



Youth street gang involvement in Iceland

A multilevel analysis using ISRD4

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Dr. Margrét Valdimarsdóttir, Associate professor of Sociology & Criminology at the University of Iceland¹

Áróra Sigurþórsdóttir, MA Criminology at the University of Iceland

Abstract:

This study examines youth street gang involvement in Iceland using data from the Icelandic sample of the International Self-Report Delinquency Study (ISRD4). The study is based on a randomly selected class-based sample of over 3,000 adolescents aged 13-17 in the Reykjavík capital area. Drawing on Vigil's theory of multiple marginality, the study investigates whether gang involvement is associated with immigrant background, social marginalization, family adversity, and criminogenic community contexts. Gang membership was measured using the Eurogang operationalization. Multilevel logistic regression models were employed to account for clustering within schools. The findings show that immigrant background was not significantly associated with gang involvement. Instead, experiences of social marginalization emerged as more important predictors. Perceived discrimination, violent hate crime victimization, and family strain were all associated with increased odds of gang involvement, whereas parental supervision acted as a strong protective factor. At the school-community level, social disorder and weak informal social control were associated with higher odds of gang membership, whereas concentrated disadvantage was not. An unexpected finding was that gang-involved youth reported relatively high levels of societal belonging compared to serious offenders who were not gang members, suggesting that gangs may provide marginalized youth with a sense of identity and social inclusion. The findings highlight the importance of social exclusion, family context, and community environments in understanding youth gang involvement in Iceland.

Keywords

Youth street gangs, Eurogang, social marginalization, adolescents, delinquency, Iceland

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1. Margrét Valdimarsdóttir conducted the data collection and analysis and led the writing of the manuscript. Áróra Sigurþórsdóttir contributed to the conceptual development of the study, literature review, and revision of the manuscript. Both authors contributed to the final version of the article.

1. Introduction

Like most adolescent behaviour, youth offending tends to be social in nature. Decades of criminological research show that adolescents typically offend in groups and that unstructured socializing with delinquent peers is among the strongest predictors of individual delinquency (e.g., Gerstner & Oberwittler, 2018; Osgood & Anderson, 2004; Warr & Stafford, 1991). Icelandic research also points to peers and group processes as central context for youth offending (e.g., Bernburg & Thorlindsson, 2005, 2007). A youth street gang is, however, conceptually different from a group of friends who occasionally commits crime. Within the Eurogang framework, a youth street gang is a relatively durable, street-oriented youth group in which illegal activity forms a part of the group's identity (Klein et al., 2006; Weerman et al., 2009, p. 20). Youth involved in such groups tend to report more frequent and serious offending and are more likely to persist in offending over time than non-gang-involved peers (Bendixen et al., 2006; Gatti et al., 2005; Gilman et al., 2014; Katz et al., 2026; Krohn et al., 2011).

Youth gangs have received little empirical attention in Iceland, although recent years have seen a growing official concern about organised youth violence and conflicts between rival groups (Ríkislögreglustjóri, 2024). Recent comparative research provides some empirical grounding for this concern. A study of adolescents across nine Nordic cities found that approximately 6% of adolescents in the Reykjavík capital area met the Eurogang criteria, a prevalence comparable to most cities in the sample, but below the 16% observed in Stockholm (Kaakinen et al., 2026). At the same time, the share of first- and second-generation immigrants rose from 9.7% in 2015 to 21% in 2025 (Statistics Iceland, 2025). While public discourse often links these two trends, empirical research in Iceland has not established such a connection (Valdimarsdóttir, 2025a).

This demographic change is nevertheless theoretically relevant because experiences associated with immigration, such as discrimination and weak social integration, may create conditions conducive to gang involvement (Decker et al., 2009; Klein et al., 2006; Vigil, 2002). Recent Nordic qualitative studies also highlight minority status and marginalization as important features of street criminal-environments and loosely organized criminal networks (Kalkan, 2022, 2024; Kolind et al., 2017; Tutenges et al., 2026). Although these studies focus on more deeply criminally involved populations than the adolescents examined in the present study, they provide useful context for understanding how marginalization and street-oriented group processes may operate within Nordic welfare states.

