

# Causes of Child and Youth Homelessness in Developed and Developing Countries

## A Systematic Review and Meta-analysis

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**IMPORTANCE** A systematic compilation of children and youth's reported reasons for street involvement is lacking. Without empirical data on these reasons, the policies developed or implemented to mitigate street involvement are not responsive to the needs of these children and youth.

**OBJECTIVE** To systematically analyze the self-reported reasons why children and youth around the world become street-involved and to analyze the available data by level of human development, geographic region, and sex.

**DATA SOURCES** Electronic searches of Scopus, PsychINFO, EMBASE, POPLINE, PubMed, ERIC, and the Social Sciences Citation Index were conducted from January 1, 1990, to the third week of July 2013. We searched the peer-reviewed literature for studies that reported quantitative reasons for street involvement. The following broad search strategy was used to search the databases: "street children" OR "street youth" OR "homeless youth" OR "homeless children" OR "runaway children" OR "runaway youth" or "homeless persons."

**STUDY SELECTION** Studies were included if they met the following inclusion criteria: (1) participants were 24 years of age or younger, (2) participants met our definition of street-connected children and youth, and (3) the quantitative reasons for street involvement were reported. We reviewed 318 full texts and identified 49 eligible studies.

**DATA EXTRACTION AND SYNTHESIS** Data were extracted by 2 independent reviewers. We fit logistic mixed-effects models to estimate the pooled prevalence of each reason and to estimate subgroup pooled prevalence by development level or geographic region. The meta-analysis was conducted from February to August 2015.

**MAIN OUTCOMES AND MEASURES** We created the following categories based on the reported reasons in the literature: poverty, abuse, family conflict, delinquency, psychosocial health, and other.

**RESULTS** In total, there were 13 559 participants from 24 countries, of which 21 represented developing countries. The most commonly reported reason for street involvement was poverty, with a pooled-prevalence estimate of 39% (95% CI, 29%-51%). Forty-seven studies included in this review reported family conflict as the reason for street involvement, with a pooled prevalence of 32% (95% CI, 26%-39%). Abuse was equally reported in developing and developed countries as the reason for street involvement, with a pooled prevalence of 26% (95% CI, 18%-35%). Delinquency was the least frequently cited reason overall, with a pooled prevalence of 10% (95% CI, 5%-20%).

**CONCLUSIONS AND RELEVANCE** The street-connected children and youth who provided reasons for their street involvement infrequently identified delinquent behaviors for their circumstances and highlighted the role of poverty as a driving factor. They require support and protection, and governments globally are called on to reduce the socioeconomic inequities that cause children and youth to turn to the streets in the first place, in all regions of the world.

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There are vast numbers of children and youth in the world who find themselves connected to the streets. Owing to the difficulties of counting and defining this very fluid population, no accurate estimates exist on the numbers of children and youth spending a portion or majority of their time on the streets; however, they are estimated to be in the tens to hundreds of millions.<sup>1</sup>

A variety of definitions have been put forth to define children and youth with street connections. Previously, the United Nations Children's Fund broadly defined these children and youth as "[a]ny girl or boy who has not reached adulthood, for whom the street in the widest sense of the word, including unoccupied dwellings, wasteland, and so on, has become his or her habitual abode and/or source of livelihood, and who is inadequately protected, directed, and supervised by responsible adults."<sup>1(p9)</sup> A further categorization placed these children living and working on the street into 3 categories: children of the street (those who spend both days and nights on the street with limited or no family contact), children on the street (those who spend a portion or majority of their time on the street while returning home to a family/guardian at night), and children from street families (children from families living on the streets).<sup>1</sup> In very high-income settings, youth connected to the streets are typically defined by their residential instability and precarious living arrangements, and they are referred to as homeless youth, runaway youth, system youth, or throwaway youth.<sup>2</sup> Most recently, the term *street-connected children and youth* has been used to refer to those for whom the street is a central reference point—one that plays a significant role in their everyday life.<sup>1</sup> While no clear definition encompasses the situations of all children and youth connected to the streets, it is important to understand that their circumstances are fluid and that the streets play a central role in their lives.<sup>3</sup> It is also important to understand that children and youth connected to the streets are rights holders<sup>3,4</sup> who often find themselves in situations that violate their basic human rights.<sup>1,4</sup>

