



SKILLS TRAINING INTERVENTIONS FOR STREET-CONNECTED AND OUT-OF-SCHOOL YOUTH IN URBAN SLUMS: A NARRATIVE REVIEW

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Abstract

Street-connected and out-of-school youth are one of the most vulnerable groups in urban slums of LMICs, who are characterized by multiple intersecting factors that hinder them in accessing employment, education, and social inclusion. The present narrative review focuses on the types of skills training interventions, the barriers to participation, the quality of the training delivered, and sustainability of the interventions, with a particular focus on the population in question. The academic literature and gray sources were comprehensively searched to find 37 relevant studies between 2000-2024 related to Technical and Vocational Training, entrepreneurship development, life skills and digital literacy programmes. Although there are various approaches to intervention (such as targeted vocational training, microenterprise projects, or psychosocial support), research indicates that training without tackling structural issues such as poverty, gender-based vulnerabilities, social exclusion, and labour market constraints is not enough. Effective interventions show the integration of several components, such as psychosocial support, livelihood linkages, and mentorship. But there are still major gaps in research on sustainability, disability coverage, gender-specific results, and context-specific effectiveness in urban informal settlements. The review is unanimous that a combination of skills and structural interventions is required to transform the situation of this very marginalised group.

Keywords: Street-Connected Youth, Out-of-School Children, Urban Slums, TVET, Skills Development, Youth Employment, Vocational Training, Livelihood Interventions

1. Introduction

1.1 Urban Slums and Youth Vulnerability

The unprecedented challenges that rapid urbanization poses for youth development and social inclusion in low- and middle-income countries (LMICs) have been identified (Dodman et al., 2017). Young people are especially vulnerable in urban slums, which are typically characterized by poor housing, low levels of basic services, and high levels of poverty. Urbanization in Africa has led to the growth of slums, a phenomenon that has intensified poverty and risk factors. Spatial expansion patterns, informal economies, weak governance systems and service gaps create and sustain risk accumulation amongst residents in these environments (Dodman et al., 2017).

Youth in these settings and situations are living with multiple compounding vulnerabilities. The informal economies of urban settlements produce precarious survival strategies, especially for people who lack formal education and marketable skills (Thieme, 2021). Child labour, street trading and informal service work are all part of survival economies to which many young people are forced by economic vulnerability. The hustle economy of Mathare, Nairobi, is one such case of how youth survive in the face of constant uncertainty and precarity through local economic arrangements, without the support of formal systems. Poverty directly contributes to exclusion from education and skills development opportunities because of the pressures on the household to prioritize income generation over education (Dodman et al., 2017).

1.2 Global Context of Urban Slums and Child Vulnerability

Urban slums are one of the most pressing humanitarian and development issues of the 21st century, and are home to an estimated 1 billion people in low and middle income countries (Dodman et al., 2017). The unplanned growth and expansion of slums are directly related to

structural poverty, lack of state capacity, and exclusionary economic systems that tend to focus the disadvantage in spatially concentrated informal settlements. In these settings, children and youth are exposed to additional vulnerabilities. Poverty, informality and weak governance can combine to leave children out of formal education and push them into the informal labor market, with low levels of skill development, hazardous work conditions and exploitation (Ahad et al., 2021).

Child labour is a major expression of vulnerability among urban slums (Bah, 2018). In both African and Asian urban setting, children aged 5-17 participate in informal economy activities (street vending, domestic work, manufacturing) without any educational or developmental content (Ahad et al., 2021). These working conditions directly affect the participation in education: around 32.5% of the urban child laborers in Bangladesh have never attended school, and 72.5% work more than 8 hours per day, without training, leave, and hygiene facilities. The factors that go beyond poverty of parents are cost of schooling, poor quality of primary education, and structural exclusion barriers to access formal education (Ahad et al., 2021).

The lives of street-connected and out-of-school youth in urban slums are characterized by multiple exclusion driven by poverty, poor school performance, dangerous living conditions, child labour, poor health, family instability, and lack of decent work. Skills training interventions for this group should not be considered as a vocational training only, but as an integrated programme that includes education, protection, psychosocial support, livelihood preparation and reintegration. This exclusion is primarily related to urban poverty. UNICEF (2012) states that city-level averages can mask the distressing situation of children in slums who do not have equal access to school, health services, sanitation or protection. Likewise, Ernst and Phillips (2013) demonstrate that children living in slums face the risks of overcrowding, inadequate infrastructure, disease, insecurity and developmental issues, which all reduce children's ability to attend school and learn.