Using the Icelandic ISRD4 sample of more than 3,000 adolescents aged 13 to 17 (Marshall et al., 2022), the present study examines youth street gang involvement in relation to immigrant background and three broad domains informed by Vigil's multiple marginalization perspective: 1) social exclusion and

integration, including discrimination, hate crime victimisation, and attachment to school and society; 2) family adversity, including socioeconomic disadvantage, family strain, and parental supervision; and 3) community context, reflecting concentrated disadvantage, social disorder, and weak informal social control.

2. Conceptualizing Youth Street Gangs

Youth gang research has a long tradition in the United States (U.S.), where many classical criminological theories were developed to explain delinquent youth groups in urban areas (Shaw & McKay, 1942). Youth gangs in the U.S. are typically described as relatively formalized, with names, symbols, leadership structures, territorial identities, and explicit group norms, whereas European youth gangs tend to be more loosely organized and less likely to display such identifying markers (Esbensen & Weerman, 2005). These differences have implications for how gang involvement is measured across context. While directly asking young people whether they belong to a gang is widely used in U.S. research, self-identification appears to be less valid in European settings. One likely explanation is that popular stereotypes of “gangs” are rooted in the American experience (Klein et al., 2006, p. 414), leading European youth to reject the label even when their groups display functionally similar characteristics. Esbensen and Weerman (2005), for example, found that 92% of young gang members in the U.S. reported using identifying symbols, compared to only 24% of gang-involved youth in the Netherlands. U.S. gang members were also considerably more likely to have recognized leaders and formal rules than their Dutch counterparts. Similarly, Pedersen (2014) found that only 29% of Danish youth who met gang criteria self-identified as gang members.

The Eurogang methodology was developed in response to these measurement challenges and defines a youth street gang as “any durable, street-oriented youth group whose own identity includes involvement in illegal activity” (Weerman et al., 2009, p.20). Operationally, the group must have existed for at least several months, spend substantial time together in public spaces, and regard illegal activity as accepted within the group rather than merely incidental to its activities. The definition is intended to distinguish youth street gangs both from adult criminal networks and loosely connected groups of young people who occasionally get into trouble (Klein et al., 2006, p.418-419).

This conceptualization appears particularly relevant to contemporary Nordic settings. In a recent study, frontline staff working in gang exit programmes in Sweden and Denmark described a younger generation involved in loosely organized criminal networks characterized by fluid hierarchies, high turnover, and weak or absent gang identification (Hedlund, Johansen et al., 2026). Such groups differ from more established and formalized criminal organizations but

may nevertheless provide settings in which adolescents become increasingly embedded in offending and, in some cases, progress toward more serious criminal involvement (Pedersen, 2014; Pedersen & Lindstad, 2012).

A defining characteristic of youth gangs is their strong association with delinquency and violence. Delinquent and high-risk youth are more likely than non-delinquent youth to join gangs, meaning that gangs attract individuals who are already involved in offending. However, longitudinal research also demonstrates that gang membership itself increases offending beyond what would be expected from pre-existing risk factors, often referred to as a gang “enhancement effect” (Bendixen et al., 2006; Conolly & Jackson, 2019; Melde & Esbensen, 2012). Thus, the high levels of offending observed among gang-involved youth cannot be explained solely by self-selection into gangs. Pedersen (2014), for example, found that while gang members constituted 13% of a youth school sample in Copenhagen, they accounted for 56% of all recorded offenses. Gang involvement is also associated with more serious forms of offending, particularly violence and weapon carrying (Gatti et al., 2011; Melde et al., 2009). Compared with other serious offenders, gang-involved youth are more likely to engage in severe violence causing significant injury (Pedersen & Lindstad, 2012).

These patterns have been linked to the social dynamics and culture of gangs. Research suggests that gangs often emphasize “hyper-masculinity,” in which aggression and toughness become important sources of status and respect (Forkby et al., 2020, p. 160). Violence may therefore serve instrumental, symbolic, and social purposes, reinforcing group identity, loyalty, and hierarchy. Such dynamics can create pressure to participate in violence, particularly where revenge and retaliation are normalized and youth feel unprotected by mainstream institutions (Decker et al., 2013; Klein et al., 2006; Kolind et al., 2017). At the same time, the protection, status, and belonging that may draw some youth into street gangs coexist with unstable loyalties and risks of violent victimization (Anderson, 2017; Stewart et al., 2006; Tutenges et al., 2026).

