

Sex composition in gangs: a systematic review

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ABSTRACT

The presence of women and girls in gangs has been heavily debated since the onset of recognition of their roles outside of associative and sexual capacities. Despite the subsequent centering of female gang members in research as a result of feminist waves of scholarship, information pertaining to just how many female gang members there are is extremely varied. Official records tend to underestimate their numbers more than self-nomination data, but studies that track self-nomination data are also disparate. I conducted a systematic review on 122 publications about gangs in order to track within-gang female composition, the proportion of females and males that are gang members in comparison to reference groups, and the relative risk of gang membership by sex. Consistent with trends found previously by individual studies, females, on average, had a lower risk of being a gang member as compared to men— within-gang female composition and sex proportions supported this. While official report type data reported lower female composition and proportions across the board, the difference was not significant. The age of gang members by sex varied, though female composition, proportion, and relative risk were higher at earlier ages (11-12) than at later ages (18+). While further meta-analysis should be pursued, these results suggest that while females have a lower risk of being a gang member than males, this gang membership seems to correlate with lower ages and should be explored further.

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INTRODUCTION

Despite a large body of data analyzing gender data for gangs, no determinate conclusion has been reached with regard to just what proportion females make up. While some studies posit that less than 2% of gang members are female (Tostlebe et al. 2021), others see gang membership as high as 45% (Esbensen and Carson 2012). These trends seem to follow age, with girls joining gangs earlier than boys (Bell 2009; Chesney-Lind et al. 1995; Esbensen and Huizinga 1993) and leaving earlier (Esbensen and Huizinga 1993), though reasons behind this have yet to draw an accepted conclusion. While a wealth of knowledge has been acquired from gang members, much of the samples garnered from these have been too small to measure significance by themselves. Methods of conglomerating smaller data, such as systematic reviews and meta-analyses, have been utilized by the medical field (Garg, Hackam, and Tonelli 2008), but have been expanded into criminology as well (Wilson 2001), where they have been used to determine whether criminological factors (such as risk factors) and criminal behavior have a relationship significant enough to warrant theoretical explanation. These techniques are known for their ability to reduce sampling bias, an issue that has plagued researchers for as long as research has been produced. Because individuals who commit crime do so presumably out of the public eye, there is no organized list of all people who shoplifted at the local convenience store last weekend. Many researchers have to find their samples from word-of-mouth or snowball sampling. These common sampling biases are where systematic reviews and meta-analyses come in.

In this study, I attempt to bring together all of the published research on the topic in order to find a more determinate answer on just what gender composition looks like in gangs, as well as how age impacts it. In order to do so, I quantify numbers reported by various publications to calculate sex proportions, subsequent risk ratio, and within-gang female composition. I also

examine disparities that exist between official report data and self-nomination data (Curry 1997; Esbensen and Winfree 2020), where females—as well as youth-- tend to be underrepresented by data from official reports, such as prison and law enforcement data. Consistent with many publications that examine gangs and gang members, I use a social scientific approach for my methodology, as its specialty lays in social patterns and behaviors. I will first establish a methodological framework based on the work of Pyrooz and Mitchell (2015) as well as Gravel (2023) by which studies will qualify for examination, as well ensuing exclusion factors. Where most systematic reviews present data in a more qualitative manner, I will use descriptive statistics to summarize information due to the massive wealth of datasets I collected. Finally, I'll discuss the theoretical interest that can be assembled from the data as well as suggestions the reader can take away from it.

It's important to note that every study within this systematic review examined sex or genders that exist within a binary (hereafter referred to as solely “sex” unless gender is more applicable) and that studies which may qualify for examination but fail to accurately report, or report at all, pertinent demographic information were excluded without contacting the authors' due to the 8 month time limit on this project.

LITERATURE REVIEW

WOMEN AND GIRLS IN CRIME

The role of women and girls in crime has been historically overlooked and oversimplified in criminological research, which often paints them as solely victims of crime or as an accessory to a male-led criminal act. Where solo female criminality has been acknowledged, it was seen as an expression of masculinity, or to put it simply, stepping into the shoes of men (Miller 2002)¹.

These assumptions have been scrutinized alongside waves of feminist scholarship in criminology, most notably beginning in the second wave feminism of the 1960s², where notions of how and why women and girls commit crime were recognized as increasingly complex—where female criminality holds agency outside the frameworks created by and for men (Heidensohn 2012). More recent research recognizes the crimes committed by women and girls to be similar to crimes committed by men and boys; a major difference lays in the history of victimization that seems to be exacerbated in females as compared to males. In a later section, I will establish the parallels between broader female criminality and scholarship on gangs, often where deviance and criminal behavior characterize an integral part of group behavior.

It is crucial to note that race, class, and gender are inextricably linked (Penner and Saperstein 2013)³, and analysis on gendered behaviors is incomplete without acknowledging the specific expectations and definitions marginalized people must navigate and are forced to

¹ It is to be noted that more recent scholarship concerned in ameliorating these issues have focused on centering women and queer individuals to paint a more complete picture about how gender and sexuality informs delinquency (Asquith, Dwyer, and Simpson 2017; Panfil 2014, 2017; Peterson and Panfil 2014; Stewart-Winter 2015; Totten 2012).

² It was with second-wave feminism that women secured a role in masculine academia, and the idea that men and boys were the “normal subjects” was placed under scrutiny (Messerschmidt 1993:196).

³ Interestingly, this study provides evidence that identification of race, sex, or class is influenced by an evaluator’s perception of their race, sex, and class. For example, an individual is more likely to be evaluated as black if they have been imprisoned before, but only if they are male.

characterize (Coston and Kimmel 2012; Messerschmidt 2002)⁴. Further in this section, the idea that individuals may participate in gang behaviors in order to “do gender”, or fulfill gendered expectations society has placed on them (think women giving birth and men making lots of money), will be discussed. Gang members tend to characterize a particularly marginalized segment of society⁵, and no discussion of their gendered behaviors is complete without recognition that race, gender, and class are all part of the same “social existence” — you cannot look at a Black woman without looking at the social fact that she is both Black and female (Messerschmidt 2002). The racial compositions of gang members are as varied as their location (Esbensen and Winfree 2020), though it has been seen that racial and ethnic minorities remain in gangs for longer periods of time (Klein and Maxson 2006; Pyrooz 2013). This phenomenon is often attributed to disadvantages concerning prosocial networks to legitimate institutions to which their white counterparts often have access. The economic disadvantage often experienced by gang members will be discussed along gendered lines later in this section.

Sex differences in offending

Crime has been historically and overwhelmingly male dominated. By this, I mean that males commit more of every type of crime than females (Leote de Carvalho, Duarte, and Gomes 2021; Steffensmeier 1980) – with the exception of acts such as abortion and infanticide (Cossins 2015). The strongest predictor of crime we have is sex, followed less closely by age⁶. Despite this,

⁴ Evidence has been presented that individuals of lower socioeconomic status, immigrant status, and individuals that are male and nonwhite express masculinities -- are interpreted by a white middle class – that are rooted in systems of inequalities and are therefore different from normative masculine expectations (Cheryan et al. 2019; Geoffery 2019).

⁵ It is *crucial* to note here that while socioeconomic status has been evidenced to be an overwhelming predictor of criminality and gang membership, it is not required for either.

⁶ Age has been seen to correlate with a phenomenon dubbed the “age crime curve”, where criminality peaks in adolescence.

female criminality follows male trend patterns. A study done with nearly nine thousand youth found that both males and females report offending more in adolescence and less in adulthood, though the curve flattens for women pertaining to arrest records⁷ (Liu 2015).

So, do the types of crimes an individual may commit vary on the basis of sex? Males and females both commit more petty crime and less serious crime, but the gap in sexed offending is diminished pertaining to property offenses (Steffensmeier 1980) and drug crime (Proctor 2004; Steffensmeier and Allan 1996). Of women who participate in offenses, a disproportionate number have been found to be concurrently involved in drug offenses (Janeksela 1997). In many cases, female criminality has been found to correlate closely with drug use (Bernard 2013; Jones 2008; Proctor 2004).

This shift provides an antithesis to Adler's (1975) influential paper. Her work formed along second wave feminism in a surge of interest in women's criminality in the 60s and 70s, and she theorized a potential shift toward female participation in violent crime alongside women's liberation movements. Adler's claim came from the elevation of female crime trends at the time—female criminality, in almost every single major crime, was increasing at a rate that far surpassed the growth of male criminality. She associated this trend with the expansion of a woman's role in society and a blurring between masculinities and femininities within crime. Despite its wide recognition even today, Adler's idea stood at odds with the ideas of other scholars at the time of its publishing. Though Simon and Sharma (1979) found an increase in female white-collar crime, they noted an overall drop in female criminality. And, as stated above, Steffensmeier's (1980) assertion that female criminality was increasing in a specifically

⁷ This seems to be concurrent with the sex disparity reported between self-report crime and crime officiated by law enforcement sources, where females are reported to commit crimes to a lesser degree than their self-report data suggests.

gendered capacity stands in contrast to Adler's assumptions. As will be discussed in later sections, interest in female criminality around this time bled (albeit slowly) into gang scholarship, with scholars like Meda Chesney-Lind identifying and linking ethnographic research between female gang members and broader female criminality in order either to reconcile or to dismiss stereotyped ideas of the time (Chesney-Lind 1993; Daly and Chesney-Lind 1988).

One of these trends will be past victimization; women and girls within the legal system tend to characterize a slightly different picture than men and boys do. While both sexes within the legal system disproportionately represent a minority race and/or ethnicity, lower socioeconomic status, and poor education and under/unemployment status, women report *significantly* more rates of prior abuse and victimization (Bernard 2013:20; Gilfus 2002; Janeksela 1997; Mallicoat 2018; Steffensmeier and Allan 1996; Widom and Osborn 2021), especially women within prison systems.

WHAT ARE GANGS?

The definition of a "gang" has been hotly debated since the onset of research on the subject. Prior to the 1950s, referred to as the "golden era" of gang scholarship (Decker and Pyrooz 2015), gangs were often thought of separate from the idea of delinquency, and research was largely reflective of etiological interests (Fagan 1989). Potentially due to gangs' subsequent association and significance within the criminal justice system, criminality became integral to many ideas of what a "gang" in the decades following.

One of the first definitions of gangs comes from Thrasher's 1927 study of over a thousand gangs in Chicago, where gangs are categorized as an "interstitial" group formed

spontaneously and “integrated through conflict”, often in areas of transition where formal controls have broken down (Thrasher 1927). His ideas were perhaps in tandem with Chicago criminologist Ernst Burgess, who similarly attributed crime to areas of transition and the absence of social adhesion (1928). A highly disagreed upon sector of definitive gang definitions is criminality as an integral part of the group dynamic or identification. Some scholars argue that gangs facilitate but do not require crime, while others posit that criminal behavior is necessary to distinguish gangs from other social groups (Decker, Pyrooz, and Densley 2022).

One of the most influential definitions this-far has been the standards set forth by the Eurogang Program of Research (Esbensen and Maxson 2012; Weerman et al. 2009), where gangs are “durable” (extant for at least 6 months) and “street oriented”, and further, criminal delinquency characterizes an integral part of the group identity. Of course, in almost all these definitions, youth are the participatory age group of gangs. Given that most gang scholarship has been done within the United States⁸, “youth” is often assumed to mean individuals are under the age of 18. The Eurogang definition has been crucial in gang research for many reasons, one of them being the variability in cultural meanings behind the word “gang”. Because of this, asking individuals whether they are a part of a gang may be insufficient, and criteria are often established instead (seen in Blaya and Gatti 2010). _____

WOMEN AND GIRLS IN GANGS

Historically, women and girls have been overlooked by gang scholars⁹; research showing the reality of their numbers and the degree of their participation in gangs has been a more recent

⁸ Gang scholarship took what has been called the “International Turn” around the year 2000, with many scholars noting the Eurogang definition as the characterizing theme (Pyrooz and Mitchell 2015a).

⁹ Centering female gang members gained precedence in the 1970s and 1980s with scholars like Meda Chesney-Lind (1988), Freda Adler (1975), and Darrell J. Steffensmeier (1980).

event. While it is possible that women's existence in gangs could have grown over time, many scholars note the likelihood that low numbers in decades previous could be due to researchers ignoring or failing to recognize women and girls as legitimate members of gangs (Esbensen and Winfree 2020). The debate on whether women and girls are merely auxiliary members or associates to gang members has been largely resolved with the findings that gang girls both commit all the forms of illegal activity gang boys do, though to a lesser extent, and that gang girls are significantly more delinquent than non-gang boys both in the United States and Europe (Esbensen and Weerman 2005; Esbensen and Winfree 2020).

Does “doing gender” matter?

The extent to which females participate in “masculine” practices in the gang, such as violence, varies by gang sex composition. In mostly male gangs, girls tended to be just as delinquent as boys (Peterson, Miller, and Esbensen 2001)—consistent again with a European sample of gang members (Weerman 2012). Female gang delinquency has been seen to correlate with gender composition within gangs, with females gang members in mostly male gangs reporting higher delinquency than female gang members in gender balanced or mostly female gangs (Peterson et al. 2001). This phenomenon, sometimes described as “masculinization”, causes a definitive increase in the likelihood of violent victimization for women in gangs (Lauritsen, Sampson, and Laub 1991; Miller 2001). Criminologists have theorized the importance of “doing gender” on the motivations of gang membership for individuals, in other words, consider how an individual's characterization and deployment of normative behaviors and expectations based on their gender influences their decision to join gangs. Just how these dynamics work in gangs with varying gender compositions is still a subject of debate; often,

these arguments revolve around gang girls embodying masculinity in order to fit into a more dominant male gang culture (Kanter 1977; Peterson et al. 2001). Overall, female and male motivations for joining gangs overlap in almost all capacities, including for friends, fun, protection, status, and a sense of belonging or family (Esbensen, Deschenes, and Winfree 1999; Thornberry et al. 2003). Sexed roles for women and girls have been explored in gang literature for decades. A common trope they fulfil is the role of a “sex object”¹⁰ for male gang members (Campbell 1990), but more recent work has found that women do not often have a sole role as a sexual object; a more recent study on the subject found that few women in gangs reported having that role at all (Sutton 2017).

As with criminology as a broader subject, researchers tend to view female gang members through terms of male gang membership. Many theories of gang membership variance by sex attempt to explain male gang members through terms of masculinity and female gang members through terms of both, or either, masculinity and femininity. In these assumptions, the motivating factors – the explanation women give for joining gangs – are either to embody masculinity for protection and respect (Cohen 1955) or, in contrast, to exhibit a new form of femininity, such as “bad girl” femininity (Messerschmidt 1993; Miller 2001) or “tomboy” femininity (Leote de Carvalho et al. 2021). Both gang joining and desistance from gangs have been viewed through terms of gender and sex; many prolific authors attribute certain motivations for joining and leaving gangs to the desire to seek hegemonic (most culturally prevalent and preferred) expressions of masculinity through either legitimate or illegitimate means (Acaba 2014; Anderson 2009; Haley 2013; Hughes, Botchkovar, and Short Jr 2019; Liverso and Hess 2021).