Street connected youth are not a single, uniform group. Some children are working or living on the street, but have family connections; some children are heavily involved in street life and rely upon it for their survival. Street-connectedness is frequently associated with poverty, school dropouts, neglect, abuse, family disintegration, migration, and social marginalization (Volpi 2002). Thomas de Benítez (2011) also notes that street children are mobile, challenging to count and not visible within official systems. It is clear that the skills training programmes should start with outreach, trust building, safe spaces, flexibility on enrolment, support with identity documents, and individual case management before they will be effective.

Child labour is a significant link between poverty and school exclusion. Huebler (2008) discovered that children from poor households and those whose heads are less educated are more likely to work and less likely to attend school. While for some children in SA child labour is used to help pay for school fees, in the region generally it is associated with irregular attendance, fatigue, poor performance, repetition and dropouts (UNICEF Regional Office for South Asia, 2014). Hence, skills training should not be a route to exploitation. It should be age appropriate, legally protected, related to education and aimed at decent work rather than early entry into the labor market.

Out-of-school youth also need differentiated responses as they contain children who were never enrolled, enrolled late, have dropped out, and are at risk of dropping out. UNICEF East Asia and Pacific Regional Office (2019) states that the effective responses should be integrated and holistic, and should include education, health, nutrition, sanitation, child protection, social protection and gender responsive approaches. World Bank (2022) also mentions that the out-of-school children in Pakistan encounter difficulties like cost of schooling, distance, quality of schooling, lack of teachers, safety issues, and household poverty. The findings indicate that

skills training should go hand-in-hand with accelerated learning, literacy, numeracy, life skills, transport support, stipends, and re-entry to formal or non-formal education.

The International Labour Organization (ILO, 2011) offers a helpful framework, linking child labour, education and youth employment in a life-cycle perspective. Weak employment prospects decrease the motivation of households to keep children in school; child labour decreases the human capital potential of children. Vocational training and apprenticeships and pre-vocational programmes are available for older adolescents to facilitate transition to employment, but must be accompanied by labour rights, legal working age, workplace safety, employer accountability, and certification (International Labour Organization, 2011). This is particularly significant for street children as they may be engaged in informal apprenticeships, which can be exploitative without supervision.

Integrated intervention models are well supported in the literature. The promising programmes for street children identified by Volpi (2002) include outreach, drop-in, residential care, health services, education, psychological services, legal assistance, family reintegration and job training. Thomas de Benítez (2011) believes that livelihood programmes should be based on the strengths of the young people; provide respect and emotional support; and be a mix of technical, social, financial and life skills. The results indicate that vocational training alone is not very effective without psychosocial care, protection, mentoring and post-training follow-up.

Governance and funding also impact the quality of the intervention. Belay et al. (2024) demonstrate that the outcomes of human capital relate to public expenditure, institutional capacity, and governance systems. The UNESCO Global Education Monitoring Report Team (2024) also highlights the need for leadership, collaboration, inclusion and capacity development in education systems. This coordination is essential for street-connected and out-of-school children to ensure success in implementing skills interventions with both education departments and labour authorities, child-protection agencies, NGOs, employers, communities, and local governments.

From the literature, it is clear that the successful skills training interventions for street connected and out-of-school youth in slums should be flexible, protective, inclusive and labour-market aware. The best models include elements of outreach, safe spaces, accelerated learning, psychosocial support, life skills, vocational training, apprenticeships, social protection, family/community reintegration, and job placement assistance. The weakest model is a short technical course which does not consider poverty, child labour, trauma, health, mobility, documentation, gender, safety or labour-market demand.

1.3 Street and Out-of-School Children: Definitions and Social Exclusion

Street children and out-of-school youth are not the same but are related. Street children are children whose street life is their home or main work place, there are 150-250 million street children in the world (Bah, 2018). Out-of-school children include children and youth aged 6-17 who are not in primary and secondary education, 244 million of which are children and youth worldwide in 2020 (Bozkurt et al., 2020). Both populations suffer from severe social exclusion, in the form of disconnection from formal institutions, restricted social capital, economic vulnerability, and violence and exploitation (Quarshie et al., 2020).

Street and out-of-school youth in slum environments bring to light complex adaptive strategies that exist alongside deep poverty. Ethnographic studies of youth in slums in Nairobi show their ability to create nuanced "hustle economies" in the slums, which is a range of livelihood strategies that involves waste labour, informal business, and network-based earning (Thieme, 2021). Yet, the adaptive strategies take place in a "precarious present": one where uncertainty is omnipresent, formal structures of support remain inaccessible, and livelihoods are limited (Thieme, 2021). Gender compounds vulnerability – adolescent girls are at higher risk of child

marriage, early pregnancy, and gender-based violence, which restricts their ability to access formal training systems (Psaki et al., 2021).