3. Theoretical explanations of youth gang involvement

Theoretical explanations of youth gangs have long emphasized the interaction between individual strain and the broader social environment. Shaw and McKay (1942) theorized that gangs emerge more readily in socially disorganized neighbourhoods where poverty, residential instability, and weakened community institutions undermine informal social control. Cohen (1955) proposed that working-class youth, evaluated according to middle-class standards in schools and other institutions, experience “status frustration”, in the sense that they are unable to meet middle class standards of achievement and recognition. Gangs can provide an alternative source of respect and identity, where toughness and defiance are valued over mainstream norms. Cloward

and Ohlin (1960) added that whether frustrated youth turn to gangs also depends on the illegitimate opportunities available in their local environment. Gang involvement being therefore shaped not only by individual strain, but also by the broader social and structural characteristics of the neighbourhoods in which youth live.

Building on these traditions, Vigil's (1988, 2002) theory of multiple marginality argues that gang involvement can result from the accumulation of marginalization across different areas of a young person's life. For example, difficult family circumstances, weak attachment to school, social exclusion, and residence in socially disorganized neighbourhood can reinforce one another and weaken ties to conventional institutions. Where families, schools, and community institutions provide limited supervision, support, or opportunities for participation, young people may spend more time in informal street settings, where peers and local street groups become increasingly influential. Vigil refers to this process as "street socialization" (2002, p. 98), through which street groups become important sources of belonging and identity.

This framework has been an influential explanation of gang involvement among immigrant and ethnic-minority youth. The argument is not that immigrant background is itself criminogenic, but that minority youth may be disproportionately exposed to forms of marginalization such as discrimination, socioeconomic disadvantage, residential segregation, and exclusion from mainstream institutions (Klein et al., 2006; Vigil, 2002). Patterns that closely resemble these theoretical processes are documented in recent Nordic qualitative studies. Kalkan's (2022; 2024) work in Copenhagen, for example, describes how social and territorial marginalization can make street culture an arena for gaining respect and recognition, while Kolind et al. (2017) show how ethnic-minority youth use street and gang identities to negotiate experiences of marginalization. Tutenges et al. (2026) ethnographic work in Sweden, Denmark, and Norway similarly portrays street-criminal environments as attractive partly because they provide community and excitement to individuals who feel excluded from more conventional social settings.

Quantitative evidence on immigrant background and youth gang involvement in the Nordic countries is limited and mixed. In pooled ISRD4 data from nine Nordic cities, immigrant background was not significantly associated with gang involvement among adolescents aged 13-17 (Kaakinen et al., 2026). By contrast, Pedersen (2014) found higher levels of gang involvement among youth with immigrant backgrounds in Copenhagen. Using official data on seven Swedish street gangs, Rostami et al. (2012) found that gang membership was ethnically heterogeneous, although 76% of members were first- or second-generation immigrants.

Research generally suggests that perceived discrimination is a meaningful pathway to gang involvement. Youth who experience racial or ethnic discrimination are more likely to join gangs, and studies point to discrimination in school, social life, and by police as a central theme in the lives of gang-involved

youth of immigrant background, with some joining in search of belonging and protection (e.g., Van Ngo et al., 2017; Wortley & Tanner, 2006; Johnson & Mendlein, 2022). Immigrant youth in the Nordic countries report higher rates of discrimination than their native peers (Bjereld et al., 2015; Hjern et al., 2013; Lahti et al., 2024; Valdimarsdóttir, 2025b), suggesting that this pathway may be relevant in the Nordic context as well.

Poor parental supervision, family strain and conflict, socioeconomic disadvantage, weak school attachment, victimization, and low self-control are consistently associated with youth gang involvement, although they also predict delinquency more generally (Baz Cores, et al., 2025; Haymoz et al., 2014; Johnson & Mendlein, 2022; Kaakinen et al., 2026; Pedersen, 2014). Gang-involved youth appear to be distinguished less by unique risk factors than by the intensity and accumulation of risks across domains (Esbensen et al., 2009). Residential segregation, concentrated disadvantage, weak informal social control, and local gang presence are also consistently identified as risk factors in the literature, as they shape the opportunities and social environments youth are exposed to (Johnson & Mendlein, 2022; for a review see Ciurbea & Cavanna, 2021; García-Rojo et al., 2025). These community conditions may therefore be important for understanding youth gang involvement, yet they remain understudied in the Nordic context.