¹⁰ This idea is often used in tandem with the idea of “sexing in”, where females can join gangs in alternate ways to males, and as a consequence are at risk of being labeled a “sex object” by women and men in their gang (Quinn et al. 2019).

This assignment of “doing gender” on criminality has been discussed in broader criminological circles, as well (Bufkin 1999). The largest critiques of these ideas is first that they tend to ignore the complexity of female agency in different social contexts, and second that gendering their participation in gang behaviors is simply empty tautology describing anything a female does (or is supposed to do) as feminine and anything a male does as masculine (Miller 2002)¹¹. More recent critiques note that the idea of using gangs to achieve masculinity, where a gang is a hypermasculine vehicle, fails to recognize that masculinity is a deviant trait for women to exhibit (Moore and Stuart 2022). The concept where individuals seek gang membership or gang desistance as a method of “doing gender” will be discussed further later in this section, as it is pertinent to the age at which an individual may join or leave a gang.

Gang membership tends to be a relatively short endeavor adolescents partake in, regardless of sex. Scholars have identified several different trajectories gang memberships follow, the two most common being adolescence-limited (peak membership at around age 14) (Esbensen and Huizinga 1993; Thornberry et al. 1993) and late adolescence (peak membership at around age 17) (Decker et al. 2022). Gang membership tends to be brief; Decker, Pyrooz and Densley note in their analysis of 9 studies that gang exiting usually takes place within three years of joining, with approximately half of individuals leaving a gang after about one year of membership (2022).

Sex differences in gang membership: gender composition and report type disparities

Female participation in gangs follows many of the trends displayed in broader female criminality, including gender composition and relative risk, where more gang members are males

¹¹ A defense against this critique notes that the tautology is made valid by the assumption that individuals exhibit behaviors and characteristics *at risk of being assessed* as masculine or feminine (Messerschmidt 2002).

(Klein and Maxson 2006) and a higher proportion of males join gangs compared to females (Bjerregaard and Smith 1993). Despite this, research shows surprising variance over just how many female gang members there are. One study of seven American cities found female gang membership as high as 45% in youth aged 11 to 12 years, with the proportion plummeting to 31% at ages 15-16 (Esbensen and Carson 2012). Another, an analysis of police gang intelligence lists in St. Louis, found female participation in gangs as low as 2% (Tostlebe et al. 2021).

This discrepancy seems to occur along report-type lines. Data collected by official sources, such as law enforcement agencies, see a lower percentage of females in gangs (Decker, Katz, and Webb 2008; Fox, Lane, and Akers 2010; Kissner and Pyrooz 2009) than does data collected by self-nomination (Esbensen and Carson 2012; Esbensen et al. 1999; Esbensen and Huizinga 1993; Moore 1991). Official report data has been known to produce numbers that stand in stark difference to self-nomination data. Where gang members have been claimed to be largely over the age of 18 through official reports (National Gang Center n.d.), an examination of almost nine thousand students through a self-nomination method found that approximately 80% of gang members joined a gang prior to age 18 (Pyrooz 2014). The age and gender discrepancies between these two data types have been attributed to official report data's simultaneous weight toward both older gang members and gang members involved in more serious crimes (Curry 1997) and disregard of youth who experimented with gang membership at earlier ages and are no longer gang affiliated (Esbensen and Winfree 2020). This presents a particular issue because gang membership has been shown to be consistent with the overall age-crime curve (where crime peaks in adolescence). In addition, gang membership is very instable, with members fluidly entering and exiting gangs (Esbensen and Huizinga 1993; Melde and Esbensen 2014; Peterson, Taylor, and Esbensen 2004; Thornberry et al. 2003). In addition, being a former gang member

itself does not mean an individual has no association to gangs (Pyrooz 2014). Self-nomination, where individuals participating in research elect themselves as gang members through either explicit means or criteria that match the definition of a gang, has become a standard method of measuring gang involvement for which it has demonstrated itself to be a robust indicator of (Decker et al. 2014; Peterson et al. 2001; Webb, Katz, and Decker 2006). Most of the studies included in this systematic review use self-nomination in order to measure gang membership.

Sex differences in gang membership: gang joining and desistance

Existing research has established that women and girls make up a significant portion of gang members, though analysis seeking to measure the proportion of male to female gang members have been extremely variant both within report type (such as within self-nomination data) and between report type (self-nomination vs official report data). It's also known that sex matters in gangs—the world a woman must navigate is impacted heavily by the patriarchal structure she must learn to exist in (Miller and Brunson 2000). In this way, “doing gender” comes to mean the particular methods of navigation an individual partakes in to do this (Bernard 2013). Theories of life changes and desires¹² have been used to explain the rate and degree to which females and males join and leave gangs. For example, theories utilizing “turning points”, or significant events in an individual’s life such as marriage that represent a significant shift between past and future (Sampson and Laub 1997, 2003), note the potential differences that might characterize turning points in a woman’s life as compared to a man’s. Marriage and employment have indeed been evidenced as robust turning points in male gang member’s lives, but this association was not seen for female gang members (Leote de Carvalho et al. 2021). Pregnancy and motherhood are

¹² With this I refer not only to life-course theories (Sampson and Laub 1997, 2003) but also strain theories, where individuals desire to attain legitimate goals, such as marriage.

well-documented as effective gendered exiting strategies unique to female gang members (Belknap and Bowers 2016; Fleisher and Krienert 2004; Hunt, Joe-Laidler, and Mackenzie 2005; Peterson and Panfil 2014; Varriale 2006, 2008), and fatherhood has been seen as a good indicator of desistance for men (Helyar-Cardwell 2012; Leverso and Hess 2021). Gang joining has been described as a turning point by some criminologists, consistent with a large shift in the lives of individuals who join gangs (Melde and Esbensen 2011), though these same studies posit that, due to the lack of an abrupt shift after leaving a gang, gang desistance doesn't necessarily qualify as a "turning point"—again, gang desistance does not always mean gang affiliation disassociation.

Women and girls tend to join gangs earlier (Bell 2009; Chesney-Lind et al. 1995; Esbensen and Huizinga 1993) and leave earlier (Esbensen and Huizinga 1993), though their reasons for joining are usually similar to men and boys. One study found a significant difference in male gang joining with money as a motivational factor (Esbensen et al. 1999), but no other differences were found.

Where little difference has been found between motivating factors between males and females, environment and past victimization has been seen to vary by sex. Bell's (2009) research, which draws upon a nationally representative sample of over eleven thousand 7th to 12th grade students through the National Longitudinal Study of Adolescent Health, found that female gang members reported lower socioeconomic status and neighborhood disorganization as compared to male gang members. Gang girls in this sample were also more likely to have gang-involved family or friends than gang boys, as well as problems within the family such as neglect, lack of supervision, and drug or alcohol addiction. Previous victimization is the most significant trend, seen to span across multiple studies and into broader criminological trends. Gang girls are

significantly more likely to have experienced sexual and/or physical abuse than gang boys (Evans and Mason 1996; Hayward and Honegger 2014; Keogh 2014; Marshall et al. 2015; Miller 2001; Moore and Hagedorn 1996); similarly, girls who reported having previously been sexually abused were less likely to resist gang recruitment (De La Rue and Espelage 2014).

METHODS

I carried out a systematic review as according to the guidelines listed by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 (Page et al. 2021). A systematic review aims to collect all available primary research pertaining to a research question in order to deliver a comprehensive overview thereof. Systematic reviews are useful for conglomerating and comparing answers which have been found in numerous studies from a perspective of minimal bias (Ahn and Kang 2018). For this particular topic, where conclusions are varied, a systematic review is valuable for its ability to increase statistical power through collective analysis. It is to be noted that using primary research which analyses existing datasets presents a unique challenge where data that may technically qualify for the inclusion factors in a systematic review could be excluded due to selection criteria in the primary research study.

The purpose of this systematic review was to compile and analyze all the published datasets that measure gang samples by sex and to note changes in sex composition and risk ratio by age. I analyzed each source's sex composition, within-gang female composition, and if possible, risk ratio, of sex in gangs (discussed further in the data analysis section).

HYPOTHESES

As noted above, the purpose of this systematic review is to measure how the sex composition and sexed risk ratio of gang membership are affected by age. Age, then, becomes the predictor variable and sex composition and/or the risk ratio becomes the outcome variable.

1. There are fewer girls than boys in gangs, regardless of age.

2. Official report data will show a greater sex disparity than self-nomination type data within gangs.
3. Girls enter gangs earlier than boys and leave gangs earlier.

SEARCH STRATEGY

Sample

I used Pyrooz and Mitchell's selection of gang research (2015), expanded by Gravel to the end of 2022 (forthcoming), which collected research pertaining to the advancement of knowledge on gangs (n = 6428, see Figure 1). While this systematic review does not require publications to utilize the Eurogang definition (Weerman et al. 2009), the authors above used its criteria in order to standardize information gathered about gangs as some cultures may not define their deviant youth groups as a "gang".

Data collected from this framework held a significant beginning around 1960 and skyrocketed past the 1990s, where approximately 90% (n = 5857, see Appendix A) of primary research supersedes the year, with sources beginning from 1834. This literature boom is consistent with an increased awareness of gangs in scholarship from the 1950s to the 1970s (Pyrooz and Mitchell 2015b) as well as an accretion of prevalence in the 1990s (Howell 2015).

Phase 1

Subsequent inclusion and exclusion factors were determined based on hypotheses in order to narrow the primary gang research collected. I conducted an initial title and abstract screening from the total 6428 sources (Figure 1). Titles and abstracts were assessed by their measurement of gang members through buzzwords (ex: "Differences between", "Predictors of," "Analysis of")

as well as explicit mentions of methodological measurement of both male and female gang members, erring for inclusiveness. Studies were excluded if they were not published journal articles in order to account for academic rigor and accessibility; theses and dissertations were excluded for these same reasons, in order to standardize for studies that had passed a peer review process. A total of 18 studies were excluded due to inaccessibility, narrowing the result of phase 1 down to 371 publications. The overall methodological process is noted in Table 1. No automation was used during this process.

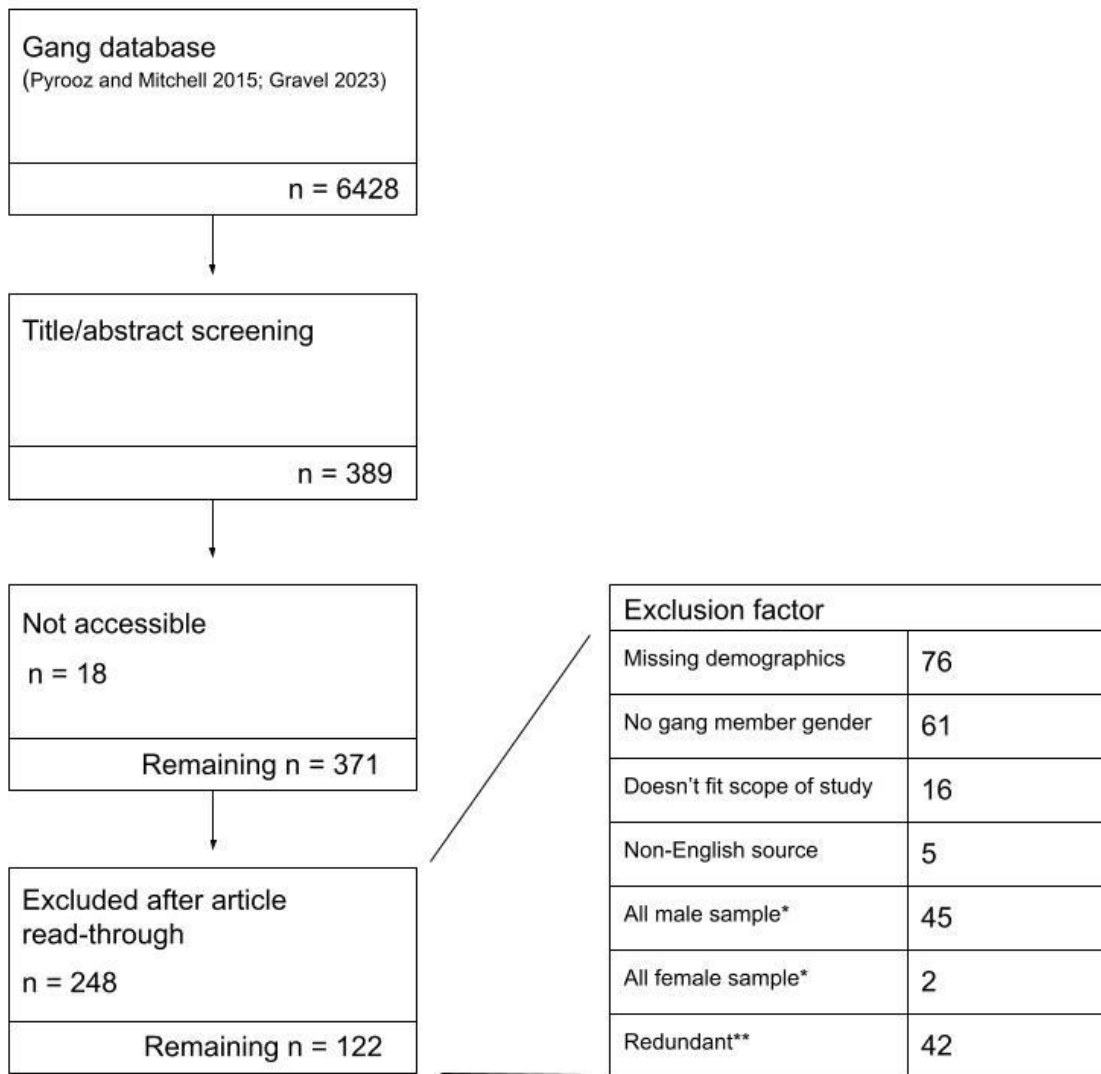


Figure 1. Methodological flow chart for inclusion and exclusion factors. *Initial study excludes a sex category completely from their analysis. **Dataset or datapoint used in another source.

Type	Criterion
Inclusive	Sample measures gang members
Inclusive	Peer-reviewed and published in a journal
Exclusive	Sample excludes males or females
Exclusive	Publication was not written in English

Table 1. Eligibility criteria.

Phase 2

After an in-depth review, I included 122 studies in this systematic review, contributing 131 datasets combined. Studies were excluded at this stage if they were missing demographic numbers critical to the scope of the review, excluded a sex group from their analysis, or did not pertain to any of the hypotheses listed. Many studies collected information pertaining to both gang status and sex, but if they did not report gang status *by* sex they were excluded. These studies, alongside many qualitative publications which did not report demographic information, could be used in further analysis; due to the time constraints of the project, authors were not contacted for additional information in this review.

