



Psychosocial Impact of Stigma by Association on Self-Esteem and Emotional and Psychological Well-Being among Children of Parents Living with HIV/AIDS in Telangana, India: A Quantitative Cross-Sectional Study

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Abstract

Background. Children of parents living with HIV/AIDS in India are disproportionately exposed to stigma by association, social exclusion, and psychosocial adversity. However, empirical evidence on the psychological impact of this stigma in the Indian context — particularly in South India — remains limited.

Method. This quantitative cross-sectional study (N = 477) examined stigma by association, self-esteem, and emotional and psychological well-being among children of parents living with HIV/AIDS across three districts of Telangana — Medak, Sangareddy, and Siddipet. The affected group (n = 387) was compared with a non-affected comparison group (n = 90). Data were collected using the adapted HIV/AIDS Stigma Instrument — Children (HASI-C; $\alpha = .858$), the Rosenberg Self-Esteem Scale (RSES; $\alpha = .868$), and a researcher-developed Emotional and Psychological Well-Being Scale (EPWBS; $\alpha = .923$). One-sample t-tests, independent samples t-tests, one-way ANOVA, and Pearson correlation were applied.

Results. Affected children exhibited significantly elevated stigma by association ($M = 55.40$, $SD = 8.78$; $t[386] = 12.090$, $p < .001$), significantly lower self-esteem ($M = 23.86$, $SD = 3.21$ vs. $M = 26.07$, $SD = 3.89$; $t[475] = 5.632$, $p < .001$), and significantly poorer emotional and psychological well-being ($M = 34.41$, $SD = 5.59$ vs. $M = 38.62$, $SD = 4.42$; $t[475] = 6.669$, $p < .001$) than non-affected peers. Stigma by association was negatively correlated with both self-esteem ($r = -.460$, $p < .001$) and well-being ($r = -.441$, $p < .001$). District of residence significantly differentiated all three variables, and caste additionally differentiated well-being.

Conclusion. Stigma by association constitutes a measurable psychosocial stressor that erodes self-esteem and emotional well-being in HIV-affected children. District-level variation underscores the need for contextually responsive social work interventions and policy integration of children's psychosocial well-being within India's HIV response.

Keywords: *stigma by association, self-esteem, emotional well-being, psychological well-being, HIV/AIDS, children, Telangana, India, social work*



Introduction

The HIV/AIDS epidemic continues to generate profound psychosocial consequences that extend well beyond individuals directly infected. Children of parents living with HIV/AIDS occupy a particularly marginalised position — neither infected themselves nor formally categorised as caregivers — yet subjected to complex forms of social stigma, discrimination, and psychological adversity arising from their familial association with a stigmatised parent. This phenomenon, theorised by Goffman (1963) as "courtesy stigma" and subsequently operationalised as "stigma by association" (Corrigan & Miller, 2004; Mak & Cheung, 2008), operates as a structural mechanism of social exclusion that compounds the vulnerability of already disadvantaged children in resource-limited settings.

India bears one of the largest HIV burdens globally, with approximately 2.4 million people living with HIV (National AIDS Control Organisation [NACO], 2023). Telangana, a state with historically significant HIV prevalence along its arterial highway corridors, hosts a substantial population of children whose parents are living with HIV/AIDS. Despite India's commitment to the United Nations Sustainable Development Goals — specifically SDG 3.3 (ending AIDS) and SDG 10 (reducing inequalities) — national policy discourse has largely neglected the psychosocial dimensions of HIV-affected children as a distinct area of concern (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2023).

The psychological consequences of stigma by association in children are grounded in several complementary theoretical frameworks. Link and Phelan's (2001) modified labelling theory posits that stigma activates processes of social rejection, devaluation, and discrimination that translate into negative psychological outcomes. Bronfenbrenner's (1979) ecological systems model situates these outcomes within nested environmental contexts — family, peer group, school, and community — each of which may amplify or buffer the stigmatising experience. Ungar's (2011) social-ecological resilience model further proposes that outcomes are mediated by access to material resources and social relationships. Together, these frameworks predict that sustained exposure to stigma by association will suppress self-esteem and impair emotional and psychological well-being, with contextual factors shaping the magnitude of this effect.