Drawing on the framework and research reviewed above, we hypothesize that (H1) first- and second-generation immigrant youth have a higher probability of youth street gang involvement than native youth. We further expect that factors representing different domains of marginalization will be associated with gang involvement: (H2) social marginalization, including (a) perceived discrimination, (b) violent hate crime victimization, (c) weak school attachment, and (d) weak societal attachment; (H3) family adversity, including (a) socioeconomic disadvantage, (b) family strain, and (c) low parental supervision; and (H4) criminogenic community context, including (a) concentrated disadvantage, (b) social disorder, and (c) weak informal social control.

4. Methodology

Data and Participants

The data were collected as part of the fourth wave of the International Self-Report Delinquency Study (ISRD4) in Iceland, targeting students aged 13 to 17 in the greater Reykjavík capital area. We used stratified random sampling, with classes selected based on grade and geographic municipality. Surveys were administered in classrooms between October 2022 and February 2023, with students completing the questionnaire online using iPads in either Icelandic or English. Participation was voluntary and anonymous. The final sample included 3,036 students from 171 classes in 59 schools, yielding a response rate of 82%. The analytical sample is limited to 2,706 students across 53 schools due to

missing values on key variables, with listwise deletion in the final multivariate models further reducing this to 2,498 observations. School group sizes range from 9 to 228 students, with an average of 51.1 per school.

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Measures

Outcome

Youth street gang involvement was measured using the Eurogang operationalization (Weerman et al., 2009). Participants were asked the following questions: 1) Some people have a group of friends they spend time with, whether they are doing something specific or just hanging out. Do you have such a group of friends? 2) Does this group of friends spend a lot of time together in public places, such as parks, open fields, shopping areas, or in the neighbourhood? 3) How long has this group existed? 4) Is it accepted within the group, or considered okay, to do things that are illegal? 5) Do people in your group of friends do illegal things together? Students were coded as gang-involved if they answered all questions affirmatively and reported that the group had existed for at least three months.

Table 1 compares this behavioural measure with self-identification, i.e. whether respondents described their group of friends as a gang. Overall, 6.2% met the Eurogang criteria and 4.5% self-identified as gang members. The two measures overlapped only modestly: of the 168 youth meeting the Eurogang criteria, 14.9% described their group as a gang, and of the 122 who self-identified, 20.5% met the Eurogang criteria ($n = 25$ met both). This is consistent with previous European findings that adolescents in groups fitting the Eurogang definition often do not self-identify as gang members (Esbensen & Weerman, 2005; Pedersen, 2014).

A higher proportion of youth meeting the Eurogang criteria reported serious offending than among those who self-identified as gang members (29.2% vs. 18.0%), and the Eurogang measure identified a larger share of all serious offenders in the sample (23.9% vs. 10.7%). These findings provide support for the Eurogang operationalization as a behavioural measure of youth street gang involvement that identifies a group characterized by comparatively high levels of serious offending.

Table 1. Comparison of the Eurogang and self-identifying measures of youth street gang involvement

Youth gang criteria:	n	% of total sample	% serious offenders within group	% of all serious offenders identified
Eurogang	168	6.2	29.2	23.9
Self-identified	122	4.5	18.0	10.7

Predictors

Participants who reported that they and at least one parent were born outside Iceland are categorized as *first-generation immigrants*. Youth born in Iceland with at least one parent born abroad are defined as *second-generation immigrants*. Native youth were defined as adolescents with two parents born in Iceland, regardless of adolescent's own place of birth.

Perceived discrimination was measured as the average of two items: The group to which I belong is being discriminated against and If I compare the group to which I belong with other groups in this country, I think we are treated unfairly. *Violent hate crime victimization* was coded 1 for respondents who reported ever having been threatened with violence or physically assaulted because of race, ethnicity or nationality, religion, gender identity, sexual orientation, or a similar characteristic, and 0 otherwise.

School attachment was measured as the mean of three items assessing whether respondents would miss their school if they moved, liked going to school most mornings, and found their classes interesting ($\alpha = 0.72$). *Societal attachment/belonging* was measured as the mean of three items assessing the extent to which respondents felt part of the country, their neighbourhood, and their city ($\alpha = 0.90$).