It is suspected that the dynamics driving this phenomenon (ie, street involvement of children and youth) are diverse and consist of complex pathways that vary between developed and developing countries, within geographic regions, by sex and age.<sup>1,3</sup> However, the literature lacks any systematic compilation of children and youth's reported reasons for street involvement, and there is an absence of consensus among academics, policy makers, stakeholders, and international organizations regarding these factors.<sup>1</sup> Without empirical data on these reasons, policies are developed or implemented to mitigate street involvement without taking these causes into account. Often in resource-constrained settings, the prevailing paradigm assumes that children on the street are predominantly juvenile delinquents, and the government response is often characterized by social exclusion, criminalization, and oppression by police and civic authorities.<sup>5</sup> Strategies frequently involve violent street sweeps conducted by police with children being placed in overcrowded detention centers or repatriated to unsafe care environments.<sup>6,7</sup> Many of these children subsequently return to the streets. Resource-constrained settings typically lack well-established child protection systems,<sup>3</sup> resulting in weak policies to mitigate children's street involvement. In developed

## Key Points

**Question** What are the self-reported reasons why children and youth around the world become street-involved?

**Findings** This meta-analysis compiled data from 49 studies representing 24 countries. Street-connected children and youth most frequently reported poverty, family conflict, and abuse as their reasons for street involvement and infrequently identified delinquent behaviors as a reason for their circumstances.

**Meaning** Children and youth's self-reported reasons for street involvement indicate that they are in extremely difficult circumstances and require support, protection, and policies to mitigate their street involvement.

regions, child protection systems may be better equipped and able to respond to street youth with policies, legislation, and programs coordinated by government and nongovernmental agencies; yet despite this, children and youth in developed regions continue to find themselves in street circumstances.

Globally, street-connected children and youth have significant morbidity and mortality.<sup>8-12</sup> To develop effective evidenced-based international and national policies aimed at preventing and mitigating the harms associated with street involvement, upholding children's rights, and ameliorating the circumstances of the world's most vulnerable children and youth, it is crucial to have rigorous evidence to comprehend this phenomenon. This review aims to systematically analyze the self-reported reasons why children and youth around the world become street-involved and to analyze the available data by level of human development, geographic region, and sex.

## Methods

### Operational Definitions

#### Street-Connected Children and Youth

For the purposes of this review, the term *street-connected children and youth* refers to any child (<18 years of age) or youth (15-24 years of age) who spends a portion or majority of his or her time on the streets living or working. Children and youth may have been defined as any of the following in the literature: children of the street, children on the street, children from street families, homeless youth, runaway youth, throwaway youth, or working children. In the broadest sense, we included any study that referred to a child or youth who had connections to the streets and for whom the street played a significant role in his or her life.

#### Developed and Developing Regions

We used the United Nations Development Programme 2013 Human Development Index for categorizing studies into developing vs developed regions. The Human Development Index uses a combination of indicators to measure development and categorizes countries into very high, high, medium, and low development countries.<sup>13</sup> We defined developing countries as all those in the high, medium, and low development categories and developed countries as those in the top quartile and

classified as very high in the United Nations Development Programme 2013 Human Development Index Report.<sup>13</sup>

### Search Strategy and Study Selection

We searched for any published peer-reviewed study from 1990 through July 2013 that reported quantitative reasons for street involvement. Studies were included if they met the following inclusion criteria: (1) participants were 24 years of age or younger, (2) participants met our definition of street-connected children and youth, and (3) quantitative reasons for street involvement were reported. We included the following study designs: cross-sectional, cohort, case-control, mixed-methods, qualitative studies reporting quantitative reasons, and interventions that provided baseline data on reasons for street involvement. We excluded publications that were not written in English or that were dissertations, books, and conference abstracts.

Electronic searches of Scopus, PsychINFO, EMBASE, POPLINE, PubMed, ERIC, and the Social Sciences Citation Index were conducted from January 1, 1990, to the third week of July 2013. The following broad search strategy was used to search the databases: “street children” OR “street youth” OR “homeless youth” OR “homeless children” OR “runaway children” OR “runaway youth” or “homeless persons.”

After duplicates were removed, 2 independent reviewers (L.E. and J.G.) screened the titles and abstracts and excluded all records that did not meet the inclusion criteria. If either of the reviewers found an article to be relevant, a full-text copy of the article was obtained, and its eligibility assessed independently. Disagreements were resolved by discussion between the 2 reviewers, and a third reviewer assisted when consensus could not be reached. A final list of studies to be included in this systematic review was agreed on, and the data were extracted. The authors included data from their own unpublished work that was under review at the time of their search.<sup>14</sup> Reference lists of selected articles were scanned to identify additional relevant documents.