Because this review is interested in analyzing the numbers that can be drawn from datasets within publications, I excluded studies that drew from the same data source (see Figure 1, “redundant”). Within every dataset, I noted what the reference group was for every study in order to verify the generalizability of the sample; if the reference group was not appropriate (such as measuring gang members and non-gang street outreach workers), the study was not used in risk ratio calculations.

Throughout the process, I excluded the non-English studies that slipped through Pyrooz and Mitchell's methodology (2015) to be consistent with their methods and to account for the potential inaccuracies of machine translation.

CODING

Data extraction

I used Excel to record extracted during the in-depth review stage (phase 2) because it can sort and analyze a bulk of information easily. Publication date, title, author/s, and publication type were all extracted before phase 2 commenced in order to organize which publication had been reviewed. While sample numbers were often clean, some required calculation from percentages. For example, if a sample of 50 gang members noted its sex composition as 30% female, 15 female gang members were recorded. Unfortunately, race and ethnicity were presented in so many variations that standardization was impossible. Because of this, race/ethnicity was recorded in the terms each study presented (see Appendix D). While many publications noted overall racial and ethnic composition, some reported them separately by gang status and I recorded them similarly. If racial and ethnic composition was given for populations that did not fit the scope of this review, I did not record them.

Each publication drew its analysis from at least one set of data, and the origin of that data was identified (*original vs existing*, see Appendix B). I gave each dataset an appropriate name in order to track redundancy – while many of the studies that were disqualified for redundancy were longitudinal, there were many authors that garnered several publications from their previous work. A study using data from the Seattle Social Development Project was identified as

existing, because it was not the author's original data, and assigned the moniker SSDP. For a list of all existing datasets, see Appendix E.

Data from separate longitudinal waves were treated as separate datasets for the sake of data analysis, which is why I noted total *publications* included in Figure 1 rather than total datasets included. All cross-sectional data was treated as a first wave.

Outcome variables

Risk ratio, sex proportion, and percent of female gang members—essentially, within-gang female composition-- are the dependent variables in this systematic review. Risk ratio was used in as an effect size estimate, as it accounts for sample size in its calculation and can be easily understood without needing to convert the number into another form (Borenstein et al. 2009).

Sex proportion measures how many females, out of *all* females sampled, are in gangs. They do not note how many individuals in the gang sample are female. Because of this, I created a third dependent variable to track, roughly, what percentage female each dataset was noting their gang sample to be. Because this does not account for sample size, it can not be used in any statistically significant manner, and further meta-analysis would be needed to find more exact numbers.

Risk ratio, also known as relative risk, compares the risk of an event (joining a gang) among one group (females) to the risk of an event compared to another group (males). Therefore, a risk ratio of 0.75 means females:males have a 0.75:1, or 3:4, risk of joining a gang. If an individual joins a gang, this risk ratio assumes that it is likelier that individual will be male, and that for every 4 males that join a gang, 3 females join. To put it differently, men are 1.33x more likely to join a gang than a woman under this risk ratio (and reversing the risk ratio from F:M to M:F).

Consistent with hypotheses, I recorded sample size, as well as the number of gang members, female gang members, male gang members, total (gang and non-gang) females, and total males as n values during phase 2. If these values were reported as percentages in the source, n values were calculated by using total sample n .

Predictor variables

Age, nomination status (official report vs self-nomination of gang membership), and gang member status are the independent variables in this review. Age was recorded in whichever way it was presented by the study, most commonly range and/or mean and standard deviation. In the case that age was not reported and grade levels were given, a range was created based on the average age of students in those grades (US sources only). If a mean was given for a list of ages, the range and a singular mean age were calculated by the author.

Nomination type was tracked in order to account for biases between self-report data and official data. Any method of classifying gang membership that was not in an official capacity, such as law enforcement or school counsellor identification, was classified as “self-nomination”. This includes snowball sampling from key known gang members. Data acquired from gang members recruited from rehabilitation centers was often classified as “official report” unless otherwise specified by the author, as many individuals in these cases were referred to rehabilitation centers by the judicial system. Data collected from punitive institutions such as prisons were classified as “official report” unless otherwise specified by the author. Some studies did not note their sampling methods; these studies were classified as “N/A” ($n = 12$, see Table 3).

Gang member status was tracked to note whether gang members in the study were *current*, *former*, or *ever* gang members. In most cases, authors referred to their sample as simply “gang

members”, for which a fourth categorization, *unspecified, gang member*, was created (see Appendix B). I labeled these studies separately to avoid assuming gang status of reported samples. I excluded several publications that measured *gang behavior* rather than *gang status* during this phase of coding (see Figure 1, “doesn’t fit scope of study”). If a study asked gang members what age they entered the gang, they were noted as *current*.

Many longitudinal studies distinguished between current and former gang membership, but in their reporting, pooled their demographic data. These studies were collected as a single wave and noted as *ever* gang members. Applicable studies were tracked twice, with one datapoint including only active gang members and one including *ever* gang members (n=5) or with one datapoint including only active gang members and one including only former gang members (n=3) (see Table 3). Additionally, some studies were tracked twice if they contained two separate datasets (redundant datasets were excluded), or if they distinguished data by age (ex: adolescent vs adult). While most of the longitudinal sources included in this study did not list data for separate waves, instead pooling demographic data, some did qualify to track multiple datapoints by wave number.

Data analysis

For the purposes of a systematic review, the risk ratio was sufficient to measure effect size. Effect size estimates are useful for providing information about the impact of a variable on an outcome, or the relationship between two variables (in this case, sex and gang membership). Risk ratio was used in this analysis because it is easier to digest than an odds ratio and can quickly show whether a variable predicts outcome.

I calculated gang proportion (# gang members/sample size) and sex compositions (# M/F gang members/# total M/F gang members), which were recorded separately and used in risk ratio calculations. I calculated risk ratio through the following formula (Equation 1)(Borenstein et al. 2009), with the number of gang females being gF , the number of gang males being gM , number of total females being tF , and number of total males being tM . Males were the denominator for risk ratios because my interest is in measuring the risk of females joining gangs as compared to males.

$$RiskRatio = \frac{gF}{tF} / \frac{gM}{tM} \quad (1)$$

Studies that did not have age values did not qualify for risk ratio and sex proportion analyses; instead, I calculated a percentage (# female gang members/# total gang members) in order to garner a rough estimate of how many female gang members, percentagewise, were seen in each data set. This process served to operationalize hypothesis 1.

Descriptive statistics are useful for evaluating potential relationships between variables and providing basic information about said variables. Essentially, they are able to summarize data in a simple manner that can be easily graphically depicted. It is important to note that descriptive statistics only suggest *potential* relationships and do not signify statistical significance by themselves.

I used descriptive statistics on all risk ratios and compositions, noting size (n), central tendency (mean, median, and mode) and measures of spread (standard deviation (σ), min/max, and upper and lower quartiles) (see Table 3 and Appendix C). I then needed to analyze risk ratio, sex proportions, gang proportions, and percentage of female gang members by age to

operationalize hypothesis 1. This was done in two stages. First, I analyzed the ages for datasets that gave mean ages. There were no means under 11, so the analyses were split into ages 11, 12, 13, 14, 15, 16, 17, 18, and 19+. All mean ages 19 and above were placed into the same category (mean 27.82, s.d. 5.81, range 19-44) because the majority of gang members join gangs prior to the age of 18 (Pyrooz 2014). From here, I used descriptive statistics on risk ratios, percentage of female gang members, sex proportions, and gang proportion for each age category (see Table 4 and Appendix C). To visualize the data more easily, I plotted the risk ratios by age on a box and whisker graph (Figure 2). The second stage was for the analysis of datasets that gave age ranges. I split these into three categories: those whose range numbers were always under 18, those whose age ranges were always above 18, and those whose range numbers were both above and below 18. For each of these, I recorded the descriptive statistics for risk ratios, percentage of female gang members, sex proportions, and gang proportion for each age category (see Tables 5-7). As with the age means, I created a box and whisker graph to represent this data (Figure 4). This stage included samples from a minimum of 9 to a maximum of 64 years of age.

To operationalize hypothesis 2, I divided studies into the following categories and ran descriptive statistics separately (see Table 2): *official report, current*; *official report, former*; *official report, ever*; *official report, unspecified*; *self-nomination, current*; *self-nomination, former*; *self-nomination, ever*; *self-nomination, unspecified*. Datasets that did not give report type, listed as N/A in Appendix B, were excluded from this process. The above categories were not separated (aka all official report data or all former gang member data) due to the disparity official report data often presents when compared to self-nomination data, as well as the fact that former gang members tend to be older than current gang members. For each of these categories, I ran descriptive statistics on and recorded the risk ratios, sex proportions, and percentage of

female gang members (see Table 8) and noted totals for each report type. In concurrence with Hypothesis 2, I used equal variance unpaired t-tests to note significance between variables of interest, where my alternative hypothesis was official report < self-nomination ($H1: \mu_1 < \mu_2$).

	Current	Former	Ever	Unspecified
Official report	Official report, current	Official report, former	Official report, ever	Official report, unspecified
Self-nomination	Self-nomination, current	Self-nomination, former	Self-nomination, ever	Self-nomination, unspecified

Table 2. Data organization by predictor variables.

FINDINGS

DATASETS

The datasets I included from qualifying studies (n = 122 studies, 131 datapoints) are listed in Appendix D, and existing datasets, such as G.R.E.A.T, are listed and described in Appendix E. Table 3 gives a breakdown of information included in each publication/datapoint. The total sample size garnered from all 131 datasets was over 800,000 non-redundant individuals, both gang and non-gang.

Publication type	n (total = 122)	%
<i>Journal article</i>	120	98%
<i>Book section</i>	3	2%
Location	n (total = 122)	%
<i>US</i>	94	77%
<i>Non-US</i>	29	23%
Nomination type	n (total = 122)	%
<i>Self-nomination</i>	90	74%
<i>Official report</i>	21	17%
<i>N/A</i>	12	9%
Age report type	n (total = 122)	%
<i>Includes age range</i>	82	*
<i>Includes age mean</i>	87	*
<i>Includes both age range and mean</i>	57	47%
<i>Neither age mean nor age range</i>	11	9%
Gang status	n (total = 122)	%
<i>Active gang members</i>	28	**
<i>Former gang members</i>	14	**
<i>Ever a gang member</i>	23	**
<i>Unspecified, gang member</i>	73	60%

Table 3. Breakdown of included publications. *Values do not add to 100% because some sources included either age range or mean, both age range and mean, or neither.

**Values do not add to 100% because some studies may track more than one data point.

DESCRIPTIVE OVERVIEW OF FINDINGS

Within-gang female composition

Percent female gang members measured sex composition *within* a gang sample, rather than sex composition of gang members to a reference group. This statistic was included largely for interest, as it can be skewed easily because the vast majority of datasets in this review did not use random sampling. Of all of the datasets, 8% had a within-gang female composition of over 50%. The average % female composition was 26%, with a high of 75% and a low of 0% (see Table 4). Datasets with a female composition of 0% were included in this review because they did not exclude females explicitly, but rather measured 0 females in this sample.

	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	75	0.660	0.588	0**	0.319	0	1.441	0.452	0.892
% female gang members	131*	0.255	0.219	0**	0.173	0	0.750	0.107	0.402
Proportion female	75	0.182	0.089	0**	0.209	0	0.857	0.045	0.303
Proportion male	76***	0.246	0.160	0.584	0.213	0.010	0.816	0.077	0.405
Proportion gang	83	0.234	0.150	0.5	0.219	0.008	0.831	0.068	0.322

Table 4. Descriptive statistics of all datasets included in this systematic review. *The maximum number of datasets examined is 131. **Four of the included datasets did not exclude females from their scope, but measured 0 female gang members. ***Only one of the four studies that measured 0 female gang members also included a reference group.

Mean ages were analyzed by year (see Table 5 and Appendix C, Tables 1-9). The highest average within-gang female composition was at age 13, with an average composition of 43% females, and the lowest was at age 19+, with an average composition of 19%. This is in slight contrast to ages analyzed by range, where the highest average within-gang female composition was found for ranges both above and below 18 years of age (26%, see Table 8) and the lowest was found for ranges above 18 years of age (85, see Table 7).

The highest average within-gang female composition along report type and gang status lines was self-nomination, unspecified at 28% (see Table 9). The lowest was found for official report, current, at 12%. On average, official report data reported a lower percentage of females

within gangs (19%) than self-nomination data (25%), though this difference was insignificant ($p = 0.0976$).

	Risk ratio (mean)	Proportion female (mean)	Proportion male (mean)	% female gang members (mean)
11*	0.689	0.083	0.119	38.5%
12	0.565	0.023	0.050	34.4%
13	0.901	0.172	0.164	47.7%
14	0.852	0.256	0.295	38.2%
15	0.663	0.183	0.212	26%
16	0.757	0.257	0.315	32.5%
17	0.589	0.090	0.156	31.2%
18	0.417	0.309	0.741	23.5%
19+**	0.679	0.214	0.275	18.5%

Table 5. *There were no means under 11. **Datasets measuring means from the age of 19 up were combined (mean 27.82, s.d. 5.81, range 19-44).

Range below 18	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	22	0.684	0.582	none	0.348	0.141	1.441	0.423	0.821
% female gang members	31*	0.265	0.291	0.333	0.141	0.062	0.583	0.126	0.356
Proportion female	22	0.163	0.066	none	0.204	0.002	0.759	0.033	0.151
Proportion male	22	0.215	0.089	0.584	0.223	0.015	0.736	0.064	0.262
Propotion gang	24**	0.210	0.091	none	0.233	0.008	0.805	0.060	0.236

Table 6. Descriptive statistics for datasets whose reported age ranges were below 18 years of age. *31 was the total number of datasets that had a range under 18 years of age. **Several datasets sampled a reference group, but did not give information on sex composition for it.

Range above 18	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	4	0.389	0.469	none	0.233	0	0.618	0.228	0.550
% female gang members	11*	0.075	0.057	0	0.061	0	0.178	0.033	0.149
Proportion female	4	0.080	0.094	none	0.049	0	0.132	0.041	0.119
Proportion male	4	0.171	0.716	none	0.077	0.056	0.274	0.114	0.227
Proportion gang	6**	0.143	0.149	none	0.065	0.054	0.262	0.090	0.153

Table 7. Descriptive statistics for datasets whose reported age ranges were above 18 years of age. *11 was the total number of datasets that had a range above 18 years of age. **Several datasets sampled a reference group, but did not give information on sex composition for it.