The empirical literature, while expanding, remains geographically concentrated in sub-Saharan Africa and South-East Asia, with Indian studies limited primarily to HIV-positive adults or orphaned children (Bharat et al., 2001; Cluver et al., 2012; Herek, 2002). Studies examining the triad of stigma by association, self-esteem, and emotional and psychological well-being among children with HIV-positive parents in South India are virtually absent from the Scopus-indexed literature. Furthermore, most existing studies employ qualitative or descriptive designs; studies integrating comparative analysis between affected and non-affected children with correlational modelling of inter-variable relationships are rare, particularly within the Indian sociocultural context.

The present study addresses these gaps through a large-scale quantitative investigation (N = 477) conducted across three districts of Telangana. It makes four distinct contributions: (a) providing district-level evidence on stigma by association beyond national aggregation; (b) employing a comparison group of non-affected children for rigorous between-group analysis; (c) deploying three standardised instruments with demonstrated reliability, including one adapted for



the child population in the Indian HIV context; and (d) modelling the triadic relationships among stigma by association, self-esteem, and emotional and psychological well-being using Pearson correlation.

Research Objectives

The study was guided by the following objectives:

1. To assess the level of stigma by association, self-esteem, and emotional and psychological well-being among children of parents living with HIV/AIDS in Telangana.
2. To compare self-esteem and emotional and psychological well-being between children of parents living with HIV/AIDS and non-affected comparison children.
3. To examine the differential impact of socio-demographic variables (district, age, gender, caste, religion, and education) on stigma by association and psychosocial outcomes.
4. To investigate the nature and strength of correlational relationships among stigma by association, self-esteem, and emotional and psychological well-being.

Method

Research Design

A quantitative cross-sectional design integrating descriptive, comparative, and correlational approaches was adopted. This design was selected for its suitability in assessing the magnitude of psychosocial constructs across a large population at a single time point while permitting rigorous group comparisons and inter-variable modelling (Creswell & Creswell, 2018).

Study Setting and Participants

The study was conducted across three purposively selected districts of Telangana — Medak, Sangareddy, and Siddipet — selected on the basis of documented HIV prevalence, accessibility of Antiretroviral Therapy (ART) Centres, and regional representativeness within the state. A uniform purposive sample of 129 children of parents living with HIV/AIDS was drawn from each district, yielding a total affected sample of $n = 387$. Some of the Children were identified through ART Centres and HIV support networks. A comparison group of 90 children from non-affected families (30 per district) was recruited from the same localities, matched broadly on age and educational level. The total sample was $N = 477$.

Inclusion criteria for the affected group were: (a) age between 10 and 18 years; (b) having at least one parent confirmed as living with HIV/AIDS through ART Centre records and HIV support networks; (c) residing in the study district at the time of data collection; and (d) provision of informed assent with parental or guardian consent. Children with known psychiatric diagnoses or intellectual disabilities were excluded to preserve instrument validity.

Instruments

HIV/AIDS Stigma Instrument — Children (HASI-C). An adapted version of the HIV/AIDS Stigma Instrument originally developed by Holzemer et al. (2007) was used to measure stigma by association. The adaptation was undertaken by the researcher to reflect the stigma experienced by children due to their parent's HIV status rather than their own infection. The scale comprises 20 items rated on a four-point frequency format (1 = Never to 4 = Most of the Time), with total scores ranging from 20 to 80 and a theoretical midpoint of 50. Higher scores

indicate greater stigma by association. Internal consistency in the present study was good (Cronbach's $\alpha = .858$).