Street connected and out-of-school youth are not mutually exclusive. Street-connected children and youth, who are engaged in street life to varying degrees, are exposed to a range of acute vulnerabilities, like violence, substance abuse, health risks and psychological trauma (Bah, 2018). A qualitative study of street children in Ghana identified that street children have multifaceted mental health issues, and that self-harm is a manifestation of powerlessness and a response to relationship problems (Quarshie et al., 2020). Out-of-school youth are also marginalised and deprived of the opportunity to attend school for a variety of reasons, including poverty, family responsibilities, early marriage, and a previous lack of school attendance.

There is a large overlap in these populations. Educational exclusion puts children at risk of street involvement, and street involvement makes it difficult to attend school (Quarshie et al., 2020). Both groups suffer from low education, lack of skills, psychological fragility and extreme social marginalisation. The unique conditions of mental health are especially evident, as young people living in urban informal settlements in Bangladesh report experiences of 'tension', a culturally-located idiom of distress that includes anxiety, worry, and powerlessness (Wahid et al., 2021). These social and psycho-social vulnerabilities further exacerbate the economic and social exclusion, resulting in complex employment and livelihood exclusion.

1.4 Importance of Skills Training for Vulnerable Youth

Skills training is a seemingly viable solution in theory to alleviate youth unemployment and labour market integration in low-income settings with ongoing rapid structural change. The potential for technical and vocational education training (TVET) to enhance employability, help transition to self-employment, develop social-emotional skills, and support poverty alleviation through Sustainable Development Goal 8 (decent work and economic growth) has garnered broad policy interest (Shi & Bangpan, 2022).

Rigorous impact evaluations suggest a differential effect according to intervention modality. Vocational training in Uganda has been found to have a positive impact on employment rates when compared to control groups, and the results remain 3-4 years after the intervention (Alfonsi et al., 2020). But, the effects are not generalized – training seems to be more effective for informal enterprises to transition to self-employment than for wage employment in the formal sector (Fox & Kaul, 2018). Additionally, the effects of TVET participation are multi-dimensional, including increases in cultural capital (skills, credentials, competencies) and social capital (bonding and bridging relationships) as well as health outcomes (Shi & Bangpan, 2022). TVET participation can help to increase education access and equity for disadvantaged youth, thereby helping to overcome exclusion from formal education pathways (Shi & Bangpan, 2022).

Training and development activities also target key areas of socio-emotional skills. Employer surveys in various countries have found that there is a greater demand for socio-emotional and higher-order cognitive skills than technical skills, but public school education systems are not sufficiently prepared to address these skills (Cunningham & Villaseñor, 2016). Combining technical, life skills, and psychosocial components in an integrated skills-training approach may be beneficial for out-of-school and street children with interrupted schooling, as it could help them overcome developmental gaps and develop marketable skills.

Technical and vocational education and training (TVET) is an important avenue for employment and livelihood for vulnerable youth (Wignall et al., 2023). Skills development is a multi-faceted approach to disadvantage. At the individual level, skills training creates human capital or the technical skills and knowledge needed for productive employment. From a social perspective, skills programs can improve self-efficacy, confidence and social integration

(Blustein et al., 2018). In the systemic dimension, TVET establishes linkages to the labour markets, employment opportunities and economic participation.

There is growing awareness of the value of skills training in the context of sustainable development. Human capital development is a cornerstone of decent work, which is defined as work that gives people economic security, social protection, dignity and opportunity for development (Rai et al., 2018). Gender equality is also directly linked to skills development, as access to education and employment continues to be important avenues to women's empowerment and economic independence. In addition to economic benefits, skills training interventions may offer psychosocial benefits by including integration of life skills that address psychological vulnerabilities that street-connected and out-of-school youth may have, including communication, problem-solving, teamwork, and emotional regulation (Blustein et al., 2018).

1.5 Existing Intervention Landscape

There are a variety of organizational models, funding options, and ways of implementing skills training for street and out-of-school youth on the global scene. Most disadvantaged youth are not the target of government-led TVET programs, although there are TVET programs in most LMIC countries for those entering the formal sector (Apunyo et al., 2021). In low-income countries, NGOs provide around 40% of skills training, are more geographically distributed, and are more flexible in providing services to marginalized groups (Shi & Bangpan, 2022). Community-based models are based on local, informal systems of apprenticeship, which are typically found in Sub-Saharan Africa and South Asia (Van Loon et al., 2020).

Evidence and gap mapping of youth employment interventions found 378 impact evaluations published 2000-2021, but also showed that there is high concentration of evidence in high-income countries and vulnerable populations are underrepresented (Apunyo et al., 2021). There is limited empirical research on demand-side policies on labour market policies, structural employment creation, and employer engagement (Kluve et al., 2017). The categories of underrepresentation in the intervention categories are entrepreneurship training and subsidized employment (Kluve et al., 2017).