Family socioeconomic status (SES) was measured with a single item asking respondents which description came closest to how they felt about their household income, with responses ranging from finding it very difficult to live on the present income to living comfortably. *Family strain* was measured as the sum of six dichotomous indicators of family problems, including parental alcohol or drug problems, repeated serious conflict or physical fighting between parents, and parental separation or divorce. *Parental supervision* was measured as the mean of four items assessing whether an adult at home knew where respondents were, what they were doing, which friends they were with when they went out, and what they did on the Internet ($\alpha = 0.77$).

Community context

To capture community context, we aggregated individual-level measures to the school level. In the Icelandic context, school districts provide a meaningful approximation of neighbourhood communities, as most children attend their local public school based on residence. Students attending the same school therefore generally reside within the same geographical area, and previous research has used school-level data to capture neighbourhood characteristics in Iceland (Bernburg and Thorlindsson, 2005, 2007; Valdimarsdóttir & Bernburg, 2015). We therefore interpret the aggregated school-level measures as indicators of community context, while recognizing that school districts approximate rather than precisely define residential neighbourhood boundaries.

We selected school-level indicators reflecting community conditions described by Vigil (2002) and informed by social disorganization theory (Shaw and McKay, 1942). The school-level indicators comprised mean family SES,

family strain, and parental supervision; student-reported school disorder and neighbourhood crime aggregated to the school level; and the proportion of first-generation immigrant students in each school. Ethnic heterogeneity and immigrant concentration may weaken neighbourhood-based ties and normative consensus. Although immigrant concentration is not inherently criminogenic, linguistic and cultural differences, particularly when combined with socioeconomic disadvantage and marginalization, may make it more difficult for parents and other residents to coordinate informal social control over young people in the neighbourhood (Sampson and Groves, 1989; Valdimarsdóttir & Bernburg, 2015).

An exploratory factor analysis was conducted across schools using principal-factor extraction and oblique oblimin rotation. Two factors emerged. Factor loadings are reported in parentheses. The first, labelled *concentrated disadvantage*, was characterized by higher average family strain (0.58), lower average family SES (0.53), and a higher proportion of first-generation immigrant students (0.51). The second factor, labelled *social disorder and weak informal control*, was characterized by higher neighbourhood crime (0.74), higher school disorder (0.72), and lower average parental supervision (0.49). Factor scores for both dimensions were generated and used as school-level predictors in the multilevel models.

Controls

Age and gender were included in all models. Females were coded 1, and males and non-binary youth were coded 0. The final model additionally included serious lifetime offending and self-control. These variables were introduced only in the final model because offending is partly embedded in the behavioural definition of gang involvement, creating a risk of overcontrol if delinquency-related characteristics are adjusted for from the outset. *Serious lifetime offending* was coded 1 if respondents reported ever engaging in at least one serious offence, including burglary, motor vehicle theft, robbery, serious violence, group fighting, weapon-related assault, or drug selling. *Self-control* was measured using six impulsivity and risk-seeking items on a five-point scale ($\alpha = 0.81$), reverse-coded so that higher scores indicate greater self-control (Gottfredson & Hirschi, 1990). Unless otherwise noted, Likert-scale measures ranged from 1 (fully disagree) to 5 (fully agree). See Marshall et al. (2022) for further information on ISRD4 measures. Descriptive statistics for all study variables are presented in Table 2.

Table 2. Descriptive statistics for study variables

	Mean	SD	Min	Max
Outcome				
Youth street gang involvement	0.06		0	1
Immigrant background				
First-generation	0.07		0	1
Second-generation	0.14		0	1
Social marginalization				
Perceived discrimination	2.08	0.96	1	5
Violent hate crime victimization	0.10		0	1
Societal attac. /Sense of belonging	3.94	1.00	1	5
School attachment	3.44	0.80	1	5
Family adversity				
Family SES	3.70	0.54	1	4
Family strain	1.10	1.20	0	6
Parental supervision	4.02	0.80	1	5
Controls				
Females	0.48		0	1
Age	14.57	1.14	13	17
Serious lifetime offending	0.08		0	1
Self-control	3.04	0.75	1	5
Neighborhood/school characteristics				
Concentrated disadvantage	0.00	1	-1.41	3.59
Social disorder and weak informal controls	0.00	1	-2.71	2.11

Note. For dichotomous variables, means represent proportions; standard deviations are not reported.