Rosenberg Self-Esteem Scale (RSES). The RSES (Rosenberg, 1965) is among the most widely validated measures of global self-esteem across cultures and age groups. It comprises 10 items rated on a four-point scale (0 = Strongly Disagree to 3 = Strongly Agree), with positive and negative items scored accordingly. Total scores range from 0 to 30, with higher scores indicating greater self-esteem. Internal consistency in the present sample was good (Cronbach's $\alpha = .868$).

Emotional and Psychological Well-Being Scale (EPWBS). The EPWBS is a researcher-developed 12-item scale assessing emotional and psychological well-being among children in the context of parental HIV/AIDS. Items were developed based on Ryff's (1989) model of psychological well-being and the World Health Organization's (2004) definition of mental health. Scores range from 12 to 60, with higher scores indicating better well-being. Internal consistency was excellent (Cronbach's $\alpha = .923$).

Ethical Considerations

Ethical approval was obtained from the institutional review board prior to data collection. Informed assent was obtained from all child participants, with written consent from parents or legal guardians. Confidentiality and anonymity were assured, and participation was voluntary with the right to withdraw at any time without consequence. Data from ART Centres and HIV support networks were accessed with the approval of the respective district health authorities.

Data Analysis

Data were analysed using IBM SPSS Statistics (Version 25.0). Normality was assessed prior to analysis using the Kolmogorov–Smirnov and Shapiro–Wilk tests; all three variables were normally distributed ($p > .05$), confirming the suitability of parametric tests. The following procedures were applied: (a) one-sample t-tests to compare scale means against theoretical midpoints; (b) independent samples t-tests to examine between-group differences (affected vs. non-affected); (c) one-way analysis of variance (ANOVA) to assess differences across socio-demographic categories; and (d) Pearson product-moment correlation to examine inter-variable relationships. The significance threshold was $\alpha = .05$.

Results

Sample Characteristics

The affected sample ($n = 387$) was predominantly composed of older adolescents aged 16–18 years (50.13%), followed by 13–15 years (33.59%) and 10–12 years (16.28%). Males constituted 54.78% and females 45.22%. Backward Caste children formed the largest caste group (53.23%), followed by Scheduled Caste (37.47%) and Scheduled Tribe (9.30%). The majority identified as Hindu (81.65%). Most were enrolled at the above-high-school level (51.16%), followed by high school (41.60%) and upper primary (7.24%). Table 1 presents the full socio-demographic profile.




Table 1: Socio-Demographic Profile of Affected ($n = 387$) and Comparison Children ($n = 90$)

Variable	Category	Affected n (%)	Comparison n (%)
Age	10–12 years	63 (16.28)	15 (16.67)
	13–15 years	130 (33.59)	16 (17.78)
	16–18 years	194 (50.13)	59 (65.56)
Gender	Male	212 (54.78)	56 (62.22)
	Female	175 (45.22)	34 (37.78)
Caste	Scheduled Caste	145 (37.47)	21 (23.33)
	Scheduled Tribe	36 (9.30)	6 (6.67)
	Backward Caste	206 (53.23)	63 (70.00)
Religion	Hindu	316 (81.65)	78 (86.67)
	Muslim	16 (4.13)	3 (3.33)
	Christian	55 (14.21)	9 (10.00)
Education	Upper Primary	28 (7.24)	1 (1.11)
	High School	161 (41.60)	25 (27.78)
	Above High School	198 (51.16)	64 (71.11)

Percentages are computed within each group.

Reliability and Normality

All three instruments demonstrated satisfactory to excellent internal consistency: HASI-C $\alpha = .858$ (good); RSES $\alpha = .868$ (good); EPWBS $\alpha = .923$ (excellent). Normality tests confirmed that distributions did not significantly deviate from normality — Self-Esteem: K–S = .044, $p = .067$; S–W = .996, $p = .514$; Emotional and Psychological Well-Being: K–S = .042, $p = .104$; S–W = .995, $p = .244$; Stigma by Association: K–S = .040, $p = .156$; S–W = .998, $p = .859$. These results confirmed the appropriateness of parametric statistical analysis.