1.6 Research Gaps and Rationale for Systematic Mapping

Although there is a growing number of skills training programs, the published literature is fragmented, with program evaluations of isolated programs, program models, participant groups, and outcomes described with varying terminology and frameworks. Several critical gaps exist: (1) conceptual fragmentation with what is meant by "skills training" and which skills are prioritized varies significantly between programmes; (2) evidence heterogeneity with inconsistent measures of outcomes, not allowing for synthesis; (3) sustainability evidence gaps and few studies on the viability of programmes over time and their institutional integration; (4) implementation knowledge gaps, especially how programmes deal with access barriers and how they create quality provision in resource constrained environments; (5) geographic concentration of evidence, with evidence concentrated in selected countries and regions and other countries and regions remaining unmapped; (6) vulnerable population underrepresentation, particularly the case of street children, gender-specific trajectories and youth in fragile environments.

These gaps hinder evidence-based policy synthesis and the ability to identify intervention features, in what contexts, lead to what outcomes. A systematic mapping review can overcome these limitations by systematically accounting for the diversity of interventions, describing implementation features and contexts, identifying groups of evidence and gaps, and establishing frameworks for comparative interpretation.

1.7 Aim of the Review

This narrative review explores the current evidence of skills training interventions within the context of street-connected and out-of-school adolescent girls and young people in urban slum settings, focusing on types of interventions, barriers to participation, the quality of the training, mechanisms for sustaining the interventions, and any gaps in research. The review draws together evidence from a variety of contexts and intervention models, pinpoints promising practices, recognizes key constraints, and states priorities for future research and program development.

2. Methodology

2.1 Review Design and Approach

This narrative review uses a narrative synthesis approach to review and synthesize evidence from a variety of interventions, populations and settings. The narrative approach was chosen to allow for the diversity of intervention models, outcome measures, and evaluation designs in this nascent field, and to offer a detailed discussion of context, implementation and mechanisms of change in addition to the quantitative results.

2.2 Search Strategy and Data Sources

Extensive literature searches were performed in academic literature databases (Scopus, Web of Science, ERIC, ScienceDirect) and gray literature databases. The terms used to describe vulnerable youth populations were intersected with the terms used to describe skills intervention, and intersected with context terms like urban slums, informal settlements, low income countries. The terms used to describe vulnerable youth populations included street children, out-of-school youth, vulnerable youth, street-connected youth, and informal settlements. The terms used to describe skills intervention included skills training, vocational education, TVET, livelihood training, entrepreneurship training, and life skills. Context terms included urban slums, informal settlements, and low-income countries. In addition to the sources listed above, a gray literature search was conducted on websites of organizations such as UNESCO, UNICEF, World Bank and ILO, as well as unpublished reports. The search was carried out in an iterative way in order to find relevant studies and systematically map the field. Studies were included if they: (1) focused on youth aged 10-24 years; (2) targeted street-connected, out-of-school, or other vulnerable populations; (3) described or evaluated skills training or TVET interventions; (4) occurred in urban or informal settlement settings; (5) were published between 2000 and 2023 in English. The exclusion criteria removed studies that were only conducted in rural areas, studies that were not relevant to TVET, papers that were purely theoretical, and papers that were aimed at adult workforce development.

2.3 Identified Studies and Structure

More than 37 relevant studies were found, covering a variety of geographic environments (mainly sub-Saharan Africa, South Asia, and Southeast Asia) and intervention approaches. Research methods included systematic RCTs, qualitative case studies and program evaluations. The review groups this evidence around four themes: (1) types and characteristics of skills training interventions; (2) barriers to participation and access; (3) training quality and program effectiveness; and (4) sustainability challenges and mechanisms.

3. Skills Training Interventions for Vulnerable Urban Youth

3.1 Vocational and Technical Training

Vocational training for vulnerable youth usually includes technical skills training in industries where there are a lot of informal workers. Common skills areas include tailoring/garment production, carpentry, construction trades, food service, beauty services, and other industry related skills. These sectors are chosen due to their low level of entry, informal working arrangements, and the opportunities for self-employment in a slum context.

There is mixed evidence of the effectiveness of vocational training. A systematic review of 113 impact evaluations of youth employment programmes revealed that skills training had greater impacts in middle and low-income countries than in high-income countries, indicating that skills provision is more effective for vulnerable groups. The impact is, however, highly variable depending on context, the quality of implementation and on additional supports. Customized programs, based on local labour market needs rather than pre-designed curricula, boost relevance and employment prospects. Vocational training is one of the constraints in addressing the employment problem as it focuses only on the aspect of employment. Technical skills are not enough to overcome labour market challenges such as lack of documentation of work experience, access to capital for self-employment and employer discrimination, even when acquired by youth.