### Study Quality

The assessment of methodological quality was used to determine whether the studies adequately reported study components essential to any study design. A critical appraisal tool was adapted to assess 10 items that should be reported to effectively assess the validity of a study's findings.<sup>15</sup> Details of the study quality assessment tool and the results of assessing study quality are available in the eAppendix and eTable 1 in the Supplement. The quality assessment was performed independently by L.E. and J.G. Afterward, the 2 sets of results were compared, and any disagreements were discussed until a consensus was reached.

### Data Extraction

Data were extracted by 2 independent reviewers (L.E. and J.G.) and included details about the study's design, setting, population demographics, and results for all reported reasons for street involvement. When more than 1 study reported on the same sample population,<sup>16-24</sup> the source containing the most detailed data about the reasons for street involvement was selected for the review.<sup>17,19,21,24</sup> Data extraction was performed independently by L.E. and J.G.,

and then the results were compared. Any disagreements were discussed until a consensus was reached. When it was not possible to extract the data from the publication, we contacted the authors to ask for clarification.

### Reasons and Variables

Extracted data on reasons were sorted and compiled into categories. The review team agreed on 6 categories that best represented the themes that emerged: poverty, abuse, family conflict, delinquency, psychosocial health, and other reasons. When studies reported multiple reasons per category, we used the most frequent response in the meta-analysis. *Poverty* consisted of the following variables: poverty, hunger, work to get money, housing instability, rural to urban migration, structural, and refugee/conflict/war displacement. *Abuse* consisted of the following variables as reported in the studies: physical abuse, sexual abuse, and abuse/maltreatment and neglect. *Family conflict* consisted of the following variables: family conflict, escape home problems, abandoned, family issues, domestic violence, orphaned, substance use at home, alcoholism at home, thrown out, mutual decision with parents, and brought to the streets by family/relative. *Delinquency* consisted of the following variables: delinquency, conflict with the law, and removed by authorities. *Psychosocial health* consisted of the following variables: sexuality/gender issues, mental health, anxiety/depression, conflict with friends, traumatic events, personal drug and alcohol use, pregnancy, and peer pressure. *Other reasons* consisted of the following variables: runaway, desire to go to the city, independence, no clear reason, and other.

### Analysis

We considered a binary response (yes/no) for each reason for street involvement to estimate pooled prevalence and to assess effect of covariates, while accounting for individual study variations by introducing random intercepts. First, we fit logistic mixed-effects models to estimate the pooled prevalence (ie, pooled mean proportion) of each reason, and to estimate subgroup pooled prevalence by development level or geographic region. Separate models were fit for each reason using only studies that examined the reason as a source of street involvement. To evaluate sex difference, we first created the number of female and male youth who reported yes/no to each reason from a study, and reshaped the data into a long format where each sex-yes/no datum is in a separate observation. For example, individual study data were separated into 4 observations with a variable (say, *num*) representing number of male-poverty yes, male-poverty no, female-poverty yes, and female-poverty no. Interactions between sex and the other covariates, such as development level or geographic region, were generated to estimate the subgroup pooled prevalence of each reason and to assess sex difference within a specific covariate level (eg, sex difference among developing countries). Because some studies reported only male data (ie, zero cells for female-yes and female-no categories), we used weighted logistic mixed models using the “num” variable as a frequency weight to avoid removing those studies from analysis. The Wald test was used throughout to assess the effect of covariate(s) and to calculate corresponding *P* values. We conducted a sensitivity analy-