Analytical Strategy

Given the hierarchical nature of the data, with students nested within classes and schools, multilevel mixed-effects logistic regression models (melogit in Stata) were used. This approach accounts for the fact that adolescents attending the same school may share characteristics and contextual influences, meaning that observations cannot be assumed to be independent. Robust standard errors were estimated using the vce(robust) option.

We first estimated an unconditional model to assess between-school variation in youth street gang involvement. The model yielded a school-level variance of 0.084 and an intraclass correlation coefficient (ICC) of 0.025, indicating modest clustering of gang involvement within schools. The multilevel specification also allows school-level contextual characteristics to be examined alongside individual-level predictors. Results are reported as odds ratios with 95% confidence intervals.

5. Results

We begin by examining the unadjusted prevalence of youth street gang involvement across immigrant generations. In the total sample, 6.1% of native Icelandic youth reported gang involvement, compared to 4.4% of first-generation immigrants and 7.9% of second-generation immigrants. These differences were not statistically significant ($\chi^2 = 2.96$, $p = 0.23$). Table 3 presents the results from the multilevel logistic regression models. Consistent with the descriptive findings, immigrant status is not significantly associated with youth gang involvement. In Model 1, after accounting for the other individual- and family-level factors included in the model, perceived discrimination shows a modest but statistically significant association with gang involvement ($OR = 1.19$, $p < .05$). Violent hate crime victimization is associated with approximately 50% higher odds of gang involvement ($OR = 1.50$), although this association reaches statistical significance only at the 90% confidence level ($p < .10$). Given the relatively small number of gang-involved youth in the sample, estimates are less precise and confidence intervals are relatively wide. Weaker associations should therefore be interpreted cautiously.

Contrary to our initial hypothesis (H2d), a sense of belonging to society is also positively associated with gang membership ($OR = 1.19$, $p < .05$). Family strain and parental supervision are both strongly correlated with youth gang involvement. A one-unit increase in family strain is associated with a 26% increase in the odds of involvement ($OR = 1.26$, $p < .01$), while parental supervision acts as a protective factor, with a one-unit increase associated with a 57% reduction in those odds ($OR = 0.43$, $p < .01$). Family SES is not significant. Notably, neither age nor gender emerged as significant predictors in Model 1. While studies using registered police data of more organized gangs typically show that gang members are predominantly male (e.g. Rostami et al., 2012), school-based self-report studies tend to find smaller gender differences (e.g., Baz Cores et al., 2025; Yiu and Gottfredson, 2014). Pedersen (2014), for example, found that one third of youth meeting the Eurogang criteria in Copenhagen were female, while Kaakinen et al. (2026) found no significant gender difference across nine Nordic cities using the same operationalization.

In Model 2, school neighbourhood-level variables are added to the model. Concentrated disadvantage is not significantly associated with gang involvement, but the social environment of the school neighbourhood is. Even accounting for individual-level factors, residing in an area characterized by social disorder and weak informal control significantly increases the odds of gang membership ($OR = 1.21$, $p < .05$), suggesting that community context has an independent association with youth gang involvement.

We additionally control for self-control and serious lifetime offending in Model 3. These are included with caution to avoid circular reasoning, as the gang measure itself includes offending. Even so, family strain ($OR = 1.19$, $p < .05$) and parental supervision ($OR = 0.52$, $p < .001$) remain significant. This

indicates that the role of family context in youth gang involvement in Iceland may extend beyond its association with general delinquency and low self-control. Other variables in the model are, however, no longer significantly related to youth gang involvement.