Stigma by Association: Level and Socio-Demographic Differences

A one-sample t-test revealed that the mean stigma by association score ($M = 55.40$, $SD = 8.78$) was significantly higher than the scale midpoint of 50, $t(386) = 12.090$, $p < .001$, confirming that children of parents living with HIV/AIDS experience substantially elevated stigma. Item-level analysis identified the most pervasive stigma manifestations as reduction in social visits (69.00%), termination of personal relationships (67.70%), social communication rejection (66.92%), and loss of friendship (66.41%). Attempted academic exclusion, while comparatively lower, was still reported by 47.28% of respondents, indicating that stigma penetrates educational environments. Table 2 presents the one-sample t-test results for all three core variables.

Table 2: One-Sample t-Test Results for Core Study Variables ($n = 387$)

Variable	M	SD	Test Value	t	df	p
Stigma by Association	55.40	8.78	50	12.090	386	< .001
Self-Esteem	23.86	3.21	25	–6.991	386	< .001
Emotional & Psychological Well-Being	34.41	5.59	36	5.581	386	< .001

Note. M = Mean; SD = Standard Deviation. The test value for stigma by association is the scale midpoint (50); test values of 25 (self-esteem) and 36 (well-being) are the researcher-specified reference points used in the parent dissertation.



Among socio-demographic variables, district of residence was the only variable that significantly differentiated stigma by association scores, $F(2, 384) = 9.487$, $p < .001$. Respondents from Siddipet reported the highest stigma ($M = 58.06$, $SD = 8.77$), followed by Sangareddy ($M = 54.37$, $SD = 8.16$) and Medak ($M = 53.75$, $SD = 8.83$). No significant differences were found across age groups, $F(2, 384) = 2.214$, $p = .111$; gender, $t(385) = 0.793$, $p = .428$; caste, $F(2, 384) = 2.116$, $p = .122$; religion, $F(2, 384) = 2.472$, $p = .086$; or educational level, $F(2, 384) = 0.606$, $p = .546$.

Self-Esteem: Level, Group Comparison, and Socio-Demographic Differences

A one-sample t-test compared the affected group's self-esteem score against a reference value of 25 — the threshold separating the medium and high self-esteem categories on the RSES. The mean score ($M = 23.86$, $SD = 3.21$) was significantly lower than this reference value, $t(386) = -6.991$, $p < .001$, indicating that affected children's self-esteem reliably falls within the medium range rather than bordering on high. Affected children also recorded significantly lower self-esteem than the comparison group ($M = 23.86$, $SD = 3.21$ vs. $M = 26.07$, $SD = 3.89$), $t(475) = 5.632$, $p < .001$. The comparison group mean exceeds the high self-esteem threshold (≥ 26), underscoring a practically meaningful gap between the two groups. Table 3 presents the between-group comparisons for both self-esteem and emotional and psychological well-being.

Table 3: Comparison of Self-Esteem and Emotional and Psychological Well-Being Between Affected and Non-Affected Children

Variable	Group	n	M	SD	t	df	p
Self-Esteem	Affected	387	23.86	3.21	5.632	475	< .001
	Non-Affected	90	26.07	3.89			
Emotional & Psychological Well-Being	Affected	387	34.41	5.59	6.669	475	< .001
	Non-Affected	90	38.62	4.42			

Note. M = Mean; SD = Standard Deviation. Independent samples t-tests were conducted for both variables.

District of residence was the only socio-demographic variable to significantly differentiate self-esteem scores, $F(2, 384) = 20.756$, $p < .001$. Children from Siddipet reported the lowest self-esteem ($M = 22.44$, $SD = 3.38$), while those from Medak ($M = 24.63$, $SD = 2.93$) and Sangareddy ($M = 24.50$, $SD = 2.85$) reported comparatively higher scores. No significant self-esteem differences were observed across age, $F(2, 384) = 0.745$, $p = .476$; gender, $t(385) = 0.631$, $p = .528$; caste, $F(2, 384) = 1.352$, $p = .260$; religion, $F(2, 384) = 1.195$, $p = .304$; or educational level, $F(2, 384) = 0.617$, $p = .540$.