Table 1. Characteristics of the 49 Studies Included in the Review

Region and Study	Country	HDI Category <sup>a</sup>	Participants, Total No.	Participants, No. (%)		Age, y
				Female	Male	
<b>Africa</b>						
Sorber et al, <sup>14</sup> 2014	Kenya	Low	200	81 (41)	119 (59)	12-21
Strobbe et al, <sup>25</sup> 2013	Zambia	Low	102	0 (0)	102 (100)	12-18
Ward and Seager, <sup>26</sup> 2010	South Africa	Medium	305	21 (7)	284 (93)	12-17
Tadele, <sup>27</sup> 2009	Ethiopia	Low	126	0 (0)	126 (100)	9-18
Plummer et al, <sup>28</sup> 2007	Sudan	Low	1649	227 (14)	1422 (86)	7 to >19
Young, <sup>29</sup> 2004	Uganda	Low	273	NR	NR	8-17
Motala and Smith, <sup>30</sup> 2003	South Africa	Medium	16	6 (38)	10 (62)	11-19
Veale and Donà, <sup>31</sup> 2003	Rwanda	Low	290	26 (9)	264 (91)	14.2 <sup>b</sup>
Lockhart, <sup>32</sup> 2002	Tanzania	Low	75	0 (0)	75 (100)	8-20
Salem and Abd el-Latif, <sup>33</sup> 2002	Egypt	Medium	100	0 (0)	100 (100)	7-16
Tchombe et al, <sup>34</sup> 2001	Cameroon	Low	275	NR	NR	11-18
Abdella et al, <sup>35</sup> 2000	Ethiopia	Low	70	NR	NR	10-16
Aderinto, <sup>36</sup> 2000 <sup>c</sup>	Nigeria	Low	202	17 (8)	185 (92)	<10-18
Lalor, <sup>37</sup> 1999	Ethiopia	Low	929	NR	NR	NR
Lugalla and Mbwambo, <sup>38</sup> 1999	Tanzania	Low	200	30 (15)	170 (85)	8-16
Matchinda, <sup>39</sup> 1999	Cameroon	Low	210	NR	NR	NR
Anarfil, <sup>40</sup> 1997	Ghana	Medium	1147	459 (40)	688 (60)	<10-19
<b>Asia</b>						
Senaratna et al, <sup>41</sup> 2013	Sri Lanka	High	283	73 (26)	210 (74)	8-18
Bhat et al, <sup>42</sup> 2012	India	Medium	119	0 (0)	119 (100)	11-18
Gupta, <sup>43</sup> 2012	India	Medium	100	16 (16)	84 (84)	5-16
Sherman et al, <sup>44</sup> 2005	Pakistan	Low	347	14 (4)	333 (96)	13 <sup>d</sup>
Ali et al, <sup>45</sup> 2004	Pakistan	Low	108	21 (19)	87 (81)	8-12
Tiwari et al, <sup>46</sup> 2002	India	Medium	400	0 (0)	400 (100)	6-16
Senanayake et al, <sup>47</sup> 1998	Sri Lanka	High	50	18 (36)	32 (64)	4-17
Baker et al, <sup>24</sup> 1997	Nepal	Low	130	0 (0)	130 (100)	6-17
Patel, <sup>48</sup> 1990	India	Medium	1000	NR	NR	NR
<b>South America</b>						
Huang et al, <sup>49</sup> 2004	Bolivia	Medium	124	39 (31)	85 (69)	3-18
Lee and Odie-Ali, <sup>50</sup> 2000	Guyana	Medium	25	0 (0)	25 (100)	9-17
Raffaelli et al, <sup>51</sup> 2000	Brazil	High	66	33 (50)	33 (50)	10-18
Aneci Rosa et al, <sup>52</sup> 1992	Brazil	High	80	0 (0)	80	9-18
<b>Eurasia</b>						
Murray et al, <sup>53</sup> 2012	Georgia	High	59	NR	NR	NR
<b>Subtotal</b>						
31 Studies	21 Countries	Low = 16, medium = 10, high = 5	9060	1081 (12) <sup>e</sup>	5163 (57) <sup>e</sup>	3-21

(continued)

sis to drop outliers identified from diagnostic tests (available in metafor package in R version 3.0.2) and through visual inspection of forest plots.

## Results

Our search identified 14 782 titles and abstracts for review after removing duplicates, theses, and books. After screening, we reviewed 318 full texts and identified 64 eligible studies, of which 49 contained reasons for street involvement that could be extracted (eFigure 1 in the Supplement). In total, there were 13 559 participants from 24 countries. Of these, there were 31 studies conducted in 21 developing countries (16 low development, 10 medium development, and 5 high development

countries), with 9060 participants. The majority of these studies were conducted in Africa (55%) and Asia (29%). Eighteen studies represented 3 developed countries and 4499 participants (Table 1). In developing regions, 57% of participants were male and 12% were female, with 31% of unknown sex due to nonreporting. In contrast, 52% of participants were male and 48% were female in developed countries.