3.2 Entrepreneurship and Livelihood Training

Entrepreneurship and small business training programs understand that access to formal employment is very limited in slum settings and that self-employment is the only option that is available in these contexts. They provide courses on business basics such as feasibility analysis, financial management, record keeping, marketing and customer relations.

The evidence of the impact of entrepreneurship training is less pronounced than for other interventions. A review of youth employment programmes revealed mixed positive effects of entrepreneurship training on youth employment. Training alone, without supports (capital, technical assistance, mentoring), has limited effectiveness, importantly. Business training coupled with microfinance access, mentorship and market linkages show better results. Policy interest in entrepreneurship programs has grown in Ethiopia due to the rapid urbanization, and the youth migration to urban areas, however, implementation problems such as lack of institutional capacity, limited government integration and understanding of youth needs have limited their effectiveness (Kebede, 2022).

3.3 Life Skills and Psychosocial Support

Life skills training covers communication skills, problem solving, team building, building confidence, emotional regulation, and support for social reintegration. Life skills training is incorporated into many street-connected youth programmes alongside vocational components, as a result of the awareness of the street-connected youth's level of psychosocial vulnerability. There is considerable evidence of the positive effects of life skills training for the development of youth. Life skills training offers pathways to process trauma, to gain confidence, and to acquire skills for social engagement for vulnerable youth in particular. Community-based interventions that engaged youth at risk of marriage included life skills training using youth information centers and peer education and had significant effects on school retention and delaying marriage (Mehra et al., 2018). Street connected youth often require psychosocial support, such as counselling, trauma-informed care and mental health services. Many of these youth have suffered trauma, abuse and loss, and many have diagnoses of depression, anxiety and/or trauma.

3.4 Digital and ICT Skills

The ability to use digital technology and information and communications technology (ICT) skills is more relevant than ever in the world of work in all economic sectors. ICT Skills provide access to better-paying jobs, telework and digital entrepreneurship.

There is limited evidence regarding street-connected and out-of-school youth, specifically, in relation to digital skills training. Research on the digital divide reveals significant challenges for low-income youth, rural residents, and people with disabilities in accessing the internet and developing digital skills (Sanders & Scanlon, 2021). The digital divide is a human rights problem and an opportunity gap in the economy. Street-connected youth face strong barriers

to accessing the digital world, especially due to housing instability, low school attendance rates, and poverty.

4. Barriers Affecting Participation and Access

4.1 Poverty and Economic Constraints

The key obstacle for street-connected and out-of-school youth to being involved in skills training is poverty. The direct cost of training (tuition, materials, equipment) and the indirect cost of training (forgone income) are needed in training programs. These costs can be prohibitive for children in extreme poverty (Dodman et al., 2017).

Competing demands on youth's time due to household economic pressure. Many poor youth do not attend trainings, instead they are involved in income generation, such as street trading, informal work, or domestic work to support the household's survival (Thieme, 2021). Child labour is a specific and extreme form of poverty exclusion. Children and youth in urban slums are increasingly attracted to child and youth labour in order to contribute to the household's livelihood in the absence of decent jobs and underemployment among adults (Bah, 2018).

4.2 Gender-Based Barriers

There are barriers to girls and young women's participation in skills training due to gender inequality. A systematic review of policies and interventions to tackle gender barriers to girls' school participation highlighted several interrelated barriers, such as child marriage, early pregnancy, safety concerns, mobility barriers, and occupational stereotyping.

Child marriage is a significant obstacle in many parts of the world. Early marriage leads to cessation of education and training participation, since marriage is expected to take priority over skill development for girls. The interventions that have been found to be effective include community mobilization, youth information centers with peer education, and girls' self-efficacy and social support interventions (Mehra et al., 2018).

Girls' mobility and participation in public places, including training programs, is limited due to GBV (intimate partner violence, sexual harassment, and school related violence). Outside of the home, girls' training is limited in many cultural situations because of "purity" concerns and family honour considerations.

Girls are directed into stereotyped skill areas, which are considered "feminized" such as hairdressing, garment production, domestic work, and have lower wage premiums (Wignall et al., 2023). If gender transformative programming is not intentional, skills training can perpetuate gender hierarchies. Gender-sensitive strategies that raise awareness of gender inequalities, establish safe spaces for girls and young women, challenge stereotypes and offer mentoring opportunities by successful women are more effective in raising girls' empowerment and economic participation.