Range both above and below 18	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	9	0.786	0.775	none	0.400	0.235	1.351	0.376	1.187
% female gang members	41*	0.294	0.270	0	0.187	0	0.588	0.122	0.458
Proportion female	9**	0.335	0.316	none	0.168	0.070	0.563	0.162	0.501
Proportion male	10	0.416	0.405	none	0.137	0.270	0.746	0.297	0.452
Proportion gang	10	0.392	0.411	none	0.147	0.158	0.667	0.270	0.491

Table 8. Descriptive statistics for datasets whose reported age ranges were both above and below 18 years of age. *41 was the total number of datasets that had a range both above and below 18 years of age. **Several of the included datasets did not exclude females from their scope, but measured 0 female gang members

Risk ratios

Overall, 16% of the datasets had a risk ratio of over 1, 1 being that females and males are equally likely to join a gang and 0.5 being that males have twice the risk of joining a gang. In other words, 16% of datasets reported that a female was more at risk of gang joining than a male. The

average risk ratio was 0.66, or that 2 females will join a gang for every 3 males that join a gang. The maximum risk ratio was 1.44, and the minimum was 0 (see Table 4).

As with within-gang female composition, the highest risk ratio by age mean was at age 13 (0.90); results can be interpreted as 9 females are at risk of joining a gang for every 10 males that join a gang. Age 18 had the lowest risk ratio (0.42), where males were more than twice at risk of joining a gang than females (Table 5). Age ranges above and below 18 years of age had the highest risk ratio (0.79, Table 8) and age ranges above 18 years of age had the lowest risk ratio (0.39, Table 7), similar to results for within-gang female composition.

Official report data of former gang members had the highest risk ratio (0.90), and official report data of current gang members had the lowest (0.55). On average, risk ratio for official report data was 0.65 and risk ratio for self-nomination data was 0.67 (Table 9). Surprisingly, the average risk ratio by report type and gang status never dipped below 0.50, where 2 males are at risk of joining a gang for every 1 female.

Proportion female

The proportion of females measures how many individuals within *both* the gang sample and reference group were female, in contrast to how percent female gang members measures only the female composition within a gang sample. Essentially, it notes how many females from the total sample of both gang and non-gang females are gang members. Overall, there was an average female proportion of 0.18 for the datasets (see Table 4), or that out of 100 females 18 would be gang members. The highest female proportion was 0.86, and the lowest was 0.

For age sorted by means, the highest female proportion was at age 16 (0.26) and the lowest was at 11 (0.08, see Table 5); this contrasted with risk ratio and within-gang female

composition findings, but was consistent with an overall predicted gang involvement peak of 15-16 (Decker et al. 2022). For ages sorted by range, the highest female proportion was for ranges above and below the age of 18 (0.32, Table 8) and the lowest was for ranges below the age of 18 (0.07, Table 6).

Consistently, the highest female proportion was seen in self-nomination data for former gang members (0.45) and the lowest was seen in official report data for current gang members (0.09). The average female proportion for official report data was 0.17, and, similarly, the average female proportion for self-nomination data was 0.18.

Location

Interestingly, 23% of the publications included in this review were from outside of the US. Due to the scope of this review, they were not differentiated in the analysis. Datasets from these publications were from samples in Belgium (n=1), Canada (n=5), China (n=4), El Salvador (n=4), Iran (n=1), the Netherlands (n=1), Nigeria (n=1), Rio de Janeiro (n=1), Scotland (n=1), Singapore (n=1), Trinidad and Tobago (n=2), and the United Kingdoms (n=5) (see Appendix D).

Nomination type

The majority of publications included in this review used a self-nomination method for identifying gang membership. Studies that utilized official report data tended to use information from school counselors and law enforcement, including parole officers and prison officials. Official report data tended to report slightly lower proportions, risk ratios, and percentages for female gang membership (0.17, 0.645 and 22%, respectively, see Table 9) than self-nomination type data (0.18, 0.670 and 27%), though all of these differences were insignificant ($p > 0.05$).

	Risk ratio (mean, (s.d.), <i>n</i>)	Proportion female (mean, (s.d.))	Proportion male (mean, (s.d.))	% female gang members (mean, (s.d.))
Official report, current (n=2)	0.551, (0), 1	0.090, (0)	0.16, (0)	11.5%, (0.005)
Official report, former (n=3)	0.897, (0), 1	0.086, (0)	0.096, (0)	16.8%, (0.168)
Official report, ever (n=4)	0.680, (0.098), 3	0.106, (0.058)	0.149, (0.061)	24.2%, (0.120)
Official report, unspecified (n=13)	0.619 (0.340), 10	0.210, (0.166)	0.320, (0.175)	24.4%, (0.197)
Total (n=22)	0.645, (0.291), 15	0.173, (0.148)	0.260, (0.169)	22.2%, (0.176)
Self-nomination, former (n=8)	0.794, (0.349), 2	0.451, (0.406)	0.425, (0.325)	18.9%, (0.140)
Self-nomination, current (n=18)	0.652, (0.309), 6	0.156, (0.164)	0.203, (0.190)	25.8%, (0.178)
Self-nomination, ever (n=16)	0.577, (0.244), 12	0.114, (0.002)	0.174, (0.187)	26.1%, (0.181)
Self-nomination, unspecified (n=55)	0.697, (0.334), 36	0.188, (0.214)	0.250, (0.223)	27.7%, (0.169)
Total (n=97)	0.670, (0.319), 56	0.178, (0.220)	0.235, (0.223)	26.9%, (0.173)

Table 9. Outcome variable means by report type and gang status.

DISCUSSION

THEORETICAL INTEREST

Hypothesis 1: There are fewer girls than boys in gangs, regardless of age.

The data I've analyzed in this review largely presents a similar outlook to previous research done without systematic data: women and girls are less likely to be gang members, overall, than men and boys. 92% of datasets had a within-gang female composition of under 50%, suggesting that the majority of sampled gang members, regardless of gang sex composition type (in reference to all-female gangs, mixed-gender gangs, and all-male gangs) were men. On top of this, where female proportion could be analyzed—by this I mean where a proportion could be made with female gang members as a numerator and total females, gang and non-gang reference, as a denominator—the average was 0.18. The average male proportion was 0.25, or 25 out of all 100 males, suggesting that males are more likely proportionally to join gangs than females. Finally, risk ratio, or relative risk, showed that females are less at risk than males to join a gang. The average was 0.66, suggesting that for every 10 individuals that join a gang, 4 are female and 6 are male. In this way, it's possible to interpret being female as a protective status. Females, then, require more pull factors (under the assumption that individuals must be motivated to delinquency) or push factors (under the assumption that individuals must be restrained from delinquency) than males in order to join gangs. Previous literature exists in tandem with this, where female offenders and female gang members have backgrounds of lower socioeconomic status and neighborhood disorganization (Bell 2009) and significantly higher rates of prior victimization and abuse than males (Evans and Mason 1996; Hayward and Honegger 2014; Keogh 2014; Marshall et al. 2015; Miller 2001; Moore and Hagedorn 1996), and where

previously sexually abused females are less resistant to gang membership than males (De La Rue and Espelage 2014).

Hypothesis 2: Official report data will show a greater sex disparity than self-nomination type data within gangs.

Previous research has noted the “dark figure of crime,” often where there’s great disparity between official sources of reported crime and the *actual* amount of crime that occurs. This phenomenon has been reproduced in gang membership, where it’s been documented that law enforcement data tends to ignore individuals who were only gang involved at younger ages (Esbensen and Winfree 2020) and those not involved in more serious crimes (Curry 1997). More than this, it’s evident that official report data tends to report less female gang involvement than self-report data (Decker et al. 2022). In accordance to this, maximums for within-gang female composition and female proportion were from self-nomination type data, with a notable exception for risk ratios (maximum for official report data on former gang members, see Table 9). Still, the official report type averages for all three—risk ratio, female proportion, and percent female—were below the self-nomination type averages. It’s relevant to note that none of these differences were statistically significant ($p < 0.05$). This lack of statistical significance presents an interesting result, where it could be possible that variance *within* report type could be as disparate, and important, as variance *between* report types, though in order to come to a definite conclusion a meta-analysis is necessary.

Hypothesis 3: Girls enter gangs earlier than boys and leave gangs earlier.

Gang membership has been seen to fit somewhat of a bell curve, where the most common trajectory (adolescence-limited) peaks at around 16—from this, we can loosely measure the idea that girls join gangs earlier and leave gangs earlier by comparing the female compositions, proportions, and risk ratios of early ages to female compositions, proportions, and risk ratios of later ages; the latter should be smaller. Because this study is limited to a minimum age, by mean, of 11, for this sake that age will be used as “early”. Likewise, because this study is defining “youth” by an American standard of sub-18, as well as because most gang members join their gangs before the age of 18, ages grouped into a “19+” category will be used as “later” for the purposes of this analysis.

This idea can be measured two ways: through the age means, we can assume that the proportion of earliest female gang members should be higher than latest female gang members—this idea applies for percent female and risk ratios, as well. For age ranges, however, the analysis of data must be slightly different; following my earlier line of thought, there should be higher risk ratios, female proportions, and percent female for ranges below the age of 18 than ranges above the age of 18. Because the ranges that measure both above and below the age of 18 are highly variable, with a minimum age of 9 up to a maximum of 64, they cannot accurately depict variance by age for early and late stages of gang involvement.

Analysis of age by mean indeed presented larger risk ratios at younger ages (0.69 for age 11 and 0.57 for age 12) than for an older age (0.42 for age 18), though ages 19+ were higher than age 12 and similar to age 11 (0.68)(see Table 4, Figures 2 and 3). Unlike this, the highest risk ratio for age by range was for ranges both above and below the age of 18 (0.79, see Table 8, Figure 4), though it was lowest for ranges above 18 (0.39). Female proportions were not

consistent with the idea that girls join earlier and leave earlier either, with higher proportions for older ages (0.74 for age 18 and 0.28 for ages 19+) compared to younger ages (0.12 for age 11 and 0.05 for age 12) (see Table 5). This was contrasted by data sorted by age range, where ranges below 18 had a higher female proportion (0.16) than ranges above 18 (0.08)—though, ranges both above and below 18 had the highest female proportion (0.335). Finally, within-gang sex composition (also known as percent female gang members) *was* higher at earlier ages (39% for age 11 and 34% for age 12) than older ages (24% for age 18 and 19% for ages 19+). Within-gang sex composition for age sorted by range mimicked this, with an average of 27% at ranges below the age of 18 and 8% at ranges above the age of 18; again, the highest was actually for ranges both above and below the age of 18, at 30%. These findings are summarized by Table 10 and Table 11. The numbers within risk ratio and female proportion that present higher values for younger ages than older ages stand in contrast to evidence that shows that women and girls join gangs earlier (Bell 2009; Chesney-Lind et al. 1995; Esbensen and Huizinga 1993) and leave earlier (Esbensen and Huizinga 1993) than boys. Of course, this is a rough estimation of this hypothesis— more evidence should be acquired through subsequent meta-analysis of longitudinal studies, where gang joining and desistance can be tracked from the same population across time.

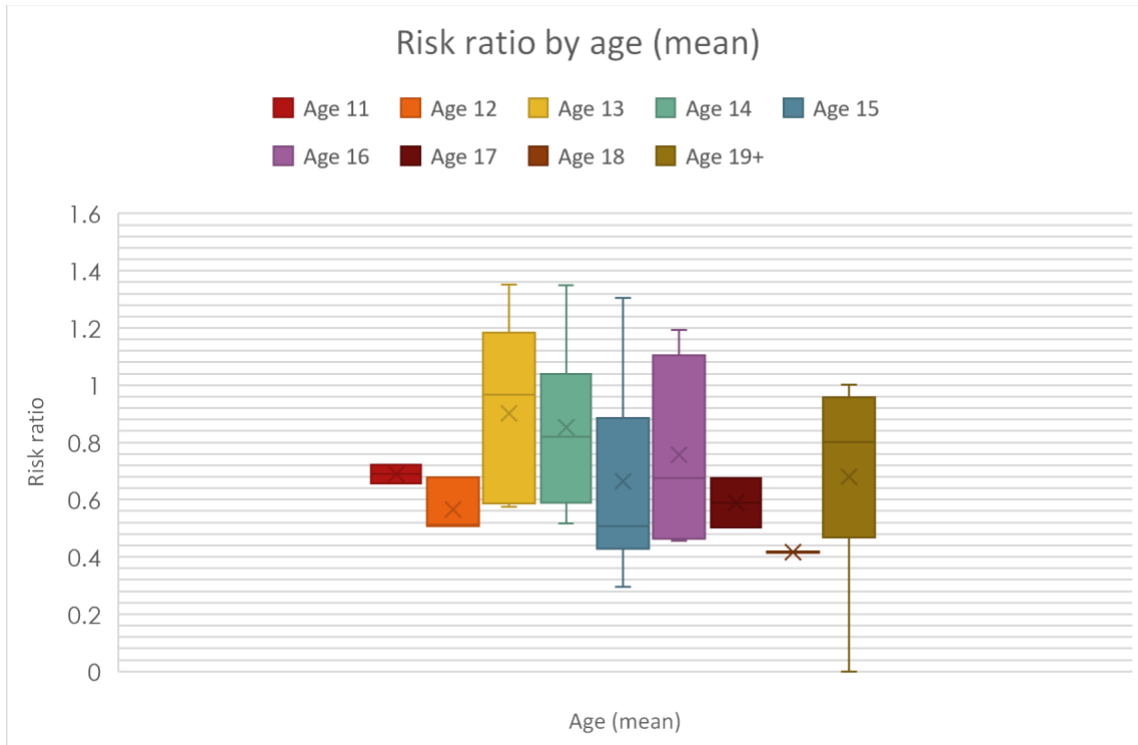


Figure 2. Risk ratios by mean ages.