Table 2 and the Figure show the overall and development-level-specific pooled-prevalence estimates for each reason category. Detailed forest plots and pooled-prevalence estimates for each category of reason stratified by level of development are provided in eFigures 2 to 13 in the Supplement. Globally, the most commonly reported reason for street involvement was poverty, with a pooled prevalence of 39% (95% CI, 29%-51%), followed by family conflict, abuse, other, psychosocial health,

Table 1. Characteristics of the 49 Studies Included in the Review (continued)

Region and Study	Country	HDI Category <sup>a</sup>	Participants, Total No.	Participants, No. (%)		Age, y
				Female	Male	
North America						
Mayfield Arnold et al, <sup>54</sup> 2012	United States	Very high	73	38 (52)	35 (48)	16-20
Coates and McKenzie-Mohr, <sup>55</sup> 2010	Canada	Very high	102	36 (35)	66 (65)	16-24
Peressini, <sup>56</sup> 2007	Canada	Very high	86	29 (34)	57 (66)	≤24
Hyde, <sup>57</sup> 2005	United States	Very high	50	25 (50)	25 (50)	18-23
Safyer et al, <sup>58</sup> 2004	United States	Very high	61	37 (61)	24 (39)	15.9 <sup>b</sup>
Rew et al, <sup>17</sup> 2002	United States	Very high	414	170 (41)	244 (59)	16-20
Moon et al, <sup>59</sup> 2001	United States	Very high	204 <sup>f</sup>	95 (47)	108 (53)	14-21
Cauce et al, <sup>21</sup> 2000	United States	Very high	364	153 (42)	211 (58)	13-21
Ennett et al, <sup>60</sup> 1999	United States	Very high	288	148 (51)	140 (49)	14-21
Nadon et al, <sup>61</sup> 1998	Canada	Very high	79	79 (100)	0 (0)	13-18
Ringwalt et al, <sup>62</sup> 1998	United States	Very high	1159	591 (51)	568 (49)	12-21
Boesky et al, <sup>63</sup> 1997	United States	Very high	122	83 (68)	39 (32)	12-17
Booth and Zhang, <sup>64</sup> 1996	United States	Very high	219	101 (46)	118 (54)	12-19
Janus et al, <sup>65</sup> 1995	Canada	Very high	187	74 (40)	113 (60)	16-21
Whitbeck and Simons, <sup>66</sup> 1993	United States	Very high	156	73 (47)	83 (53)	14-18
Oceania						
Rosenthal et al, <sup>19</sup> 2006	Australia	Very high	692	349 (50)	343 (50)	12-20
Howard, <sup>67</sup> 1993	Australia	Very high	192	56 (29)	136 (71)	13-20
Hier et al, <sup>68</sup> 1990	Australia	Very high	52	26 (50)	26 (50)	NR
Subtotal						
18 Studies	3 Countries	Very high	4499	2162 (48)	2337 (52)	12 to ≤24
Total						
49 Studies	24 Countries	Developed = 18, developing = 31	13559	3243 (24) <sup>g</sup>	7500 (55) <sup>g</sup>	3 to ≤24

Abbreviations: HDI, Human Development Index; NR, not reported.

<sup>a</sup> Based on the 2013 Human Development Report.

<sup>b</sup> Mean age.

<sup>c</sup> Excluding nonstreet children.

<sup>d</sup> Median age.

<sup>e</sup> Thirty-one percent of sex data were not reported.

<sup>f</sup> One person was transgender, so the male and female columns do not equal study total.

<sup>g</sup> Twenty-one percent of sex data were not reported.

and, lastly, delinquency. Of the 49 studies included in this review, 47 (96%) reported family conflict-related reasons for street involvement, with a pooled-prevalence estimate of 32% (95% CI, 26%-39%). Abuse was almost equally reported in developing and developed countries, with an overall pooled prevalence of 26% (95% CI, 18%-35%). Other reasons had an overall pooled prevalence of 20% (95% CI, 13%-29%). Within the other category, “running away” was the most frequently reported reason in North America (38%), and “independence” was the most frequently reported reason in the Pacific, representing the developed world; a “desire to go the city” (10%) and “other general reasons” (12%) were the most frequently reported reasons in the developing regions. Psychosocial-related reasons had a pooled-prevalence estimate of 16% (95% CI, 11%-23%). Lastly, delinquency was the least frequently cited reason overall, with a pooled prevalence of 10% (95% CI, 5%-20%).

Street involvement due to poverty-related reasons was reported in all 31 studies representing developing regions and was the most frequently reported factor with a pooled-prevalence estimate of 41% (95% CI, 30%-53%). Similar pooled-prevalence estimates for abuse- and family conflict-related reasons were reported at 24% (95% CI, 16%-35%) and 24% (95% CI, 18%-31%), respectively, in the developing regions.

In developed countries, family conflict was the most frequently reported reason for street involvement with a pooled-prevalence estimate of 48% (95% CI, 38%-58%), with all the studies from developed regions contributing to this estimate. Similar pooled-prevalence estimates for abuse (29% [95% CI, 15%-48%]) and psychosocial health (26% [95% CI, 19%-35%]) were reported in developed countries.