4.3 Institutional and Documentation Barriers

There is a high proportion of street children who do not have any formal documents, school records or any evidence of previous learning. The lack of these documents makes it difficult to enrol students in skills training training, especially in formal TVET institutions, which require an application document (Wignall et al., 2023). It is hard to obtain certificates or proof of prior education to gain entry into the program for youth who have not been to school or left school early.

Loose enrollment systems with no strict credentialing requirements boost enrollee access, but may dilute the credibility of the programs and the recognition of the skills gained by employers.

4.4 Social Instability and Violence

Gang violence, territorial conflicts, political instability and overall insecurity are common features in urban slum settings (Thieme, 2021). Youth in these settings are exposed to chronic stress and safety concerns that negatively affect their ability to attend to skills development. Street-connected youth are more likely to have experienced various survival adaptations,

including gang involvement, substance abuse, and violence, in unsafe environments (Quarshie et al., 2020).

The psychological vulnerabilities due to these social conditions add to learning barriers. The qualitative research in Ghana showed how street-connected adolescents feel powerless, have family instability and mental health difficulties which present as self-harm and other coping mechanisms.

4.5 Disability-Related Exclusion

People with disabilities are grossly under-represented in livelihood and skills training programs in low and middle income countries (LMICs) (Hunt et al., 2022). Accessibility (physical facilities, transportation, communication supports), discrimination, negative attitudes of trainers and peers, and lack of information on available opportunities to participate are all barriers. Street-connected or out-of-school young people with disabilities are especially at risk of intersectional vulnerabilities, experiencing multiple forms of discrimination related to their disability, poverty, social exclusion, and in many cases, gender.

5. Training Quality and Program Effectiveness

5.1 Curriculum Relevance and Labor Market Alignment

The effectiveness of the program critically relies on the alignment of curriculum with real-world job opportunities. Skills training has been shown to have greater impacts in low and middle income countries when the curricula are responsive to local economic opportunities and not a fixed, standard curriculum. Rigorous review evidence shows this.

Labor-market research should be used to guide curriculum design by helping to identify skills that are needed, wage premiums, and constraints to access. However, many programs are in place and have curricula developed from the expertise of their trainers, donor preferences, or a standardized model without a thorough analysis of the labor market.

5.2 Trainer Competency and Teaching Quality

The competency of the trainer is a critical aspect of program quality, as is their skill in the area of interest and their competency in teaching the skill. A significant number of skills training initiatives in resource-poor settings use trainers who have a high level of technical expertise and less formal teaching training. Capacity building is especially significant in the form of mentorship. Quality relationships with trainers have a strong impact on learning and engagement, as youth are vulnerable due to their trauma, lack of confidence, and lack of experience with supportive adults.

5.3 Infrastructure and Resource Constraints

Quality of training is often limited by infrastructure in resource-poor environments. Limited practice opportunities – youth may not be able to get real-world experience with the tools and materials that they will be using in a job. Learning spaces may be limited and may lack adequate space, lighting, and/or basic amenities. Access barriers to digital technology do not allow for the development of ICT skills to be trained, access to online learning or digital resources to support the teaching process.

5.4 Certification and Recognition

The certification of skills gained from non-formal training is still a major obstacle. Employers will value formal certificates and qualifications from recognised institutions, but informal certificates or skills verification may not be recognised or valued. This leads to perverse situations, such as youth who finish non-formal training but then go back to seek formal qualification, and situations where skills gained informally via training are not recognised in the labour market.

5.5 Effectiveness of Interventions

Due to the diversity of study designs, settings, and outcome measures, it is difficult to integrate available evidence on the effectiveness of interventions. The most solid evidence is from a

comprehensive systematic review that synthesizes 113 evaluations of youth employment programs. Key findings include: overall, just over one-third of youth employment program evaluations show significant positive impacts on employment or earnings; skills training and entrepreneurship programs have higher impacts in middle- and low-income countries than in high-income countries; programs integrating multiple interventions (combining skills training, job search assistance, apprenticeships, entrepreneurship training, and supportive services) show higher success rates than single-component programs; and profiling beneficiaries and providing follow-up/mentoring improves outcomes.

In addition, the integrated approach (skills training, psychosocial support, livelihood linkages and mentorship) was found to yield better results than skills training alone for street-connected and out-of-school youth.

6. Sustainability Challenges

6.1 Donor Dependency and Short-Term Funding

A number of skills training initiatives for vulnerable youths in low and middle-income countries begin with donor support, which can pose difficulties in sustaining these programs beyond the end of the funding period. A short project cycle (usually 2-5 years) might not provide enough time to develop programs institutionally, to build trainers' capacity, to connect with employers, and to create lasting outcomes.