Emotional and Psychological Well-Being: Level, Group Comparison, and Socio-Demographic Differences

A one-sample t-test compared the affected group's well-being score against the scale's theoretical midpoint of 36. The mean score ($M = 34.41$, $SD = 5.59$) was significantly lower than this midpoint, $t(386) = 5.581$, $p < .001$, indicating that affected children's emotional and psychological well-being falls below the expected average level. Affected children also recorded

significantly lower well-being than the comparison group ($M = 34.41$, $SD = 5.59$ vs. $M = 38.62$, $SD = 4.42$), $t(475) = 6.669$, $p < .001$, a mean difference of 4.21 points.

Among socio-demographic variables, both district of residence and caste significantly differentiated well-being. District effects, $F(2, 384) = 4.193$, $p = .010$, showed Sangareddy reporting the highest well-being ($M = 35.13$, $SD = 5.72$), followed by Medak ($M = 34.84$, $SD = 5.24$) and Siddipet ($M = 33.27$, $SD = 5.67$). Caste effects, $F(2, 384) = 3.755$, $p = .024$, showed Scheduled Tribe respondents reporting the highest well-being ($M = 36.67$, $SD = 4.79$), followed by Scheduled Caste ($M = 34.53$, $SD = 5.64$) and Backward Caste ($M = 33.94$, $SD = 5.61$) — a pattern that did not significantly differentiate stigma or self-esteem, suggesting caste operates specifically on well-being rather than on stigma exposure itself. No significant well-being differences were found across religion, $F(2, 384) = 0.126$, $p = .889$, or educational level, $F(2, 384) = 2.449$, $p = .088$.

Contextual indicators further underscored the burden on this population: 84.24% reported disturbance about their parents' present condition; 84.50% expressed worry about their parents' future; 65.12% reported adverse effects of parental absence on self-confidence and academic engagement; and 52.97% were unable to freely express their emotional feelings. Furthermore, 41.09% reported difficulty concentrating on studies.

Correlational Analysis

Pearson product-moment correlations were computed to examine the relationships among the three core study variables. All correlations were statistically significant at the $p < .001$ level. Table 4 presents the full correlation matrix with descriptive statistics.

Table 4: Pearson Correlation Matrix for Stigma by Association, Self-Esteem, and Emotional and Psychological Well-Being ($n = 387$)

Variable	M	SD	1	2	3
1. Stigma by Association	55.40	8.78	—		
2. Self-Esteem	23.86	3.21	-.460**	—	
3. Emotional & Psychological Well-Being	34.41	5.59	-.441**	.402**	—

Note. ** $p < .001$ (two-tailed).

Stigma by association was negatively correlated with self-esteem ($r = -.460$, $p < .001$) and with emotional and psychological well-being ($r = -.441$, $p < .001$), indicating that higher levels of stigma by association are associated with lower self-esteem and poorer well-being. Self-esteem demonstrated a moderate positive correlation with emotional and psychological well-being ($r = .402$, $p < .001$), confirming that higher self-esteem is associated with better psychological functioning.

Discussion

This study provides robust quantitative evidence that children of parents living with HIV/AIDS in Telangana experience significantly elevated stigma by association, measurably lower self-esteem, and poorer emotional and psychological well-being compared to non-affected peers. The findings are consistent with the international literature on the psychosocial consequences of parental HIV/AIDS (Bharat et al., 2001; Cluver et al., 2012; Li et al., 2009) while contributing original evidence from the South Indian sociocultural context.



**Stigma by Association as a Pervasive Psychosocial Stressor**

The finding that affected children scored significantly above the scale midpoint ($M = 55.40$, $t[386] = 12.090$, $p < .001$) confirms that stigmatising experiences are systemic rather than incidental in the lives of this population. The most prevalent manifestations centred on relational and communicative ruptures — social avoidance (63.56%), reduction in social visits (69.00%), and termination of personal relationships (67.70%) — reflecting Goffman's (1963) conceptualisation of courtesy stigma as a process of social contamination that extends from the stigmatised individual to their immediate network.