Tests for differences between developing and developed region subgroups resulted in significant differences in all reported reasons for street involvement with the exception of poverty and abuse. We conducted a sensitivity analysis (eTable 2 and eFigures 14-17 in the Supplement) to exclude outliers identified in diagnostic tests and through visual inspection of forest plots, but no significant difference was observed for poverty-related reasons between developed and developing countries.

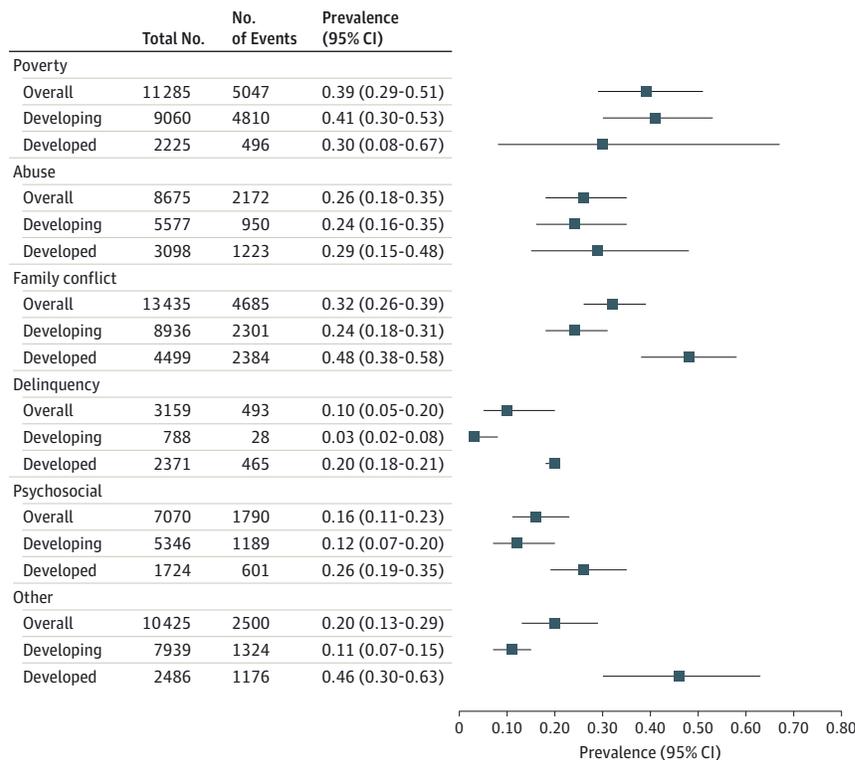
Table 3 demonstrates the most frequently reported reasons for street involvement by geographic region. Detailed forest plots and pooled-prevalence estimates for each category of reason stratified by geographic region are provided in eFigures 18 to 23 in the Supplement. Poverty-related reasons for street involvement were most commonly reported in Africa (49% [95% CI, 34%-65%]), Asia (28% [95% CI, 18%-41%]), Eurasia (83% [95% CI, 71%-91%]), and South and Central America (27% [95% CI, 5%-71%]).

**Table 2. Overall and Development-Level-Specific Pooled-Prevalence Estimates Comparing Reasons for Street Involvement**

Reason	No. of Studies	No. of Street-Involved Participants Who Reported Reason	Total No. of Participants	Pooled-Prevalence Estimates, % (95% CI)	P Value <sup>a</sup>
Poverty	35	5047	11 285	39 (29-51)	
Developing	31	4810	9060	41 (30-53)	.51
Developed	4	496	2225	30 (8-67)	
Abuse	28	2172	8675	26 (18-35)	
Developing	19	950	5577	24 (16-35)	.64
Developed	16	1223	3098	29 (15-48)	
Family conflict	47	4685	13 435	32 (26-39)	
Developing	29	2301	8936	24 (18-31)	<.001
Developed	18	2384	4499	48 (38-58)	
Delinquency	7	493	3159	10 (5-20)	
Developing	3	28	788	3 (2-8)	<.001
Developed	4	465	2371	20 (18-21)	
Psychosocial	21	1790	7070	16 (11-23)	
Developing	13	1189	5346	12 (7-20)	.03
Developed	8	601	1724	26 (19-35)	
Other	34	2500	10 425	20 (13-29)	
Developing	21	1324	7939	11 (7-15)	.001
Developed	13	1176	2486	46 (30-63)	

<sup>a</sup> Wald test for differences in development level.