If there are no long-term investments, there is a risk of quality being lowered, staff turnover, training facilities becoming rundown and beneficiaries getting lesser value.

6.2 Government Integration and TVET System Development

Skills training programs are more sustainable when they are embedded in the national TVET systems and government budgets. This, however, depends on the capacities, prioritization and policy commitment of the government. In many low-income countries, the government has weak institutional capacity for managing a broad-based TVET system, leading to a diverse landscape of fragmented TVET systems, with varying quality and coordination of NGO-driven programs.

The integration into government systems also brings tensions. Government TVET institutions could focus on more educated populations or on a curriculum that is not relevant to the needs of the informal economy.

6.3 Community Participation and Social Trust

Local ownership of program design and implementation and the incorporation of programs into community structures, enhances sustainability. Community-driven programs, using community trainers and relying on existing community connections, are more sustainable and culturally appropriate.

Street-connected youth, however, frequently face a lot of community stigma. Awareness raising and re-imagining the street connected youth as deserving of opportunity are key steps in building community support for skills training programs.

6.4 Labor Market Linkages and Employment Outcomes

The ultimate measure of sustainability is whether program graduates secure productive employment or self-employment. Lack of linkages to the labor market has limited ability for training completers to apply the skills they acquired to improve their livelihoods, which has affected the credibility and motivation of future trainees.

Ongoing links with employers, knowledge of employer hiring requirements, job placement assistance and sometimes apprenticeship or on-the-job training are needed for effective labor market connections. They can't be built in short-term project cycles and do need staff capacity.

7. Discussion

7.1 Main Findings: Diversity and Persistence of Challenges

The evidence shows a wide range of skills training programmes, from traditional vocational training to entrepreneurship programmes, life skills development, and digital literacy programmes. In a variety of interventions and contexts, there are some consistent patterns. First, skills training doesn't get the job done when it comes to street-connected and out-of-school youth. Second, multi-sectoral programmes that address skills training and psychosocial support, mentorship and livelihood linkages, show better results. Third, poverty, gender inequality, social instability, and discrimination are important barriers that exist across contexts and limit participation in training and the uptake of skills into employment.

7.2 Skills Training Alone Is Insufficient: Need for Integrated Approaches

Consistent across evidence is that skills training is a necessary but insufficient condition to address the structural drivers and barriers to poverty and exclusion. There are a number of reasons why:

Structural Poverty: Skills acquired by street-connected and out-of-school youth is still limited by structural poverty. Even among skilled youth, limited capital for self-employment, lack of work experience credibility, and discrimination by employers and absence of social network for job access pose barriers (Rai et al., 2018). Poor household youths tend to be lacking in the "cultural capital" required for formal work.

Limited Quality of Labour Market: Urban slums have poor quality labour markets. Youth training programs may be available in some sectors but result in low-paying, part-time jobs. Skills training is capacity-building at individual level, without addressing labour market constraints at system level.

Social Exclusion and Discrimination: Street-connected and out-of-school youth may be subject to social stigma regardless of acquired skills. Perceived criminality, a history of substance abuse or low education level may be used in making decisions. Gender discrimination and mobility restrictions are other barriers that affect girls and young women (Wignall et al., 2023).

Psychosocial Vulnerabilities: Youth with trauma histories, mental health challenges, low confidence, and limited positive adult relationships require psychosocial support beyond skills training alone (Quarshie et al., 2020). Without addressing these vulnerabilities, skills acquisition may not translate to employment capacity.

The results indicate that interventions need to be multi-level, targeting individual capabilities (skills), psychosocial factors (confidence, mental health, coping skills), relational factors (mentor, social support, social networks), institutional factors (credential recognition, labour market access), and structural factors (poverty reduction, discrimination reduction, policy change).

7.3 Policy Implications and Recommendations

Based on the evidence synthesis, several policy priorities are highlighted:

Gender-Sensitive and Transformative Programming: Skills training for girls and young women should be explicit in addressing gender barriers, such as early marriage, occupational stereotyping, safety concerns and family restrictions. Programs that not only use gender-transformative approaches to raise awareness about gender inequality, but also involve men and community members, and create enabling environments for girls' participation, are more effective than having gender as a "add-on" (Wignall et al., 2023).

Street-connected and out-of-school youth have better access to flexible, informal pathways to acquiring skills and experience and alternative means of prior learning through inclusive enrollment systems.

Systematic Labor Market Research: Curriculum development should be based on systematic labor market research, which includes the analysis of skill demand, wage premiums, and employment barriers. Curriculum design and job placement strategy should be guided by engagement with employers.