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Table 3. Multilevel logistic regression estimates for youth street gang involvement

		Model 1		Model 2		Model 3	
Level		OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value
Individual-level characteristics (Level 1)	Immigrant background						
	First-generation	0.58 (0.22-1.54)	.275	0.52 (0.21-1.29)	.157	0.63 (0.26-1.52)	.302
	Second-generation	0.99 (0.70-1.41)	.957	0.96 (0.68-1.36)	.818	1.04 (0.69-1.57)	.835
	Social marginalization						
	Perceived discrimination	1.19 (1.00-1.40)	.049	1.17 (0.98-1.39)	.079	1.08 (0.91-1.27)	.391
	Violent hate crime victimization	1.50 (0.94-2.38)	.085	1.53 (0.97-2.43)	.070	1.26 (0.76-2.08)	.373
	Societal attac./Sense of belonging	1.19 (1.00-1.40)	.045	1.20 (1.01-1.43)	.039	1.15 (0.96-1.37)	.127
	School attachment	1.06 (0.88-1.29)	.542	1.10 (0.90-1.34)	.356	1.14 (0.95-1.38)	.150
	Family adversity						
	Family SES	1.08 (0.82-1.42)	.598	1.10 (0.84-1.46)	.483	1.12 (0.85-1.48)	.416
	Family strain	1.26 (1.08-1.47)	.004	1.26 (1.07-1.47)	.004	1.19 (1.01-1.41)	.041
	Parental supervision	0.43 (0.36-0.52)	<.001	0.44 (0.36-0.53)	<.001	0.52 (0.43-0.64)	<.001
	Controls						
	Females	0.92 (0.65-1.31)	.654	0.94 (0.66-1.34)	.737	0.98 (0.68-1.41)	.904
	Age	0.96 (0.83-1.11)	.610	0.94 (0.81-1.09)	.434	0.94 (0.80-1.09)	.407
	Serious lifetime offending					2.68 (1.69-4.28)	<.001
	Self-control					0.50 (0.40-0.63)	<.001
Neighborhood/school characteristics (Level 2)	Concentrated disadvantage			1.11 (0.92-1.33)	.275	1.07 (0.89-1.28)	.469
	Social disorder and weak informal controls			1.21 (1.00-1.46)	.045	1.16 (0.95-1.42)	.146
	Random effects						
	Between-school variance (σ^2)	<.001		<.001		<.001	
	Model fit						
	Wald χ^2	182.62	<.001	227.65	<.001	362.71	<.001

6. Discussion

This study examined street gang involvement among adolescents in Iceland. Using the Eurogang operationalization, we tested several hypotheses derived from Vigil's (1988, 2002) theory of multiple marginality. At its core, the theory

proposes that gang involvement develops in the context of marginalization across multiple and potentially interconnected domains of young people's lives, including their social, family, school, and community environments. The present study does not directly test how these forms of marginalization accumulate or interact. Rather, the framework was used to identify and organize conditions across these domains that may be associated with youth street gang involvement in the Icelandic context. The findings provide support for some of these expectations, but not others.

While Nordic and other European research has documented the prominence of young immigrant and ethnic-minority men in gangs (e.g., Decker et al., 2009; Rostami et al., 2012; Tutenges et al., 2026), the present study did not find a discrepancy in youth street gang involvement by immigrant background (H1). This difference may partly reflect the populations being studied. Both Nordic ethnographies and studies using official data tend to focus on older and more deeply criminally involved groups, whereas the present study captures a school-based adolescent population. Previous research also indicates that whether immigrant youth have a higher risk of gang involvement than their native peers is context-specific. For example, using a self-report survey of middle school students in 19 European countries, Haymoz et al. (2014) found that immigrant background was associated with street gang involvement in Sweden but was not significantly associated with gang involvement in many other countries.

The findings provide a partial support for hypotheses concerning social marginalization (H2). Perceived discrimination and having experienced violent hate crime victimization were both associated with increased risk of youth reporting involvement in street gangs. Although our estimated associations were somewhat imprecise, with relatively wide confidence intervals, these findings are consistent with previous studies on adolescent gang involvement (Johnson & Mendlein, 2022; Yiu & Gottfredson, 2014). The results in this study indicate that school attachment is not a factor impacting whether young people are involved in street gangs.

We also hypothesized that weaker attachment to society more broadly would be associated with gang involvement, consistent with Vigil's emphasis on social marginalization and exclusion from conventional social institutions. One of the unexpected findings, however, was a positive association between sense of belonging and gang involvement, which contrasts with criminological research where social attachment and belonging are generally viewed as protective factors against delinquency (e.g., Johnson & Mendlein, 2022). One possible interpretation is that street-oriented groups provide some marginalized youth with social identity, recognition, and a sense of community (Tutenges et al., 2026). However, the measure of belonging captures belonging to the country, neighbourhood, and city rather than to the gang itself, and the cross-sectional data cannot establish whether gang-involved youth experienced weaker belonging before becoming involved.