**Figure. Overall and Development-Level-Specific Forest Plot of Pooled-Prevalence Estimates and 95% CIs for Reasons for Street Involvement**



Family conflict was the primary reason in North America (47% [95% CI, 36%-58%]) and the Pacific region (54% [95% CI, 30%-76%]). Tests for differences between geographic regions resulted in significant differences for family conflict, delinquency, and other reasons. Family conflict was different by geographic regions

( $P = .02$ ). eFigure 24 in the Supplement shows the pooled-prevalence estimates for reported reasons of street involvement grouped by geographic region. We conducted a sensitivity analysis comparing reasons for street involvement by geographic region when removing outliers identified by diagnostic tests and

Table 3. Pooled-Prevalence Estimates Comparing Reasons for Street Involvement by Geographic Regions

Reason and Region	No. of Studies	No. of Street-Involved Participants Who Reported Reason	Total No. of Participants	Pooled Prevalence, % (95% CI)	P Value <sup>a</sup>
Poverty	35	5047	11 285	39 (29-51)	.16
Africa	17	3770	6169	49 (34-65)	
Asia	9	644	2537	28 (18-41)	
Eurasia	1	49	59	83 (71-91)	
North America	3	360	1533	34 (6-81)	
Pacific	1	136	692	20 (17-23)	
South and Central America	4	88	295	27 (5-71)	
Abuse	28	2172	8675	26 (18-35)	.98
Africa	11	687	4462	25 (12-44)	
Asia	4	176	841	18 (10-32)	
Eurasia	1	18	59	31 (20-43)	
North America	8	1055	2406	29 (14-51)	
Pacific	1	167	692	24 (21-27)	
South and Central America	3	69	215	31 (21-43)	
Family conflict	47	4685	13 435	32 (26-39)	.02
Africa	16	1510	6153	25 (16-36)	
Asia	8	710	2429	23 (13-38)	
Eurasia	1	59	22	37 (26-50)	
North America	15	1786	3563	47 (36-58)	
Pacific	3	598	936	54 (30-76)	
South and Central America	4	59	295	18 (7-37)	
Delinquency	7	493	3159	10 (5-20)	<.001
Africa	3	28	788	7 (4-12)	
Asia	0	0	0		
Eurasia	0	0	0		
North America	3	335	1679	20 (18-22)	
Pacific	1	130	692	19 (16-22)	
South and Central America	0	0	0		
Psychosocial	21	1775	6870	16 (11-23)	.27
Africa	11	1097	4287	12 (6-22)	
Asia	1	83	1000	8 (7-10)	
Eurasia	1	9	59	15 (8-27)	
North America	6	220	840	23 (16-31)	
Pacific	2	381	884	37 (19-59)	
South and Central America	0	0	0		
Other	34	2500	10 425	20 (13-29)	.06
Africa	11	952	5578	8 (4-14)	
Asia	6	331	2032	17 (12-24)	
Eurasia	1	6	59	10 (5-21)	
North America	11	830	1742	45 (27-65)	
Pacific	2	346	744	47 (43-50)	
South and Central America	3	35	270	13 (5-29)	

<sup>a</sup> Wald test for differences in geographic region.

visual inspection (eTable 3 and eFigures 25-26 in the [Supplement](#)). This resulted in no changes to significant differences by different regions at a significance level of .05. However, the results indicated that poverty reported in Peressini<sup>56</sup> might deviate from other North American studies.

Finally, we examined sex differences for stated reasons within developing and developed regions when the data were reported (eTable 4 in the [Supplement](#)). We found no significant differences in the reasons male and female participants reported for their street involvement, with the exception of abuse in developed regions. Female participants in developed regions more frequently reported abuse-related reasons

for street involvement (28% [95% CI, 14%-49%]) than male participants (18% [95% CI, 8%-37%]) ( $P = .01$ ). In contrast, in developing countries, male participants were more likely to report abuse as a primary reason for being street connected (22%) compared with female participants (13%), although it failed to reach statistical significance.

## Discussion

This review shows that the leading cause of street involvement as self-reported by children and youth worldwide is related to

variables categorized as poverty, and when stratified by development level, this remains true in developing countries, whereas family conflict-related reasons are most commonly reported in developed countries. It is likely that more than 1 factor contributes to children and youth's street involvement and that the reasons may interact synergistically. Nonetheless, with poverty, family conflict, and abuse being the most commonly reported reasons for street involvement across levels of development, it is apparent that children and youth who have turned to the streets are doing so as a means of survival due to unfavorable conditions within their homes and that they are not typically delinquents (as they are so often perceived).<sup>1,3,6,7</sup> These results have strong implications for policy internationally; demonstrating that criminalization and policies that place street-connected children and youth in detention centers are likely to be ineffective strategies that violate their human rights instead of providing protection.