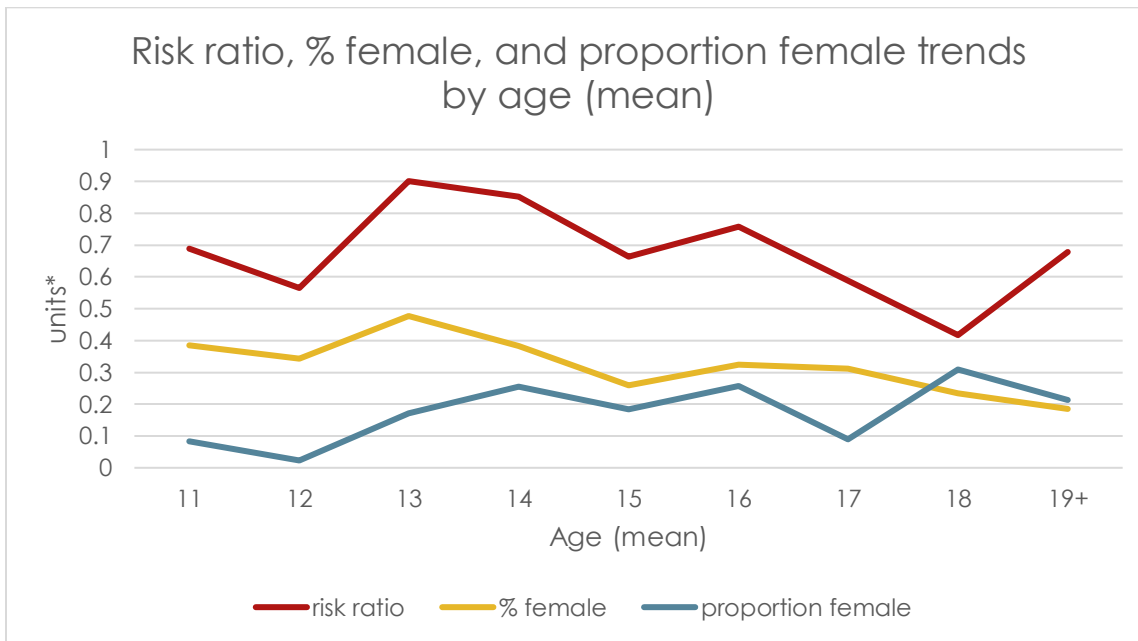


Figure 3. Risk ratio, within-gang female composition, and female proportion by age (mean). *Units are arbitrary; since all increase with increased female presence respectively, they can be compared.

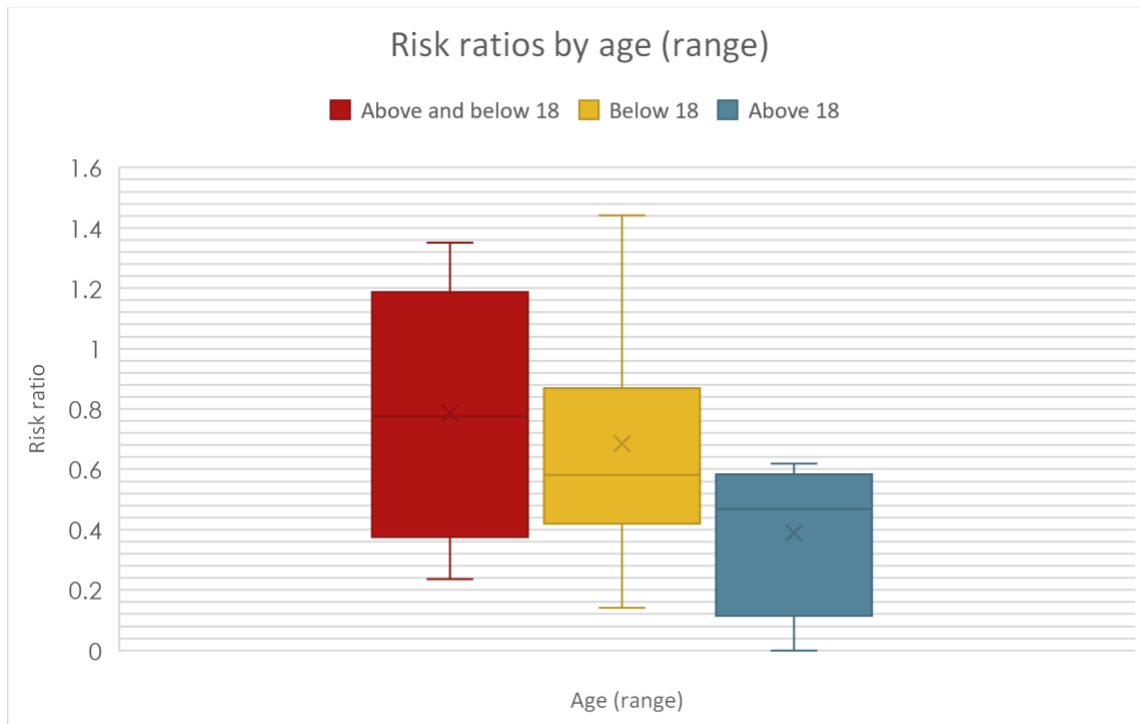


Figure 4. Risk ratios by age ranges.

	Expected outcome	Outcome	Fits hypothesis?
Risk ratio	11 and 12 higher than 18 and 19+	11, 12 only higher than 18	No, 19+ was comparable to 11 and 12
Female proportion	11 and 12 higher than 18 and 19+	18 and 19+ higher than 11 and 12	No
% female gang member	11 and 12 higher than 18 and 19+	11 and 12 higher than 18 and 19+	Yes

Table 10. Outcome by mean age.

	Expected outcome	Outcome	Fits hypothesis?
Risk ratio	Ranges below 18 higher than ranges above 18	Ranges below 18 higher than ranges above 18	Yes, though the highest was ranges above and below 18
Female proportion	Ranges below 18 higher than ranges above 18	Ranges below 18 higher than ranges above 18	Yes, though the highest was ranges above and below 18
% female gang member	Ranges below 18 higher than ranges above 18	Ranges below 18 higher than ranges above 18	Yes, though the highest was ranges above and below 18

Table 11. Outcome by age ranges.

LIMITATIONS

As I've mentioned in the findings section of this paper, percentage of within-gang females was collected purposefully for interest. It, unlike risk ratio, is not an effect size estimate, and is unable to accurately depict the association between variables in any meaningful way. Many of the datasets collected in this review were unable to use random sampling, as is the nature of this field of scholarship, so it's likely that these numbers could be skewed without an appropriate reference population to compare it with. Despite this, the percentage of females within a gang sample tended to follow the trends the calculated female proportions and risk ratios did. Still, to fully appreciate the wealth of data that can be collected in this manner, a meta-analysis should be done to aggregate data and offer a more precise estimate of how exactly gang proportions and risk ratio change by age.

Furthermore, a significant chunk of data that could be utilized was excluded from this review on the grounds of time; at the least, the 76 publications that were missing demographical information and the 61 publications that didn't distinguish gang statistics by gender could be integrated into my data if I were to contact the authors. On top of this, the overwhelming majority of longitudinal studies — which, usefully, sort individuals into various variables by age — pooled their demographic information, flattening the ages into a single mean or range. Ideally, the scope of a meta-analysis done on this review should be expanded to not only publications but the base datasets they refer to.

Another limitation in this study lies in the base theoretical assumptions it makes. This review analyzed sex composition, rather than gender composition, because every single study I came across measured gender only within the binary. While this can be seen as a sampling limitation, where it's difficult to identify individuals outside of female or male presenting boxes, it's crucial to note what exactly it is sociology seeks to study. Sociology is the field of social

behaviors, structures, and interactions—to sociologists, a woman is not a woman because she has two X chromosomes, but because she embodies and deploys a number of intricate behaviors and characteristics in order to fulfil the role of “women”. Recent evaluations of Americans by generation have found that the percentage of Gen Z individuals who identify as LGBTQ has doubled in the past six years and will likely increase further (Jones 2022), with 26% of LGBTQ youth reporting a gender that exists outside of the binary (The Trevor Project). As criminology, and gang scholarship, is often the study of youth, it’s crucial to incorporate more than female and male gender identities into research moving forward to get a more complete picture of how it is that gendered behavior and roles impact delinquency. More than that, recent research by Vanessa Panfil has demonstrated the need and desire LGBTQ individuals have for being represented in criminological research, despite the fragile political membrane on which they operate (Panfil 2022).¹³

FUTURE RESEARCH

Much of the research attempting to explain gang membership does so through sophisticated longitudinal designs, where multiple waves of the same individuals are taken at different ages in order to track changes over time. Examples of this include the National Longitudinal Study of Adolescent to Adult Health, the Denver Youth Survey, and multiple waves of the Gang Resistance Education and Training program evaluations. If gender were to be studied properly as it associated with criminality and delinquency across time, and in reference to the limitations stipulated above, the fluidity with which various identities—such as sexuality and gender—

¹³ Indeed, individuals identifying as LGBTQ are overrepresented in juvenile justice facilities, with an overwhelming majority being nonwhite (CAP & MAP 2016). More than this, all-queer gangs and gang members that are queer, despite being understudied, are extant and have understandings of gang life that are different from their peers (Panfil 2017, 2020; Totten 2012).

change over time should be included. Similarly, where gang joining and desistance is explained along lines of “doing gender”, emotionality and expression of emotion has been significantly understudied as a crucial part of gender expression and roles (Moore and Stuart 2022), even as scholarship has recognized it as a significant part of the expression of masculinity, especially pertaining to race and class (Wilkins 2018). Furthermore, variation exists within sexes and genders as well as between them; however, the degree to which variation holds within sexes and genders as compared to between sexes and genders has been largely overlooked in this field. Criminology has been invested in noting female differences in reference to a normative male center. Despite its analysis of female delinquency as the note of importance in many publications, it is often still in comparison to males. The idea of centering women, as well as gender minorities, within scholarship is not new, with a small but growing field of queer criminology slowly taking a section of the stage in the hopes of creating a more systematically thorough analysis of gender construction and its consequences (Dennis 2014; Panfil 2018; Totten 2012).

CONCLUSION

This systematic review aimed to compile and analyze all of the data in current publications pertaining to gangs as according to Pyrooz and Mitchell (2015) and Gravel (forthcoming)'s framework. More specifically, I collected information from 122 publications (see Figure 1), or 131 datasets, where I recorded sample size for both gang and reference individuals by sex. The outcome variables, or dependent variables, I calculated were % female gang members (female gang members/total gang members), risk ratio (see Equation 1), and sex composition (gang females/all females, as well as for males). Risk ratio was used as an effect size estimate in this systematic review, which can provide information on the association between variables. In this case, my interest was in the relative risk of gang membership for females as compared to males. Descriptive statistics were used to quantify the gathered data.

My hypotheses followed trends noted in previous literature:

4. *There are fewer girls than boys in gangs, regardless of age.*
5. *Official report data will show a greater sex disparity than self-nomination type data within gangs.*
6. *Girls enter gangs earlier than boys and leave gangs later.*

My data suggests that the first hypothesis proves largely true. Indeed, over 90% of datasets had a within-gang female composition of less than 50%-- this means that the majority of studies had gang samples that consisted of less than half females, with an average of 26% females within gang samples. Alongside this, the average female proportion was 0.18, suggesting that out of every 100 females 18 were gang members; in contrast, the male proportion average of

0.25 was much higher. Relative risk showed that, for every 10 individuals that join a gang, 4 are likely to be female and 6 are likely to be male-- a risk ratio of 0.66.

Report type, however, was less clear-cut. Previous research suggests that there's a disparity of sex composition between self-nomination and official report types, where the latter tends to characterize less females than self-nomination sources. Despite the fact that official report type averages for risk ratio, female proportion, and within-gang female composition were lower than averages for self-nomination report type averages, there was no statistical difference for any of them.

The third hypothesis itself was more complicated, and perhaps more appropriate for a meta-analysis. Still, by quantifying means, it's possible to answer it to a degree with the data I collected. The result summaries are seen in Table 10 and Table 11. While the age ranges fit their predicted outcomes, all of them showed the exception that ranges both above and below the age of 18 were actually the highest for risk ratio, female proportion, and within-gang female composition alike. As for outcomes sorted by age means, only one outcome — within-gang female composition — fit the expected outcome, where younger ages were expected to see a higher value than older ages for every outcome variable.

To prove results with any sort of adequate statistical evidence, a meta-analysis should be done. Despite this, trends are able to be seen just by quantifying and analyzing datasets as a suggestion for future literature. Most surprising were the results for report type, where the differences between self-nomination and official data were slim, especially for risk ratios. This could be due to the combination of official report types, where prison, law enforcement, and other types of nominations (such as school counselors) were combined. There is evidence suggesting differences between law enforcement and prison data are variable due to differences

in information-gathering, despite their mutual advising of each other (Pyrooz, Decker, and Owens 2020). The separation and subsequent analysis of these types could glean additional insight to report types, an important topic for any researcher trying to see if their data is valid. In addition to this, I noted the gender binary the studies analyzed in this paper accorded to. Future research should aim to expand gender categories alongside a shift with generational identities (Jones 2022, The Trevor Project 2021), as well as to note with more significance differences within genders rather than between them, as it is highly likely that there is a large amount of variation that to this day has not been fully explained.

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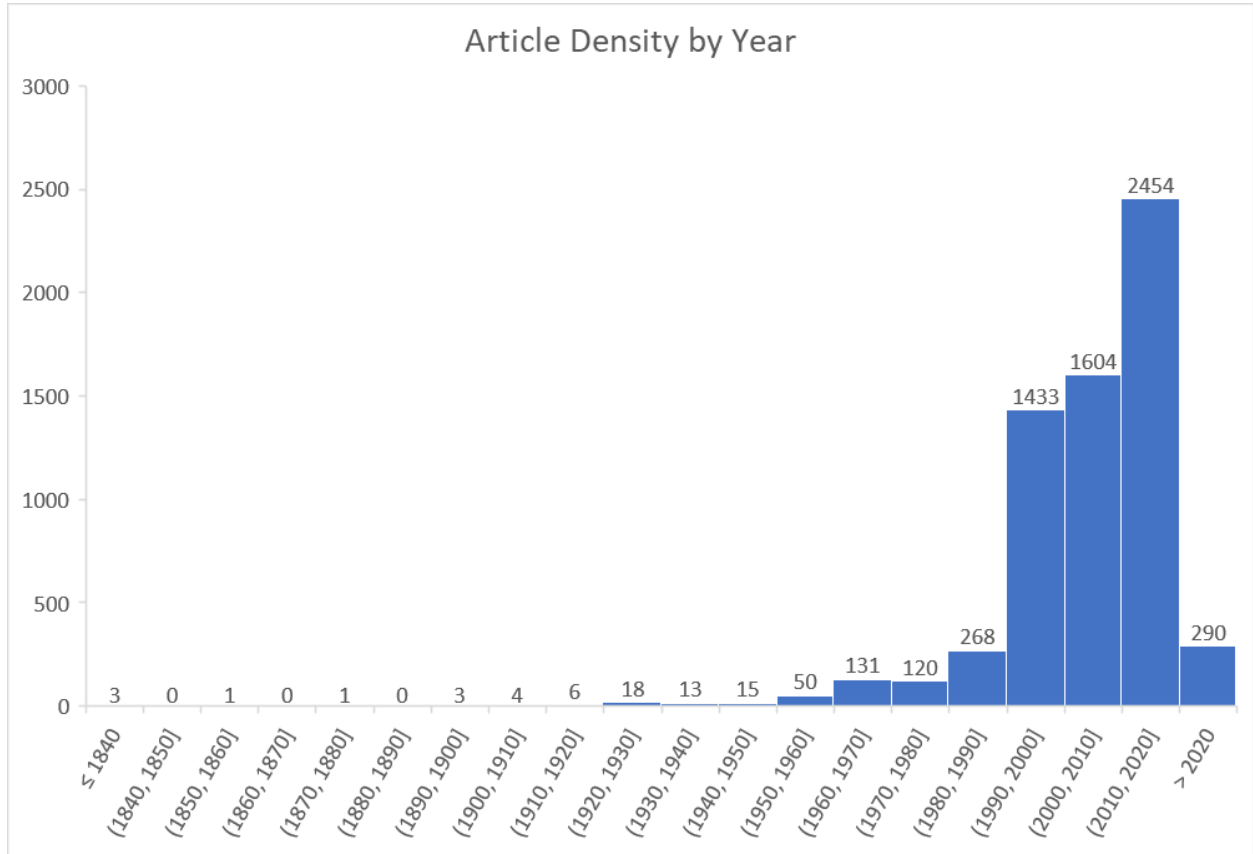
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APPENDICES

APPENDIX A



Appendix A. Article density by year (Pyrooz and Mitchell 2015; Gravel forthcoming).