Importantly, the cross-sectional design used in the current study limits our ability to draw causal conclusions. For example, although discrimination and victimization may increase the likelihood of gang involvement, gang membership itself is likely to be associated with exposure to victimization and conflict (Melde & Esbensen, 2012; Pyrooz et al., 2016). This is consistent with Nordic qualitative work describing street-criminal environments as social spaces where marginalized individuals find community, recognition, and alternative status, while also facing insecurity, violence, and exploitation (Hedlund, Wästerfors et al., 2026; Lalander & Sernhede, 2011; Tutenges et al., 2026). Longitudinal data would be needed to disentangle these processes more clearly.

The findings provide clearer, although still partial, support for the hypothesis concerning family adversity (H3). Family strain was consistently associated with youth street gang involvement, while parental supervision appears to be strongly protective. Both relationships remained after accounting for low self-control and serious offending, suggesting that family context is relevant beyond its association with more general individual risk factors. Family SES, however, was not associated with gang involvement. This contrasts with previous Icelandic and Nordic research showing socioeconomic differences in adolescent delinquency more generally (Knaappila et al., 2019; Sariaslan et al., 2014; Valdimarsdóttir & Bernburg, 2015). The present findings may therefore suggest that, when it comes specifically to street gang involvement, relational and supervisory aspects of family life are more salient than socioeconomic position itself.

Community context also appears to matter for youth street gang involvement. Social disorder and weak informal social control were associated with gang involvement, whereas concentrated disadvantage was not, providing partial support for H4. In the Icelandic context, this suggests that the social organization of local environments may be more relevant than socioeconomic disadvantage itself. This pattern can also be understood in relation to Cloward and Ohlin's (1960) theory of differential opportunity, which emphasizes that delinquent involvement depends not only on motivation or strain but also on access to illegitimate opportunities. Even within a comparatively affluent welfare society, local disorder may facilitate gang involvement by making delinquent networks and opportunities more visible and accessible, while weak informal social control reduces the social constraints that might otherwise limit such involvement (Valdimarsdóttir & Bernburg, 2015).

A few additional methodological limitations should be noted. Although the Eurogang approach improves comparability with European research, defining and measuring youth gangs remains difficult in contexts where groups are informal and fluid. The criteria also emphasize street-oriented groups and may miss forms of youth group offending that are formed, organized, or carried out primarily online. Contemporary processes of group formation and conflict may increasingly take place through digital platforms, where young people can establish group identities, engage in conflicts, and even offend together

without regular face-to-face interaction. In addition, because the study is based on a school survey, adolescents absent during data collection were not included and, given the association between gang involvement and school disengagement, highly involved youth may be underrepresented (Ang et al., 2015; Connolly & Jackson, 2019).

These measurement challenges also point to important directions for future research. In-depth qualitative research in Iceland could provide a better understanding of how young people perceive and describe the groups in which they participate, how such groups form and change over time, and how street-based and online interactions intersect. Combined with longitudinal research, this would provide a more complete understanding of both the processes leading to gang involvement and its consequences. Future research could also examine whether these processes differ by gender, particularly given that the absence of an overall gender difference in the present study contrasts with the much stronger male predominance typically found in studies based on official data (e.g. Rostami et al., 2012).

In sum, this study provides one of the first empirical examinations of youth street gang involvement in Iceland and adds to the comparative literature from the Nordic countries. The findings caution against explanations that link gang involvement directly to immigration and poverty, and instead indicate that experiences of discrimination and victimization, family strain, low parental supervision, and socially disorganized environments are associated with youth gang involvement. Understanding why young people become involved in gangs is important because gang involvement may itself become a negative turning point, reshaping peer networks, routines, and social bonds in ways that reinforce offending and contribute to adverse outcomes later in life (Connolly & Jackson, 2019; Gilman et al., 2014; Krohn et al., 2011). From a policy perspective, the findings therefore point to the importance of early prevention that strengthens family support, social inclusion, and access to prosocial opportunities.

Kontaktoplysninger

Margrét Valdimarsdóttir: margretva@hi.is

Áróra Sigurbórsdóttir: ars86@hi.is

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