The absence of significant stigma differences across gender, age, caste, religion, and education — with the sole exception of district — carries important theoretical and practical implications. It suggests that stigma by association in the HIV context does not operate selectively along conventional social hierarchies but pervades all demographic strata uniformly, a finding consistent with Goffman's (1963) notion of the totalising quality of stigma. From a programming perspective, this uniformity supports universal rather than demographically targeted stigma-reduction approaches. The district-level variation, with Siddipet recording the highest scores ($M = 58.06$), is consistent with Bronfenbrenner's (1979) ecological systems model and with Indian studies documenting community-level variations in HIV stigma (Bharat et al., 2001), and points to the role of local awareness infrastructure and social capital in moderating stigma experiences.

Self-Esteem: Reliably Suppressed Rather Than Borderline

Affected children's self-esteem was significantly below the 25-point reference value separating medium from high self-esteem on the RSES, $t(386) = -6.991$, $p < .001$, indicating that this population's self-esteem sits reliably within the medium range rather than approaching the high category. This was reinforced by the significantly lower self-esteem recorded relative to the comparison group ($M = 23.86$ vs. $M = 26.07$; $t[475] = 5.632$, $p < .001$), whose mean crosses into the high range (≥ 26). Both findings are consistent with Link and Phelan's (2001) modified labelling theory, which posits that stigma erodes self-concept through internalised processes of social devaluation. The long-term significance of this gap is underscored by established associations between adolescent self-esteem and adult educational attainment, occupational functioning, and mental health (Orth & Robins, 2014).

The district-level differentiation in self-esteem ($F[2, 384] = 20.756$, $p < .001$), mirroring the stigma pattern, further supports an ecological interpretation: Siddipet's highest stigma burden co-occurs with its lowest self-esteem scores ($M = 22.44$), suggesting that district-level factors simultaneously shape both stigma exposure and its self-concept consequences. The absence of gender-differentiated self-esteem may reflect the relatively equalised stigma exposure documented across genders in the present sample, warranting further investigation through mixed-methods approaches.

Emotional and Psychological Well-Being: The Human Cost of Stigma

The significantly lower well-being scores among affected children ($M = 34.41$ vs. $M = 38.62$; $t[475] = 6.669$, $p < .001$), together with the significantly below-midpoint one-sample result ($t[386] = 5.581$, $p < .001$), document the human cost of chronic stigma exposure. The contextual data amplify this picture: over four-fifths of respondents reported disturbance about their parents' current condition (84.24%) and worry about their parents' future (84.50%), and over half could not



freely express their emotional feelings (52.97%). These patterns are characteristic of anticipatory grief, emotional suppression, and chronic psychological stress — risk factors well-documented in literature on children affected by parental chronic illness (Birenbaum, 2000; Raveis et al., 1998).

Unlike stigma and self-esteem, well-being was also significantly differentiated by caste ($F[2, 384] = 3.755, p = .024$), with Scheduled Tribe children reporting the highest well-being despite no corresponding caste advantage in stigma exposure or self-esteem. This dissociation suggests that caste-linked community resources or family support structures may buffer emotional and psychological functioning specifically, independent of the stigma pathway, and warrants dedicated qualitative follow-up. The consistent significance of district across all three outcome variables — stigma, self-esteem, and well-being — reinforces the ecological interpretation offered above and strengthens the case for district as the primary unit of intervention planning.

The finding that 41.09% of respondents could not concentrate on their studies, and 65.12% reported adverse effects of parental absence on self-confidence and academic engagement, carries direct implications for school social work practice. These data suggest that the psychosocial burden of parental HIV/AIDS extends into the educational domain, affecting academic attainment and teacher-student-peer dynamics — areas where school social workers are uniquely positioned to intervene through psychosocial support, teacher sensitisation, and inclusive peer programming.