APPENDIX B

Variable	Subtype
<i>Publication date</i>	
<i>Title</i>	
<i>Author/s</i>	
<i>Publication type</i>	book, book section, article
<i>Dataset type</i>	original, existing
<i>Wave number</i>	
<i>Sample size</i>	
<i># of gang members</i>	
<i># of female gang members</i>	
<i># of male gang members</i>	
<i># of total females (gang and non-gang)</i>	
<i># of total males (gang and non-gang)</i>	
<i>Reference group</i>	ex: 8th grade students, juvenile arrestees
<i>Age (range)</i>	
<i>Age (mean)</i>	
<i>Age (mean s.d.)</i>	
<i>Gang member status</i>	active, former, ever
<i>Nomination type</i>	official report, self-nomination
<i>Method type</i>	qualitative, quantitative, mixed
<i>Race/ethnicity composition</i>	
<i>Location</i>	

Appendix B. Recorded variables.

APPENDIX C

Age 11*	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	2	0.689	0.689	0.656	09.033	0.656	0.722	0.656	0.722
% female gang members	2	0.385	0.385	0.333	0.052	0.333	0.438	0.333	0.438
Proportion female	2	0.083	0.083	0.053	0.030	0.053	0.113	0.053	0.113
Proportion male	2	0.119	0.119	0.081	0.038	0.081	0.157	0.081	0.157
Propotion gang	2	0.101	0.101	0.069	0.033	0.069	0.134	0.069	0.134

Table 1. *There were no means under 11.

Age 12	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	3	0.565	0.511	0.507	0.079	0.07	0.677	0.507	0.677
% female gang members	3	0.344	0.350	0.308	0.028	0.308	0.375	0.308	0.375
Proportion female	3	0.029	0.023	0.02	0.009	0.022	0.041	0.022	0.041
Proportion male	3	0.050	0.045	0.043	0.008	0.043	0.061	0.043	0.061
Propotion gang	3	0.042	0.033	0.032	0.014	0.032	0.061	0.032	0.061

Table 2.

Age 13	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	5	0.901	0.967	none	0.289	0.575	1.351	0.587	1.183
% female gang members	5	0.477	0.484	none	0.079	0.384	0.580	0.387	0.563

Proportion female	5	0.172	0.078	none	0.196	0.052	0.563	0.064	0.326
Proportion male	5	0.164	0.128	none	0.130	0.054	0.417	0.070	0.277
Propotion gang	5	0.168	0.101	none	0.163	0.053	0.491	0.070	0.299

Table 3.

Age 14	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	7	0.852	0.821	none	0.260	0.516	1.348	0.588	1.039
% female gang members	8*	0.382	0.393	none	0.072	0.219	0.483	0.365	0.419
Proportion female	7	0.256	0.091	none	0.276	0.053	0.847	0.053	0.456
Proportion male	7	0.295	0.094	none	0.273	0.064	0.816	0.067	0.512
Propotion gang	7	0.280	0.084	none	0.274	0.059	0.831	0.071	0.489

Table 4. *8 was the total number of datasets that had a mean within 14.01-14.99.

Age 15	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	13	0.663	0.508	none	0.308	0.296	1.306	0.429	0.884
% female gang members	18*	0.260	0.189	0.182	0.150	0.036	0.533	0.154	0.396
Proportion female	13	0.183	0.046	none	0.232	0.010	0.759	0.025	0.316
Proportion male	13	0.212	118	none	0.189	0.010	0.581	0.056	0.357
Propotion gang	14**	0.200	0.131	none	0.195	0.010	0.631	0.048	0.223

Table 5. *18 was the total number of datasets that had a mean within 15.01-15.99. **One study sampled a reference group but did not give information on sex composition for it.

Age 16	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	6	0.757	0.675	none	0.288	0.456	1.194	0.467	1.074
% female gang members	12*	0.325	0.399	0.458	0.186	0.022	0.588	0.139	0.458
Proportion female	6	0.257	0.23	none	0.155	0.059	0.470	0.125	0.470
Proportion male	6	0.315	0.281	none	0.128	0.130	0.544	0.262	0.393
Propotion gang	6	0.311	0.289	none	0.136	0.091	0.481	0.245	0.470

Table 6. *12 was the total number of datasets that had a mean within 16.01-16.99.

Age 17	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	2	0.589	0.589	0.503	0.086	0.503	0.676	0.503	0.676
% female gang members	7*	0.312	0.320	none	0.115	0.107	0.423	0.190	0.422
Proportion female	2	0.090	0.090	0.089	0.001	0.089	0.091	0.089	0.091
Proportion male	2	0.156	0.156	0.132	0.025	0.132	0.181	0.132	0.181
Propotion gang	2	0.139	0.139	0.115	0.025	0.115	0.164	0.115	0.164

Table 7. *7 was the total number of datasets that had a mean within 17.01-17.99.

Age 18	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	2	0.417	0.417	0.415	0.002	0.415	0.419	0.415	0.419
% female gang members	5*	0.235	0.100	0.448	0.174	0.086	0.448	0.089	0.448

Proportion female	2	0.309	0.309	0.306	0.003	0.306	0.313	0.306	0.313
Proportion male	2	0.741	0.741	0.736	0.005	0.736	0.746	0.736	0.746
Propotion gang	2	0.659	0.659	0.652	0.007	0.652	0.667	0.652	0.667

Table 8. *5 was the total number of datasets that had a mean within 18.01-18.99.

Age 19+*	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	9****	0.679	0.800	none	0.309	0	1.001	0.469	0.958
% female gang members	29**	0.185	0.139	0	0.199	0	0.750	0.040	0.217
Proportion female	9****	0.214	0.132	none	0.202	0	0.677	0.075	0.356
Proportion male	10	0.275	0.225	none	0.198	0.056	0.738	0.172	0.303
Propotion gang	13***	0.277	0.158	none	0.221	0.054	0.728	0.119	0.401

Table 9. *Datasets measuring means from the age of 19 up were combined (mean 27.82, s.d. 5.81, range 19-44). **29 was the total number of datasets with means within this age range. ***Several datasets sampled a reference group, but did not give information on sex composition for it. **** One dataset was not included, as its female proportion was 0.

Range below 18	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	22	0.684	0.582	none	0.348	0.141	1.441	0.423	0.821
% female gang members	31*	0.265	0.291	0.333	0.141	0.062	0.583	0.126	0.356
Proportion female	22	0.163	0.066	none	0.204	0.002	0.759	0.033	0.151
Proportion male	22	0.215	0.089	0.584	0.223	0.015	0.736	0.064	0.262
Propotion gang	24**	0.210	0.091	none	0.233	0.008	0.805	0.060	0.236

Table 10. *31 was the total number of datasets that had a range under 18 years of age. **Several datasets sampled a reference group, but did not give information on sex composition for it.

Range above 18	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	4	0.389	0.469	none	0.233	0	0.618	0.228	0.550
% female gang members	11*	0.075	0.057	0	0.061	0	0.178	0.033	0.149
Proportion female	4	0.080	0.094	none	0.049	0	0.132	0.041	0.119
Proportion male	4	0.171	0.716	none	0.077	0.056	0.274	0.114	0.227
Propotion gang	6**	0.143	0.149	none	0.065	0.054	0.262	0.090	0.153

Table 11. *11 was the total number of datasets that had a range above 18 years of age. **Several datasets sampled a reference group, but did not give information on sex composition for it.

Range both above and below 18	n	mean	median	mode	s.d. (σ)	min	max	Q1	Q3
Risk ratio	9	0.786	0.775	none	0.400	0.235	1.351	0.376	1.187
% female gang members	41*	0.294	0.270	0	0.187	0	0.588	0.122	0.458
Proportion female	9**	0.335	0.316	none	0.168	0.070	0.563	0.162	0.501
Proportion male	10	0.416	0.405	none	0.137	0.270	0.746	0.297	0.452
Propotion gang	10	0.392	0.411	none	0.147	0.158	0.667	0.270	0.491

Table 12. *41 was the total number of datasets that had a range both above and below 18 years of age. **Several of the included datasets did not exclude females from their scope, but measured 0 female gang members

APPENDIX D

Author	Year	Title	Data type	Racial/ethnic composition	Location
Adeniyi, Wasiu Olasunkanmi; Jinadu, Afusat Temilade	2021	Influence of Peer Pressure on Gang Behaviour among Secondary School Students in Osun State, Nigeria	quantitative	N/A	Osogbo, Nigeria
Alleyne, Emma; Wood, Jane L.	2010	Gang involvement: psychological and behavioral characteristics of gang members, peripheral youth, and nongang Youth	quantitative	50% United Kingdom, 14% mixed, 36% other	UK
Alward, Lucas M.; Baker, Thomas; Gordon, Jill A.	2021	Procedural justice and incarcerated people's obligation to obey institutional rules: An examination of current, former, and never-gang members.	quantitative	54% were Black, 37% White, and 9% other race	N/A
Amato and Cornell	2003	How do youth claiming gang membership differ from youth who claim membership in another group, such as a crew, clique, posse, or mob?	quantitative	Asian American 17.7%, African American 25.1%, European American 33.9%, Latino 13.8% mixed 9.5%	Washington D.C.
Berdychovsky, Liza; Stodolska, Monika; Shinew, Kimberly J.	2019	The Roles of Recreation in the Prevention, Intervention, and Rehabilitation Programs Addressing Youth Gang Involvement and Violence	qualitative	17% African American, 43% Latin American, 3% White	Chicago
Bolger, Laura; Needs, Adrian	2022	An Interpretative Phenomenological Analysis of the Experience of Ex-Gang Members as They Transition into and Out of Gangs	qualitative	20% Black Caribbean, 20% White British, 60% Black British	UK
Bouchard, Martin; Spindler, Andrea	2010	Groups, gangs, and delinquency: Does organization matter?	quantitative	99% Caucasian	Canada
Boxer, Paul; Docherty, Meagan; Ostermann, Michael; Kubik, Joanna; Veysey, Bonita	2017	Effectiveness of Multisystemic Therapy for gang-involved youth offenders: One year follow-up analysis of recidivism outcomes	quantitative	38% Black/African American, 18% Latino/a, 34% White, 10% other)	Eastern USA
Brown William, B.	1998	The Fight For Survival: African-American gang members and their families in a segregated society	qualitative	African American 100%	Detroit
Bubolz, Bryan F.; Lee, Sou	2021	"I Still Love My Hood": Passive and Strategic Aspects of Role Residual Among Former Gang Members	qualitative	20 African Americans, 6 Hispanics or Latinos, 1 Caucasian, and 3 individuals who described themselves as having multiple races and ethnicities.	Midwestern USA
Carvalho, L. S.; Soares, R. R.	2016	Living on the edge: Youth entry, career and exit in drug-selling gangs	quantitative	White 29%, Black 27%, mixed race 37%, other 7%	Rio de Janeiro
Caudill, Jonathan W.	2010	Back on the Swagger: Institutional Release and Recidivism Timing Among Gang Affiliates	quantitative	N/A	N/A
Chalas, Dawn Marie; Grekul, Jana	2017	I've Had Enough: Exploring Gang Life From the Perspective of (Ex) Members in Alberta	qualitative	N/A	Canada
Chui, Wing Hong; Vinod Khatiani, Paul	2018	Delinquency Among Members of Hong Kong Youth Street Gangs: The Role of the Organizational Structures of Gangs and Triad Affiliations	quantitative	N/A	Hong Kong
Chui, Wing Hong; Vinod Khatiani, Paul	2021	Mediating the Maltreatment–Delinquency Relationship: The Role of Triad Gang Membership	quantitative	N/A	Hong Kong, China

Chui, Wing Hong; Vinod Khatiani, Paul; Kiconco, Milliam	2022	An Examination of the Differential Impacts of Social Bonds and Organized Crime Affiliation on Male and Female Youth Street Gang Members' Delinquency	quantitative	N/A	hong kong
Coffman, Donna L.; Melde, Chris; Esbensen, Finn-Aage	2015	Gang membership and substance use: guilt as a gendered causal pathway	quantitative	N/A	USA
Conway-Turner, Jameela; Visconti, Kari; Winsler, Adam	2020	The Role of Gang Involvement as a Protective Factor in the Association Between Peer Victimization and Negative Emotionality	quantitative	45% White, 18% Asian, 17% Hispanic, 10% Black, and 10% Mixed/Other	Fairfax, VI
Danyko, Stephen J.; Arlia, Alisondra; Martinez, James	2002	Historical Risk Factors Associated with Gang Affiliation in a Residential Treatment Facility: A Case/Control Study	quantitative	(75%) were Black, 1 (1.6%) was Caucasian, and 14(23%) were Hispanic	n/a
Decker, Scott H.; Curry, G. David	2000	Addressing key features of gang membership	mixed	N/A	St. Louis, MO
Decker, Scott H.; Lauritsen, Janet L.	1996	Breaking the Bonds of Membership: Leaving the Gang	quantitative	4 White males, 7 Black females, and 88 Black males	USA
Decker, Scott H.; Pyrooz, David C.; Moule, Richard K.	2014	Disengagement From Gangs as Role Transitions	mixed	40% Black, 48.8% Hispanic	CA, AZ, MO
Decker, Scott H.; Pyrooz, David C.; Sweeten, Gary; Moule, Richard K.	2014	Validating Self-Nomination in Gang Research: Assessing Differences in Gang Embeddedness Across Non-, current, and Former Gang Members	quantitative	41% Black, 47% Hispanic, 4% other	N/A
Del Carmen, Alejandro; Rodriguez, John J.; Dobbs, Rhonda; Smith, Richard; Butler, Randall R.; Sarver, R.	2009	In their own words: A study of gang members through their own perspective	qualitative	African American 35%, 65% Hispanic	Fort Worth, TX
Dickson-Gomez, Julia; Bodnar, Gloria; Guevara, Aradenia; Rodriguez, Karla; Gaborit, Mauricio	2006	El remolque y el vacil: HIV risk among street gangs in El Salvador	qualitative	N/A	El Salvador
Dickson-Gomez, Julia; Pacella-Labarbara, Maria L.; Broadus, Michelle Renee; Quinn, Katherine; Galletly, Carol; Rivas, Justin	2017	Convention Versus Deviance: Moral Agency in Adolescent Gang Members' Decision Making	qualitative	63.8% African American (n = 37), 22.4% Latino (n = 13) and 13.8% (n = 8) identified as mixed race, primarily Latino and African American	N/A
Donnermeyer, Joseph F.; Edwards, Ruth W.; Chavez, Ernest L.; Beauvais, Fred	2000	Involvement of American Indian youth in gangs	quantitative	N/A	NM, MT, OK, SD
Dukes, Richard L.; Martinez, Rubén O.; Stein, Judith A.	1997	Precursors and Consequences of Membership in Youth Gangs	quantitative	listed in an odd way	Pikes Peak, CO
Dukes, Richard L.; Stein, Judith A.	2003	Gender and Gang Membership: A Contrast of Rural and Urban Youth on Attitudes and Behavior	quantitative	varies by gang status	Colorado Springs, CO
Eggleston, Erin J.	2000	New Zealand youth gangs: Key findings and recommendations from an urban ethnography	mixed	Māori, Pakeha, Tongan, Fijian, Niuean, Cook Island, Tokelau and Samoan ethnic groups	New Zealand
Esbensen, Finn-Aage; Winfree, L. Thomas	1998	Race and gender differences between gang and nongang youths: Results from a multisite survey	quantitative	40% White, 27% African American, Hispanic 19%, Asian 6%, other 8%	Las Cruces, NM; Omaha, NE; Phoenix, AZ;