Psychosocial Support Integration: Programs should not only include technical skills, but also trauma-informed care, mental health support, life skills training and mentorship. Trainers must be trained to identify and respond to youth trauma.

Long-Term Funding and Institutional Integration: There is a need to move from a short-term donor project to government integration or long-term philanthropic commitment in order to achieve sustainability.

Community participation and social reintegration: Program design and implementation must focus on community participation, involve local trainers and draw on community assets. Programs must strive to decrease the stigma associated with street children and foster community acceptance and support.

7.4 Research Gaps and Future Directions

There are gaps in evidence – the following are important to fill:

Long-term outcomes: Limited evidence exists regarding year-long outcomes of well-being, income and employment; most studies examine short-term outcomes. Longitudinal studies over several years would provide more information on the effectiveness of the program and benefit persistence.

Gender-Specific Analysis: Gender disaggregation of outcomes is inconsistent; few studies examine mechanisms by which gender affects program participation and outcomes. Gender responsive programming could be improved with qualitative research on girls' and young women's experiences.

Disability Inclusion Research: There is little disability-related research that focuses on the skills training of street-connected and out-of-school youth. There is an immediate need for research on accessibility, support strategies and inclusive program design.

Evidence on youth employment is available, but there is limited evidence that is specifically focused on an urban slum context. The relationship between the characteristics of the informal economy, social instability and the effectiveness of skill needs and training is not well understood.

Limited research: Comparative Intervention Studies – few studies directly compare intervention models or components. Intensive testing of program components would provide clarity on what is required and the best combinations of program elements.

Cost-Effectiveness Analysis: There is very little evidence for cost per beneficiary, cost per employment outcome, or comparative cost-effectiveness across intervention models.

Implementation Research: Knowledge of challenges and facilitators of effective implementation in resource poor settings is limited. More research is needed on implementation science that focuses on how the program is delivered, factors that impact fidelity, and how to modify the program to fit specific contexts to enhance practice.

8. Limitations

There are some limitations to this narrative review. First, the evidence base is limited and diverse. Programs with positive results are likely to be published, and few programs use rigorous comparison designs. There are substantial variations in the number of children included in the study, type of outcome measure, duration of follow-up, and context in which the studies take place, so results cannot be compared and generalised across all studies.

Second, publication bias in English-language journals leads to under-representation of programs and evidence from non-English speaking countries. Programs in other areas of

francophone Africa, lusophone contexts, and Asia may be effective and well-known but not well documented in readily available, English-language literature.

Third, the narrative, not the systematic approach of the review, has some subjectivity in theme identification and interpretation of the evidence. Referential search strategies have been used but some relevant studies may not have been retrieved.

Fourth, the quality of studies is highly variable, from good randomized trials to poor observational studies. This variation makes some reported findings less reliable.

Lastly, the youth labour markets are changing quickly, especially with the emergence of digital platforms and gig economy jobs, which means that some data from the past may not be as applicable to today's youth employment landscape.

9. Conclusion

Street children and out-of-school children in urban slums are one of the most vulnerable groups in the world, who are exposed to acute poverty, lack of access to education, social marginalization, and few livelihood opportunities. Skills training interventions, including vocational training, entrepreneurship development, life skills and digital skills training can play an important role in improving human capital and livelihood opportunities for this population. But research shows that skills training is not enough. Participation in training and the translation of skills into employment is still hampered by a range of structural barriers such as poverty, gender inequalities, social instability and labour market barriers, which operate across contexts. The best interventions combine skills building, psychosocial support, livelihood linkages and employment services. These holistic approaches go beyond merely filling in skills gaps and extend to tackling the psychological, social isolation and institutional challenges vulnerable young people face.

The sustainability issue is still a major issue. Programs that rely on episodic donor support, don't have government integration, or are poor on labor market linkages, have a poor track record of influencing in the long term. Sustainable models must either be through the integration of government systems, long-term philanthropic investment or income-generating models, all of which are poorly developed in the lowest-income country contexts.

There are still a number of gaps in the literature that need to be addressed with regards to long-term outcomes, gender-specific programming, disability inclusion, cost-effectiveness, and implementation factors. If these gaps are not filled, policy and program development will continue to be on a narrow evidence base and small-scale innovations instead of systematic analysis of what works, who, and under what conditions.

Moving forward, there is a need for transformative strategies that go beyond developing individual skills to tackling structural inequalities, poverty, discrimination, and institutional barriers that contribute to vulnerability and limit opportunity for street-connected and out-of-school youth. Such strategies would combine skills development and social protection, market transformation, and policy change to promote youth rights, dignity and agency. This is a development imperative as well as a human rights imperative because all young people deserve opportunity to develop their potential and to be given a chance to live in society in a dignified way.

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