Globally, street-connected children and youth have significant morbidity<sup>8,69</sup> and mortality<sup>10</sup> and are at high risk of substance use,<sup>9</sup> sexual exploitation,<sup>12</sup> and the human immunodeficiency virus.<sup>70,71</sup> There is a dearth of evaluated interventions for street-connected children and youth, particularly in low- and middle-income countries.<sup>72</sup> To prevent and reduce these high rates of morbidity and mortality and high number of rights violations, strategies are urgently needed to mitigate street involvement, and interventions are required to respond to those already on the street.

There is a clear need to develop and strengthen social protection policies and child welfare systems in both developing and developed countries to address poverty, abuse, and family conflict impacting children's street involvement. Poverty reduction strategies, such as cash-transfer programs, feeding programs, and universal free primary and secondary education, aimed at supporting vulnerable households and increasing human capital, may greatly reduce children's street involvement. Social cash transfers have had positive effects on children's well-being in many settings<sup>73</sup> and may affect child protection outcomes, including reducing the probability of abuse, exploitation, and violence against children through direct or indirect effects.<sup>74</sup> Expanding and augmenting social protection programs are likely to significantly reduce street involvement in association with poverty reduction and child protection.

In low- and middle-income countries with weak or nonexistent child protection systems, policies should be designed, implemented, and enforced to protect children and youth in situations of abuse and family conflict. In developed regions, the child welfare system may not be adequately protecting vulnerable children and youth. Family breakdown, maltreatment, and conflict often lead to homelessness<sup>18</sup> and involvement in the foster care system. There is a clear relationship between a youth's homelessness and his or her involvement in the foster care system, and there is hope for improving the safety net for vulnerable youth in developed regions.<sup>75</sup>

This review has several strengths and limitations. To the best of our knowledge, this is the first study to compile data and present pooled estimates concerning reported reasons for street involvement. It includes studies across 24 countries comparing results by level of development and sex, making it generalizable to street children and youth globally. This review only

included English language peer-reviewed studies, which may have resulted in the exclusion of studies published in other languages and may reflect the lack of studies from Europe and South and Central America, limiting generalizability to these regions. Second, not all studies measured or reported the same reasons, and we compiled reported reasons into categories reflecting their general theme; this may have resulted in some misclassification bias. We attempted to limit bias by independently extracting and comparing data, and reviewing final categorization as a team. Third, we did not include gray literature and, therefore, may have missed reported reasons in reports. Fourth, self-reported reasons for street involvement are subject to reporting and social desirability bias, which may not accurately reflect the reasons for street involvement. Fifth, the "other" category should be interpreted with caution owing to the grouping of data. Studies in the "other" category that reported reasons as "runaway," "other," or "no clear reason" may not represent the underlying reason that the child or youth left home and, therefore, should be interpreted with caution. Sixth, our assessment of outliers with diagnostic tests may not have been sufficiently powered, and our assessment based on visual inspection may be inaccurate; therefore, the sensitivity analyses should be interpreted with caution. Seventh, we were unable to analyze reasons by age owing to a lack of data stratified by age. It is possible that self-reported reasons vary by age and the age they first came to the streets, which would have important policy implications. Lastly, there was a disparity in the inclusion of girls in developing regions compared with developed regions, which may have impacted the analysis of sex. Data were not always reported stratified by sex, and there were a large proportion of study participants not classified as either male or female in developing country studies. This points to a need to ensure research reaches girls on the street because they are an especially vulnerable and hard-to-reach population.

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## Conclusions

Preventing street involvement and mitigating its harms are critical to helping children and youth achieve their potential. There is an urgent need for international collaborations among researchers, policy makers, stakeholders, and organizations working with street-connected children and youth to formulate strategies to prevent them from turning to the streets and assist those already involved in street life. The street-connected children and youth who provided reasons for their street involvement infrequently identified delinquent behaviors for their circumstances and highlighted the role of poverty as a driving factor for their street involvement. With the global refugee crisis, it will be important to monitor changes in the number of children taking to the streets as a result of displacement and conflict. The self-reported reasons that were given indicate that these children and youth are in extremely difficult circumstances and are subject to numerous human rights violations. They require support and protection, and governments globally are called on to reduce the socioeconomic inequities that cause children and youth to turn to the streets in the first place, in all regions of the world.

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