					Philadelphia, PA; Kansas City, MO; Milwaukee, WI; Orlando, FL; Will County, IL; Providence, RI; Pocatello, ID; and Torrance, CA
Esbensen, Finn-Aage; Weerman, Frank M.	2005	Youth Gangs and Troublesome Youth Groups in the United States and the Netherlands: A Cross-National Comparison	quantitative	62% Dutch, Moroccan 5%, Turkish 8%, Surinamese 7%, Antillean 2%, other 12%	Netherlands
Estrada, Joey Nuñez; Gilreath, Tamika D.; Astor, Ron Avi; Benbenishty, Rami	2016	A Statewide Study of Gang Membership in California Secondary Schools	quantitative	27.6% White, 34.6% Hispanic, 4.4% Black, 12.5% Asian, 1.2% American Indian, 12.2% multiracial, 7.5% other	CA
Evans, William P.; Albers, Eric; Macari, Dan; Mason, Alex	1996	Suicide ideation, attempts and abuse among incarcerated gang and nongang delinquents	quantitative	Caucasian/White, 41.7 percent; African-American/Black, 27.7 percent; Chicano/Latino/Hipanic, 16.7 percent; Native-American, 4.3 percent; Asian-American, .3 percent; and multi-ethnic and other, 5.9 percent.	Nevada
Evans, William P.; Mason, Alex	1996	Factors associated with gang involvement among incarcerated youth	quantitative	: Caucasian/White 155 (39.1%), African American! Black 103 (26%), Chicano/Latino/Hispanic 62 (15.7%), Native-American 16 (4%), Asian American 13 (3.3%), and multi-ethnic and other 46 (11.7%).	Nevada
Felkenes, George T.; Becker, Harold K.	1995	Female gang members: A growing issue for policy makers	qualitative	A majority of respondents, males (96.9%) and females (89.5%), were of Mexican heritage.	"majority" of interviewed were between 14-19
Fox, Kathleen A.	2017	Gangs, Gender, and Violent Victimization	quantitative	N/A	Florida
Fox, Kathleen A.; Lane, Jeffrey; Akers, Ronald L.	2010	Do perceptions of neighborhood disorganization predict crime or victimization? An examination of gang member versus non-gang member jail inmates	quantitative	21% Hispanic	Florida
Frisby-Osman, Sarah; Wood, Jane L.	2020	Rethinking How We View Gang Members: An Examination into Affective, Behavioral, and Mental Health Predictors of UK Gang-Involved Youth	quantitative	White 31.9, White other 4.4, mixed 14.3, Asian 22, Asian other 2.2, Black 25.3	UK
Gagnon, Analisa	2018	Extending Social Learning Theory to Explain Victimization Among Gang and Ex-Gang Offenders	quantitative	non-White 71%	FL, NM, PA, IL, TX, CO, TN, OR
Garduno, L. Sergio; Brancale, Julie Mestre	2017	Examining the risk and protective factors of gang involvement among Hispanic youth in Maryland: Garduno And Brancale	quantitative	100% Latino	Maryland
Gilman, Amanda B.; Hill, Karl G.; Hawkins, J. David; Howell, James C.; Kosterman, Rick	2014	The Developmental Dynamics of Joining a Gang in Adolescence: Patterns and Predictors of Gang Membership	quantitative	47% European American, 26% African American, 22% Asian American, and 5% Native American.	Seattle
Ha, Thao; Kim, Hanjoe; Christopher, Caroline; Caruthers, Allison; Dishion, Thomas J.	2016	Predicting sexual coercion in early adulthood: The transaction among maltreatment, gang affiliation, and adolescent socialization of coercive relationship norms	quantitative	423 European Americans (42.3%), 291 African Americans (29.1%), 68 Latinos (6.8%), 52 Asian Americans (5.2%), and 164 (16.4%) youths of other ethnicities, including biracial.	Northwest USA

Hanrahan, Stephanie J.	2015	Games and mental skills: Enhancing life satisfaction, self-worth, and happiness of former gang members	qualitative	N/A	N/A
Hardman, Dale G.	1969	Small Town Gangs	qualitative	N/A	Midwestern USA
Harris, Toi B.; Elkins, Sara; Butler, Ashley; Shelton, Matthew; Robles, Barbara; Kwok, Stephanie; Simpson, Sherri; Young, Dennis W.; Mayhew, Amy; Brown, Ayanna	2013	Youth Gang Members: Psychiatric Disorders and Substance Use	qualitative	.5% Asian, 43.4% Black, 29.4% Latino, 26.4% White	Harris County, TX
Henkel, James O.; Reichel, Phillip L.	2002	The drivers license: A suggested gang suppression strategy	quantitative	N/A	Wisconsin
Hoffman, Beth R.; Weathers, Nnenna; Sanders, Bill	2014	Substance Use Among Gang Member Adolescents and Young Adults and Associations With Friends and Family Substance Use: Substance Use Among Gang Member Adolescents and Young Adults and Associations With Friends and Family Substance Use	mixed	Latino 66.7%, African American 30%	Los Angeles, CA
Johnson, Knowlton W.; Shamblen, Stephen R.; Courser, Matthew W.; Young, Linda; Abadi, Melissa H.; Browne, Thom	2013	Drug use and treatment success among gang and non-gang members in El Salvador: a prospective cohort study	quantitative	N/A	El Salvador
Joseph, Justin J.; Rembert, David A.	2021	Exploring Psychopathy's Relationship with Youth Gang Membership in Males and Females	qualitative	43.1% Black, 35.8% Hispanic, 17.2% White, 3.9% other	Maricopa County, AZ and Philadelphia County, PA
Katz, Charles M.; Fox, Andrew M.	2010	Risk and protective factors associated with gang-involved youth in Trinidad and Tobago	quantitative	41% African, 23% East Indian, 15% Afro/Indian, 21% other	Trinidad and Tobago
Katz, Charles M.; Maguire, Edward R.; Choate, David	2011	A Cross-National Comparison of Gangs in the United States and Trinidad and Tobago	quantitative	African 68.5, East Indian 8.4, Afro Indian 22.8, Other 0.3	Trinidad and Tobago
Katz, Charles M.; Webb, Vincent J.; Fox, Kathleen A.; Shaffer, Jennifer N.	2011	Understanding the relationship between violent victimization and gang membership	quantitative	45% reported being Hispanic, 41.5% reported being White, 10.1% reported being African American, and 3.4% reported being American Indian	Phoenix, AZ
Kee, C.; Sim, K.; Teoh, J.; Tian, C. S.; Ng, K. H.	2003	Individual and familial characteristics of youths involved in street corner gangs in Singapore	quantitative	N/A	Singapore
King, Kelly M.; Voisin, Dexter R.; Diclemente, Ralph J.	2013	Gang Norms and Risky Sex Among Adolescents With a History of Detention	quantitative	N/A	Atlanta, GA
Klein, Malcolm W.	1968	Impressions of Juvenile Gang Members	qualitative	84% African American, 16% Mexican American	Los Angeles, CA
Kubik, Joanna; Docherty, Meagan; Boxer, Paul; Veysey, Bonita; Ostermann, Michael	2016	Examining the moderating role of gang involvement on the context and impact of victimization	quantitative	66 percent non-White)	East USA
Li, Xiaoming; Stanton, Bonita; Pack, Robert; Harris, Carole; Cottrell, Lesley; Burns, James	2002	Risk and Protective Factors Associated with Gang Involvement among Urban African American Adolescents	quantitative	100% African American	Eastern USA

Little, Bertis B.; Gonzalez, J.; Snell, L.; Molidor, Christian	1999	Risk behaviors from sexually transmitted diseases among gangs in Dallas, Texas	qualitative	25% Black, 74% Latino, <1% White	Dallas, TX
Lurigio, Arthur J.; Flexon, Jamie L.; Greenleaf, Richard G.	2008	Antecedents to gang membership: Attachments, beliefs, and street encounters with the police	quantitative	55% African American, 28% Latinx, 7% White, 3% Asian	Chicago, IL
Madan, Anjana; Mrug, Sylvie; Windle, Michael	2011	Brief report: Do delinquency and community violence exposure explain internalizing problems in early adolescent gang members?	quantitative	N/A	Birmingham, Alabama
Martin, Richard H.; Gwynne, Jeffrey L.; Parillo, Robert; Younker, Barr; Carter, Reginald	2011	Alabama prison gang survey	quantitative	African American 54%; Hispanic 6%; White 26%; Asian 1%; Native American 5%; and, Bi-racial 8%	Alabama
Maxson, Cheryl Lee; Matsuda, Kristy N.; Hennigan, Karen M.	2011	“Deterrability” Among Gang and Nongang Juvenile Offenders: Are Gang Members More (or Less) Deterrable Than Other Juvenile Offenders?	quantitative	62.9% Hispanic, 19.4% African American, 7% White, 10.8% other	Los Angeles, CA
McConnell, Elizabeth H.	1994	High-school students - an assessment of their knowledge of gangs	quantitative	73.1 African American, 18.7 Latino, 3.6 Anglo, 1.6 Asian, 3.0 American Indian	Georgia
Mcdaniel, Dawn Delfin	2012	Risk and protective factors associated with gang affiliation among high-risk youth: a public health approach	quantitative	White 22.32, African American 22.63, Hispanic 43.79, other 10.07	USA
Mclean, Robert; Densley, James A.; Deuchar, Ross	2018	Situating gangs within Scotland’s illegal drugs market(s)	qualitative	100% indigenous	Glasgow, Scotland
Melde, Chris; Esbensen, Finn-Aage	2014	The Relative Impact of Gang Status Transitions: Identifying the Mechanisms of Change in Delinquency	quantitative	gang: 25.4 White, 21.1 Black, 37.5 Hispanic, 16 other. non-gang: 27.3 White, 18% Black, 39.7% Hispanic, 15.1%	Albuquerque, NM; Chicago, IL; a Dallas-Fort Worth, TX area suburb; Greeley, CO; Nashville, TN; Philadelphia, PA; and Portland, OR
Melde, Chris; Rennison, Callie Marie	2008	The Effect of Gang Perpetrated Crime on the Likelihood of Non-Lethal Victim Injury	quantitative	White 66.6%, Black 19%, other 23.2%, mixed 9.8%, unknown 2.4%	
Melde, Chris; Taylor, Terrance J.; Esbensen, Finn-Aage	2009	“I GOT YOUR BACK”: AN EXAMINATION OF THE PROTECTIVE FUNCTION OF GANG MEMBERSHIP IN ADOLESCENCE	quantitative	N/A	AZ, NM, MA, SC
Miller, Jody; Brunson, Rod K.	2000	Gender dynamics in youth gangs: A comparison of males’ and females’ accounts	qualitative	African American (54 of 58, or 93%); four (7%) described themselves as multiracial.	St. Louis, MO
Moloney, Molly; Hunt, Geoffrey P.; Joe-Laidler, Karen	2015	Drug Sales, Gender, and Risk: Notions of Risk From the Perspective of Gang-Involved Young Adults	qualitative	African-Americans comprised the largest ethnic group in the sample (53%, n = 134), followed by Latinos (primarily Chicano/Mexicano but also including Central American; 26%, n = 65), Asian-Americans or Pacific Islanders (API) (11%, n = 28) as well as 18 who identified primarily as “mixed,”—four Whites, and one Native American.	USA
Novich, Madeleine; Hunt, Geoffrey P.	2017	“Get off me”: Perceptions of disrespectful police behaviour	qualitative	African American (54%, N = 137) followed by Latino/a (primarily	San Fran, CA

		among ethnic minority youth gang members		Chicano/Mexicano, but also including Central American; 27%, N = 69). These groups were followed by Asian American or Pacific Islanders (10%, N = 25)	
Nydegger, Liesl A.; Difrancesco, Wayne; Quinn, Katherine; Dickson-Gomez, Julia	2017	Gender Norms and Age-Disparate Sexual Relationships as Predictors of Intimate Partner Violence, Sexual Violence, and Risky Sex among Adolescent Gang Members	qualitative	F: African American 68.2, Latina 18.7, White .9, other 9.3, M: African American 61.5, Latino 28.4, White 0, other 5.3	Midwest USA
Nydegger, Liesl A.; Quinn, Katherine; Walsh, Jennifer L.; Pacella-Labarbara, Maria L.; Dickson-Gomez, Julia	2019	Polytraumatization, Mental Health, and Delinquency Among Adolescent Gang Members	quantitative	Black (60.0%) , Latino 27.0, other 13	Milwaukee, WI
O'Neal, Eryn Nicole; Decker, Scott H.; Moule, Richard K.; Pyrooz, David C.	2016	Girls, Gangs, and Getting Out: Gender Differences and Similarities in Leaving the Gang	mixed	Black 26.57%, Hispanic 65.03	Los Angeles, CA, Phoenix, AZ
Olate, René; Salas-Wright, Christopher P.; Vaughn, Michael G.	2012	Predictors of violence and delinquency among high risk youth and youth gang members in San Salvador, El Salvador	qualitative	N/A	San Salvador, El Salvador
Olate, René; Salas-Wright, Christopher P.; Vaughn, Michael G.; Yu, Mansoo	2015	Preventing Violence among Gang-Involved and High-Risk Youth in El Salvador: The Role of School Motivation and Self-Control	quantitative	N/A	San Salvador, El Salvador
Papachristos, Andrew V.; Braga, Anthony A.; Piza, Eric; Grossman, Leigh S.	2015	THE COMPANY YOU KEEP? THE SPILLOVER EFFECTS OF GANG MEMBERSHIP ON INDIVIDUAL GUNSHOT VICTIMIZATION IN A CO-OFFENDING NETWORK: GANG MEMBERSHIP, NETWORKS, & VICTIMIZATION	quantitative	70% Black	Newark, NJ
Pauwels, Lieven J. R.; Vettenburg, Nicole; Gavray, Claire; Brondeel, Ruben	2011	Societal Vulnerability and Troublesome Youth Group Involvement: The Mediating Role of Violent Values and Low Self-Control	quantitative	n/a	Ghent/Leuge, Belgium
Petering, Robin	2016	Sexual risk, substance use, mental health, and trauma experiences of gang-involved homeless youth	quantitative	39.41% White, 22.97% Black, 11.68% Latino, 25.74% other	Los Angeles, CA
Peterson, Dana; Carson, Dena C.	2012	The Sex Composition of Groups and Youths' Delinquency: A Comparison of Gang and Nongang Peer Groups	quantitative	27.5% White, 17.2% Black, 39.5% Hispanic, 15.8% other	Albuquerque, NM; Chicago, IL; a Dallas-Fort Worth, TX area suburb; Greeley, CO; Nashville, TN; Philadelphia, PA; and Portland, OR.
Peterson, Dana; Carson, Dena C.; Fowler, Eric	2018	What's Sex (Composition) Got to Do with It? The Importance of Sex Composition of Gangs for Female and Male Members' Offending and Victimization	quantitative	15.3% White, 22.3 Black%, 51.2% Hispanic, 11.2% other	Albuquerque, New Mexico; Chicago, Illinois; Greeley, Colorado; Nashville, Tennessee; Philadelphia,