Correlational Dynamics: Towards a Triadic Psychosocial Burden Model

The pattern of correlations — stigma by association negatively associated with self-esteem ($r = -.460$) and well-being ($r = -.441$), and self-esteem positively associated with well-being ($r = .402$) — outlines a triadic psychosocial burden model in which stigma functions as a primary stressor suppressing self-esteem, which in turn impairs emotional and psychological well-being. This configuration aligns with Pearlin et al.'s (1981) stress-process model and with Link and Phelan's (2001) modified labelling theory, which posits stigma-induced damage to the self-concept as the central mechanism of psychological harm.

The marginally stronger correlation between stigma and self-esteem ($r = -.460$) compared with stigma and well-being ($r = -.441$) suggests that self-concept may represent a more proximal pathway through which stigma affects psychological outcomes. Future research employing structural equation modelling could formally test the mediating role of self-esteem in the stigma → well-being relationship, providing causal pathway evidence that would substantially advance this field.

Implications for Social Work Practice and Policy

At the micro level, social workers in HIV-care settings must assess stigma by association as a distinct psychosocial risk factor and incorporate self-esteem reinforcement, emotional literacy, and stigma-coping skills into direct practice with affected children. At the mezzo level, school-based social work programmes should address educational consequences of parental HIV/AIDS through counselling, teacher sensitisation, and peer inclusion initiatives. At the macro level, the district-wise variation documented here provides an evidence base for geographically differentiated policy responses: Siddipet, which recorded the highest stigma, the lowest self-esteem, and the lowest emotional and psychological well-being of the three districts, warrants prioritisation for intensified psychosocial and community-awareness programming.



From a policy perspective, the National AIDS Control Programme (NACP) and Telangana State AIDS Control Society (TSACS) have historically focused on prevention, treatment, and care for people living with HIV, with limited attention to the psychosocial needs of HIV-affected children as a distinct population. The present findings provide a compelling evidence base for integrating children's psychosocial well-being as a formal component of India's HIV response, aligned with the UNAIDS (2023) goal of eliminating HIV-related stigma and discrimination by 2025.

Limitations

Several limitations warrant acknowledgement. First, the cross-sectional design precludes causal inference regarding the directionality of observed relationships; longitudinal designs are necessary to establish temporal precedence. Second, purposive sampling limits generalisability beyond the three study districts; future studies employing probability sampling across a wider geographic area would strengthen external validity. Third, the EPWBS is a newly developed instrument; construct, convergent, and discriminant validity require further investigation through confirmatory factor analysis. Fourth, the comparison group ($n = 90$) was considerably smaller than the affected group ($n = 387$), which may affect the stability of between-group estimates; a balanced design is recommended in future research. Fifth, social desirability bias cannot be excluded given the sensitive nature of the topic and the involvement of ART Centres in participant identification.

Conclusion

This study provides large-scale, multi-district quantitative evidence on the triadic relationship among stigma by association, self-esteem, and emotional and psychological well-being in children of parents living with HIV/AIDS in Telangana, India. The findings demonstrate that affected children carry a measurable psychosocial burden — significantly elevated stigma, significantly lower self-esteem, and significantly poorer emotional and psychological well-being — relative to their non-affected peers. The moderate negative correlations among these constructs outline a coherent psychosocial burden model in which stigma by association operates as a primary stressor that erodes self-concept and thereby impairs psychological functioning.

District-level variation across all three outcome variables highlights the importance of contextually responsive interventions, with Siddipet emerging as a high-priority district. The pervasiveness of stigma across all demographic categories underscores the need for universal rather than targeted anti-stigma approaches, while the caste-specific pattern observed for well-being points to a distinct, complementary pathway worth targeted follow-up. These findings reinforce the critical role of social workers — in schools, ART Centres, and community settings — in identifying and addressing stigma by association as a discrete psychosocial risk factor. Integrating psychosocial well-being and self-esteem enhancement into existing HIV care programmes represents an urgent, evidence-based priority for Telangana's HIV response and for the broader child welfare agenda in HIV-affected communities across India.



