Individual and social	CD-RISC; protective and risk factors	Qualitative study
39	Sherr et al., 2017 [44]	Malawi and South Africa	588 children (HIV-positive, HIV-affected, HUU)	4 – 12*	Individual and social	Draw-a-person Test; Digit Span Test	Quantitative study
40	Sherr et al., 2017 [70]	Malawi and South Africa	854 children (HIV-affected)	5 – 15 *	Individual and social	CSI; Educational risk; grant receipt; number of grants; good parenting; Draw a Person test	Cash grant intervention
41	Phaladze et al., 2018 [67]	Botswana	732 children (orphaned by HIV/AIDS)	10 – 18	Individual and social	School grade, loss and grief, living arrangement	Qualitative study; interview
42	Sharp et al., 2018 [43]	South Africa	750 children (224 orphaned by HIV/AIDS, 276 orphaned by non-HIV/AIDS causes, 250 not orphaned)	7 – 11	Individual and social	SDQ; School Connectedness Scale	Cross-sectional study

43	Webster et al., 2018 [57]	Uganda	168 children (HEU, HUU) 106 caregivers (HIV-positive, HIV-negative)	6 – 18	Individual and social	Distress Weinberger Adjustment Inventory; Children's Hopelessness Scale; Positive Outlook-Individual Protective Factors Index; Hare Area-specific self-esteem scale; PedsQLTM	Cross- sectional study
44	Katisi et al., 2019 [68]	Botswana	650 children (orphaned by HIV/AIDS)	11 – 17	Individual and social	Child and Youth Resilience Measure-28; 5-point Inventory of Complicated Grief ; 3-point Future Aspirations/Peer Leader Survey	Quasi-experimental; pre-test and post-test
45	Small et al., 2019 [32]	South Africa	475 children (HIV-affected)	9 – 13	Individual and social	General health questionnaire; global indicator of well-being; CBCL; Neighborhood Social Control Scale; Neighborhood Social Cohesion Scale; Neighbourhood Disorganization Scale	Longitudinal study
46	Lachman et al., 2014 [54]	South Africa	2477 children-caregivers dyads (HEU, HUU)	10 – 17 >18	Individual, family, and social	APQ; BNS 8-items about poverty; CESD, MOS-SSS; SDQ	Cross-sectional survey
47	Anabwani et al.,	Botswana	1238 children	6 – 18	Individual, family,	Questions about	Survey interview

	2016 [63]		(984 children HIV-positive, 254 HIV-affected)		and social	school, activities, care, and stigma	
48	Hensels et al., 2016 [41]	Malawi and South Africa	979 children (HIV-affected)	4 – 13*	Individual, family, and social	CSI; P-C CTS; SDQ; ISPCAN; CDI; RSES; TSCC; Experience of Stigma, Discrimination and Social Exclusion Domain; PedsQL Draw-a-person Test; Digit Span Test; Ten Questions disability questionnaire	Longitudinal study
49	Ashry et al., 2017 [33]	Egypt	65 children (33 HEU, 32 HUU)	3 – 17*	Individual, family, and social	HRQOL; KINDL	Cross sectional comparative study
50	Slogrove et al., 2020 [7]	Global	HEU children	N/A	Individual, family, and social	N/A	Report

Table S1. Summary of the 50 studies analysed in the present systematic review.

Acronyms used: Child Depression Inventory (CDI); Revised Children's Manifest Anxiety Scale (R-CMAS); Strengths and Difficulties Questionnaire (SDQ); Post-Traumatic Stress Disorder (PTSD); Child Behavior Checklist Youth Self-Report (CBCL YSR); Beck Hopeless Scale (BHS); Vineland Adaptive Behavior Scales (VABS); Child Behavior Checklist (CBCL); Revised-Children's Manifest Anxiety Scale (RCMAS); Bar-On Emotional Quotient Inventory: Youth Version (BOEQI YV); World Health Organization Disability Assessment Schedule for Children (WHODAS-Child); Centre for Epidemiologic Studies Depression Scale for Children (CESDC); Achenbach Youth Self Report (YSR); subscales of South African Child Assessment Schedule (SACAS); Psycho-Social Adjustment Scale-Adolescents (PAS-A); Reynolds Adolescent Depression Scale 2 (RADs-2); Behaviour Rating Inventory of Executive Function (BRIEF); Automatic Working Memory Assessment (AWMA); English Language Proficiency (ELP); Pediatric Quality of Life inventory (PedsQL); Penn Computerized Neurocognitive Battery (PennCNB); Paediatric Symptom Checklist, (PSC); Brain Powered Games (BPG); Computerized Cognitive Rehabilitation Therapy (CCRT); Connor-Davidson Resilience Scale (CD-RISC); Multiple Indicator Cluster Survey-Round 4 (MICS4); Inventory of Socially Supportive Behaviors (ISSB); Irritability Questionnaire (IRQ); Youth Conduct Problems Scale-Rwanda Short Form (YCPS-RS); Rosenberg Self-Esteem Scale (RSE); Self-Efficacy Questionnaire for Children (SEQ-C); adapted Strauss Conflict Tactics

Scale, Parent-Child version (P-C CTS); Medical Outcomes Study Social Support Scale (MOS-SSS); Alabama Parenting Questionnaire (APQ); 12-item Short Form Survey (SF-12); Trauma Symptom Checklist for Children (TSCC); Social and Health Assessment (SAHA); Multidimensional Scale of Perceived Social Support (MSPSS); Center for Epidemiologic Studies Depression Scale for Children (CES-DC); Child Well-being Index (CWI); Connor Davidson Resilience Scale (CD-RISC); Mullen Scales of Early Learning (MSEL); Color Object Association Test (COAT); Early Childhood Vigilance Test (ECVT); Behavior Rating Inventory of Executive Function–Preschool version (BRIEF-P); Home Observation for the Measurement of the Environment (HOME); Hopkins Symptoms Checklist-25 (HSCL); Quality of Life (QOL); Basic Necessities Scale (BNS); Child Status Index (CSI); International Society for the Prevention of Child Abuse and Neglect (ISPCAN); Health-Related Quality of Life (HRQOL); Kinder Lebensqualität Fragebogen (KINDL).