					Pennsylvania; Portland, Oregon; and a city in the Dallas/Fort Worth, Texas area.
Portillos, Edwardo L.; Jurik, Nancy C.; Zatz, Marjorie S.	1996	Machismo and Chicano/a Gangs: Symbolic Resistance or Oppression?	qualitative	all of Latin descent	USA
Pyrooz, David C.; Decker, Scott H.	2013	Delinquent Behavior, Violence, and Gang Involvement in China	quantitative	N/A	Changzhi, China
Pyrooz, David C.; Decker, Scott H.; Moule, Richard K.	2015	Criminal and Routine Activities in Online Settings: Gangs, Offenders, and the Internet	qualitative	current gang: 31.6% Black, 60.9% Hispanic, former gang: 36.1% Black, 52% Hispanic, nongang 41.9% Black, 36.5% Hispanic	Cleveland, OH; Fresno, CA; Los Angeles, CA; Phoenix, AZ; and St. Louis, MO
Pyrooz, David C.; Weltman, Elizabeth; Sanchez, Jose	2019	Intervening in the Lives of Gang Members in Denver: A Pilot Evaluation of the Gang Reduction Initiative of Denver	quantitative	37% Black, 58% Latino, 5% White	Denver, CO
Quinn, Katherine; Dickson-Gomez, Julia; Broaddus, Michelle Renee; Pacella-Labarbara, Maria L.	2019	“Running Trains” and “Sexing-In”: The Functions of Sex Within Adolescent Gangs	qualitative	(64%) of participants were African American. The remaining participants were Latino (22%) or Latino and Black/African American (14%)	N/A
Quinn, Katherine; Walsh, Jennifer L.; Dickson-Gomez, Julia	2019	Multiple Marginality and the Variation in Delinquency and Substance use Among Adolescent Gang Members	quantitative	60% identified as Black, and 28% were Latino/a.	Milwaukee, WI
Rahimipour Anaraki, Nahid	2021	Prison gangs in Iran: Between violence and safety	quantitative	N/A	Iran
Rosen, Jonathan D.; Cruz, José Miguel	2018	Overcoming Stigma and Discrimination: Challenges for Reinsertion of Gang Members in Developing Countries	qualitative	N/A	El Salvador
Rosen, Jonathan D.; Cruz, José Miguel	2019	Rethinking the Mechanisms of Gang Desistance in a Developing Country	qualitative	N/A	El Salvador
Ruddell, Rick; Gottschall, Shannon	2011	Are All Gangs Equal Security Risks? An Investigation of Gang Types and Prison Misconduct	quantitative	N/A	Canada
Schram, Pamela J.; Gaines, Larry K.	2005	Examining Delinquent Nongang Members and Delinquent Gang Members: A Comparison of Juvenile Probationers at Intake and Outcomes	quantitative	gang: African American 14.8, Hispanic 71.1, White 14.1. nongang: African American 10.3, Hispanic 36.8, White 52.9	CA
Seals, Richard Alan; Stern, Lilitiana V.	2013	Cognitive ability and the division of labor in urban ghettos: Evidence from gang activity in U.S. data	quantitative	14.5% Black, 11.6% Hispanic,	USA
Sharpe, Elizabeth Gail	2003	The impact of age upon the risk factors for gang membership	quantitative	majority of participants representing African American and White / Caucasian	NC
Smith, Stephanie; Gomez Auyong, Zenta E.; Ferguson, Christopher J.	2019	Social Learning, Social Disorganization, and Psychological Risk Factors for Criminal Gangs in a British Youth Context	quantitative	99.8% Caucasian	Avon, UK
Spano, Richard; Bolland, John M.	2011	Is the Nexus of Gang Membership, Exposure to Violence, and Violent Behavior a Key Determinant of	quantitative	95% Black, 4% Hispanic, 1% White	Mobile, Alabama

		First Time Gun Carrying for Urban Minority Youth?			
Spindler, Andrea; Bouchard, Martin	2011	Structure or Behavior? Revisiting Gang Typologies	quantitative	99% Caucasian	USA
Spooner, Kallee; Pyrooz, David C.; Webb, Vincent J.; Fox, Kathleen A.	2017	Recidivism among juveniles in a multi-component gang reentry program: findings from a program evaluation in Harris County, Texas	quantitative	majority of participants were Black or Hispanic. (lists by gang, nongang)	Houston, TX
St. Cyr, Jenna L; Decker, Scott H	2003	Girls, guys, and gangs: Convergence or divergence in the gendered construction of gangs and groups	qualitative	96% African American	St. Louis, MO
Totten, Mark D.	2012	Gays in the gang	qualitative	Five were Aboriginal, ten were visible or ethnic minorities, and ten were Caucasian.	Canada
Valdez, Christine E.	2021	Posttraumatic Distress and Treatment Barriers Among Former Gang Members: Implications for Improving Access to Traumatic Stress Resources in Marginalized Populations	mixed	56.3% Hispanic or Latino, 31.3% African American	Western USA
Van Dommelen-Gonzalez, Evan; Deardorff, Julianna; Herd, Denise; Minnis, Alexandra M.	2015	Homies with Aspirations and Positive Peer Network Ties: Associations with Reduced Frequent Substance Use among Gang-Affiliated Latino Youth	mixed	100% Latino	San Francisco, CA
Voisin, Dexter R.; Neilands, Torsten B.	2010	Low school engagement and sexual behaviors among African American youth: Examining the influences of gender, peer norms, and gang involvement	quantitative	100% African American	Midwest USA
Walters, Glenn D.	2019	Gang Influence: Mediating the Gang-Delinquency Relationship With Procurent Criminal Thinking	quantitative	46.5% White, 20.5% Hispanic, 16.9% African American, 3.7% Asian/Pacific Islander, 3.7% Native American, and 8.6% Other or mixed.	Philadelphia, Pennsylvania; Portland, Oregon; Phoenix, Arizona; Omaha, Nebraska; Lincoln, Nebraska; and Las Cruces, New Mexico
Wang, A. Y.	1994	Pride and Prejudice in High-School Gang Members	quantitative	49% African American, 51% Caucasian	Orlando, FL
Wang, Zhongyan	1996	Is the Pattern of Asian Gang Affiliation Different? A Multiple Regression Analysis	quantitative	Asian 100%	N/A
Wang, Zhongyan	1998	An Update of Asian Gang Affiliation	qualitative	Asian sample	the north (North Dakota, Minnesota, Wisconsin), the northeast (Massachusetts, New Jersey), the Midwest (Ohio, Illinois, Indiana, Iowa), the east (North Carolina); the southeast (Florida), the

Watkins and Carson	2021	Gang membership, gender, and sexual behavior in and outside a romantic relationship	mixed	gang: 34% White, 21% Black, 32% Hispanic, 14% other. non-gang: 55% White, 18% Black, 16% Hispanic, 11% other	USA
Watkins, Adam M.; Moule, Richard K.	2014	Older, Wiser, and a Bit More Badass? Exploring Differences in Juvenile and Adult Gang Members' Gang-Related Attitudes and Behaviors	quantitative	over 90% Black, remaining White	St. Louis, MO
Weitzel, Emily; Hopper, Caroline; Herridge, Del	2021	Adolescent Gangs: Substance Misuse and Exposure to Adverse Childhood Experiences	quantitative	92.0% (2,246) White British, 2.66 mixed, 3.24 Asian, 1.06 Black	England/Wales, UK
Whitbeck, Les B.; Hoyt, Dan R.; Chen, Xiaojin; Stubben, Jerry D.	2002	Predictors of gang involvement among American Indian adolescents	quantitative	American Indian 100%	Upper Midwest Reservations
Whitney-Snel, Kendall; Valdez, Christine E.; TotAfrican Americann, Jessica	2020	"We break the cycle...": Motivations for prosocial advocacy among former gang members to end gang involvement	qualitative	African American (31.3%, n = 10), Caucasian or White (21.9%, n = 7), Biracial (9.4%, n = 3), American Indian or Alaskan Native (6.3%, n = 2), and Asian (3.1%, n = 1); 15.6% reported unknown race (n = 5) and 12.5% did not report (n = 4)	
Widlitz, Michelle; Dermatis, Helen; Galanter, Marc; Bunt, Gregory	2007	Gang Membership and Subsequent Engagement into a Drug Free Therapeutic Community	quantitative	race/ethnicity distribution was 45% (94/209) African American, 32% (66/209) Latino/other, and 23% (49/209) White	New York
Windle, James; Briggs, Daniel	2015	Going solo: the social organisation of drug dealing within a London street gang	qualitative	mostly of minority ethnic background	USA
Wortley, Scot; Tanner, Julian	2008	Respect, Friendship, and Racial Injustice: Justifying Gang Membership in a Canadian City	qualitative	N/A	Canada
Yacoubian Jr, George S.; Rico, Delcie G.; Fost, Elisabeth; Urbach, Blake J.; Wish, Eric D.	2001	Relationship Between Gang and Other Group Involvement and the Use of Illicit Drugs: Findings From Maryland's Offender Population Urinalysis Screening (OPUS) Program	quantitative	varies by group status, reference group: 51% White, 43% African American, 3% Hispanic, 3% other. Gang group: 55% White, 45% African American	Maryland
Yearwood, Douglas L.; Hayes, Richard A.	2001	A statewide assessment of gangs in the public schools: Origins, membership and criminal activities.	quantitative	African-American 52.4% White 18.0% Asian 3.5% Hispanic/Latino 3.5% Mixed 18.9%/o Not specified 3.7%	North Carolina
Yoder, Kevin A.; Whitbeck, Les B.; Hoyt, Dan R.	2003	Gang Involvement and Membership among Homeless and Runaway Youth	quantitative	(60.1%) identified themselves as White (non-Hispanic), 24.1% as African American, 3.3% as Hispanic, 2.5% as Native American, and 10% as biracial, multiracial, or other.	Iowa, Kansas, Missouri, and Nebraska
Zaitzow, Barbara H.; Houston, James G.	1999	Prison gangs: The North Carolina experience; a summary of the findings	quantitative	255 African American, 135 White, 23 native American, 10 Hispanic, 3 Asian, 3 Arab-American, 17 other	North Carolina
Zatz, Marjorie S.; Portillos, Edwardo L.	2000	VOICES FROM THE BARRIO: CHICANO/A GANGS, FAMILIES, AND COMMUNITIES*	qualitative	11 self-identified as Mexican, 2 as "wetback," 1 as "wetback" and Indian, 7 as Chicano or Chicana, 2 as Chicano and American Indian, 1 as Chicano and White, and 7 as Hispanic.	USA

APPENDIX E

Common name	Description
GANGFACT	Gang Field Assessment of Crime Threat by The National Gang Crime Research Center
TSGPP	N/A, Canadian database
Female Policy (name created by the author*)	1993 field study in Los Angeles County areas of East Los Angeles, Whittier, and Norwalk
Yo Puedo	Yo Puedo: Future Opportunities for Youth, sexual health intervention program for Latino youth in San Francisco
OF	Interviews of drug-selling gang members done by nonprofit organization <i>Observatório de Favelas</i> in Rio de Janeiro
MDT	Evaluations on the MDT program in San Bernardino County, targeting high-risk (reoffending) juvenile offenders
OPUS	Maryland's Offender Population Urinalysis Screening (OPUS) Program
NSAAHSS	National Survey of Asian-American High School Students
Nevada youth correctional facilities in the summer of 1994	
TTAPS	Trinidad and Tobago Arrestee Project Survey
AARIN	Arizona Arrestee Reporting Information Network
Knox1996 (name created by the author*)	Uses original data from Knox's 1996 study
YNS	Youth Net Survey
BYVS	Birmingham Youth Violence Study
MHRAP	Midwest Homeless and Runaway Adolescent Project
YFAM	Youth/Family Accountability Mode
SSDP	Seattle Social Development Project
Pathways	Pathways to Desistance Study
FCU	Family Check Up, a family-centered intervention starting in middle school

North Carolina GANGFACT	Gang Field Assessment of Crime Threat, North Caroline Program
NSCR	School Project of the Netherlands Institute for the Study of Crime and Law Enforcement
MYS	Mobile Youth Survey in Mobile, Alabama
TTYS	Trinidad and Tobago Youth Survey
OCJS2006	2006 Offending, Crime and Justice Survey
GREAT	Gang Resistance Education and Training
GREATII	Second national evaluation of GREAT
YVS	Youth Violence Survey, conducted in 2004 in a high-risk, urban school district
NLSY97	National Longitudinal Survey of Youth (1997)
FCYS2009	2009 Fairfax (VA) County Youth Survey
CHKS	California Healthy Kids Survey

*Note that all named labelled “name created by the author” were created by me and not, in fact, the author of the publication the data was extracted from.