References

- Bharat, S., Aggleton, P., & Tyrer, P. (2001). India: HIV and AIDS-related discrimination, stigmatisation and denial. UNAIDS. https://data.unaids.org/publications/irc-pub01/jc587-india_en.pdf
- Birenbaum, L. K. (2000). Assessing children's and teenagers' bereavement when a sibling dies from cancer: A secondary analysis. *Child: Care, Health and Development*, 26(5), 381–400. <https://doi.org/10.1046/j.1365-2214.2000.00154.x>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Cluver, L. D., Orkin, M., Gardner, F., & Boyes, M. E. (2012). Persisting mental health problems among AIDS-orphaned children in South Africa. *Journal of Child Psychology and Psychiatry*, 53(4), 363–370. <https://doi.org/10.1111/j.1469-7610.2011.02459.x>
- Corrigan, P. W., & Miller, F. E. (2004). Shame, blame, and contamination: A review of the impact of mental illness stigma on family members. *Journal of Mental Health*, 13(6), 537–548. <https://doi.org/10.1080/09638230400017004>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Prentice-Hall.
- Herek, G. M. (2002). Thinking about AIDS and stigma: A psychologist's perspective. *Journal of Law, Medicine and Ethics*, 30(4), 594–607. <https://doi.org/10.1111/j.1748-720X.2002.tb00428.x>
- Holzemer, W. L., Uys, L., Makoae, L., Stewart, A., Phetlhu, R., Dlamini, P. S., Greeff, M., Kohi, T. W., Chirwa, M., Cuca, Y., & Naidoo, J. (2007). A conceptual model of HIV/AIDS stigma from five African countries. *Journal of Advanced Nursing*, 58(6), 541–551. <https://doi.org/10.1111/j.1365-2648.2007.04244.x>
- Li, L., Lee, S. J., Thammawijaya, P., Jiraphongsa, C., & Rotheram-Borus, M. J. (2009). Stigma, social support, and depression among people living with HIV in Thailand. *AIDS Care*, 21(8), 1007–1013. <https://doi.org/10.1080/09540120802614358>
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27(1), 363–385. <https://doi.org/10.1146/annurev.soc.27.1.363>



- Mak, W. W. S., & Cheung, R. Y. M. (2008). Affiliate stigma among caregivers of people with intellectual disability or mental illness. *Journal of Applied Research in Intellectual Disabilities*, 21(6), 532–545. <https://doi.org/10.1111/j.1468-3148.2008.00426.x>
- National AIDS Control Organisation. (2023). India HIV estimates 2023. Ministry of Health and Family Welfare, Government of India. <https://naco.gov.in>
- Orth, U., & Robins, R. W. (2014). The development of self-esteem. *Current Directions in Psychological Science*, 23(5), 381–387. <https://doi.org/10.1177/0963721414547414>
- Pearlin, L. I., Menaghan, E. G., Lieberman, M. A., & Mullan, J. T. (1981). The stress process. *Journal of Health and Social Behavior*, 22(4), 337–356. <https://doi.org/10.2307/2136676>
- Raveis, V. H., Siegel, K., & Karus, D. (1998). Children's psychological distress following the death of a parent. *Journal of Youth and Adolescence*, 27(3), 361–377. <https://doi.org/10.1023/A:1022861108040>
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Joint United Nations Programme on HIV/AIDS. (2023). Global AIDS update 2023: The path that ends AIDS. UNAIDS. <https://www.unaids.org/en/resources/documents/2023/global-aids-update-2023>
- Ungar, M. (2011). The social ecology of resilience: Addressing contextual and cultural ambiguity of a nascent construct. *American Journal of Orthopsychiatry*, 81(1), 1–17. <https://doi.org/10.1111/j.1939-0025.2010.01067.x>
- World Health Organization. (2004). Promoting mental health: Concepts, emerging evidence, practice. WHO. <https://www.who.int/publications/i/item/promoting-mental-health>