THE CAMPBELL COLLABORATION

Systematic Review Protocol: Juvenile Curfew Policies' Effect on Criminal Behavior, Public Safety, and Victimization

Lead/Contact reviewer:

David B. Wilson, Ph.D.
Professor & Chair
Department of Criminology, Law and Society
George Mason University
4400 University Drive, MS 4F4
Fairfax, VA 22030
dwilsonb@gmu.edu

Co-authors:

David McClure, M.A.
Center for Evidence-Based Crime Policy
Department of Criminology, Law and Society
George Mason University
4400 University Drive, MS 6D3
Fairfax, VA 22030
dmcclure@gmu.edu

Charlotte Gill, Ph.D.
Center for Evidence-Based Crime Policy
Department of Criminology, Law and Society
George Mason University
4400 University Drive, MS 6D3
Fairfax, VA 22030
cgill9@gmu.edu

BACKGROUND

Juvenile curfew policies encompass a variety of restricted activities and sanctions, implemented with the intention of controlling delinquency and increasing public safety. Curfews are built upon the idea that "restricting the hours when young people may be in public should limit their opportunities to commit crimes or become victims" (McDowall, 2000, p. 59). With this underlying motivation, such policies can take a variety of forms, including variations in targeted age groups, hours of operation, exceptions to the policy, and sanctions for violations (e.g., Ford, 1994, p. 1679; Ruefle & Reynolds, 1995). Typical curfew policies in larger cities are directed at youth aged up to 17, and enforced between the hours of 10:00PM – midnight and 4:00 – 6:00 in the morning (McDowall, 2000, p. 58). Alternatively, some policies restrict certain activities rather than the general public movement of juveniles; for example, graduated driver licensing policies, which may prohibit juveniles from driving at night or carrying more than a set number of passengers with the intention of reducing crashes among young drivers (Foss & Evenson, 1999; Hartling et al., 2004).

Since curfew policies were first enacted into U.S. law over one-hundred years ago (see Adams, 2003 for a brief history), they have been extremely popular among municipalities seeking to control juvenile delinquency. Fifty-nine of 77 (77%) American cities with populations of 200,000 or greater surveyed in 1994 had a currently implemented juvenile curfew policy (Ruefle & Reynolds, 1995), and in a 1995 survey 146 (73%) of the 200 largest American cities reported using curfews (Ruefle & Reynolds, 1996). A separate study conducted in 1995 found that 70 percent of the 272 cities surveyed had implemented a nighttime curfew, and 57 percent of those cities believed that their policy was effective (U.S. Conference of Mayors, 1997). Bannister et al. (2001) suggest that most jurisdictions that impose curfews consider them to be effective at reducing juvenile delinquency, and plan to continue using them. Curfew policies have also found support among the public, particularly residents of jurisdictions in which they are used. Nelson (as cited in Ruefle & Reynolds, 1996) found that 92 percent of 300 adult residents of Cincinnati, Ohio supported the city's curfew, and 72 percent reported that it made them feel safer. Fisher (as cited in Ruefle & Reynolds, 1996) also found majority support for a proposed curfew in Mobile, Alabama. Good (2006) reports that 96 percent of surveyed residents in cities with curfew policies viewed the laws as "very or somewhat effective for combating juvenile crime in their communities," and 93 percent considered curfew enforcement a good use of police resources.

Despite the prevalence and popularity of juvenile curfews, some commentators have argued that curfew policies violate the civil rights of young people (most of whom may not be adjudicated offenders) by restricting their freedom of movement (Ford, 1994, p. 1694; see also Bannister et al., 2001; Watzman, 1994; Simpson & Simpson, 1993; White, 1996). In the United States context, legal challenges to curfew laws

have been brought on this basis, with the contention that the application of blanket curfew policies on a particular section of the population is unconstitutional because it restricts individual liberties (see e.g. Fried, 2001; Cole, 2003). Some of these challenges have been successful while others have failed, and the matter has not yet been reviewed by the Supreme Court. However, Watzman (1994) suggests that the more exceptions for 'acceptable activities' (for example, legitimate employment) a given policy provides, the more likely it would be to survive a challenge on constitutional grounds.

Fried (2001) argued that evaluation data from the social sciences may help to inform the debate on the constitutionality of curfew policies by indicating whether the effectiveness of such policies outweighs the harm caused by restricting individual liberties. However, the existing research on curfew policies raises concerns about their effectiveness. Several reviews of the curfew literature have indicated that there is little rigorous empirical research directly measuring crime outcomes, and what is available shows little to no effect. McDowall (2000) reports on six evaluations of curfew policies conducted between 1977 and 2000, concluding that the body of research showed little to no preventive effect, with the most promising studies indicating no more than a modest crime prevention benefit. McDowall notes that all the studies used research designs and proxy measures of crime with substantial weaknesses. Adams (2003) conducted a systematic review and found just ten studies (including some reviewed by McDowall) that measured criminal offending, public safety, or victimization using a research design that allowed for at least a pre-post comparison of outcomes. Most of the studies reviewed by Adams did not include even a non-equivalent comparison group, increasing the possibility that the results were subject to confounding from other influences on juvenile delinquency. According to Adams, most of the studies reported no change in crime rates as a result of curfews; in addition, where changes were observed, they were just as likely to be increases in crime rather than decreases. He also notes that curfew enforcement rarely results in the detection of serious offenses. The one area in which curfews had a more positive impact was in reducing driving-related accidents and injuries, as Hartling et al. (2004) also found in their systematic review.

The Adams (2003) review currently stands as the most complete review of research on the effectiveness of juvenile curfew policies as a means of reducing crime, and has come to represent a definitive statement of the failure of such policies. For example, Mears (2010) cites the review in support of the proposition that "research clearly indicates that juvenile curfew laws are ineffective." Writing again in 2007, Adams himself cites the 2003 review as a clear indication that juvenile curfew laws do not work, whereas the original conclusion merely says that there is insufficient evidence that they work in anything more than very specific circumstances. However, he also notes the difficulties inherent in properly measuring curfew policies: in particular, the frequent reliance on before-after study designs, which can provide the illusion of curfews' effectiveness in reducing crime without appropriately accounting for other

factors that could explain the decline. Further, even when a curfew policy is implemented, enforcement may be inconsistent. Studies have shown that over-stretched and under-resourced police departments may forego the enforcement of curfew laws in favor of focusing on more urgent demands (McDowall, 2000, p. 59; Bannister et al., 2001, p. 237; see also Reynolds et al., 2000; Watzman, 1994). Further, even when curfew policies are enforced, sanctions for violation are not necessarily consistent across jurisdictions – some officers may take juveniles into custody while others issue citations or simply take the young person home (McDowall, 2000, p. 58). More recent research suggests that the conditions under which curfew laws are implemented and enforced may be important. Harris (2006) finds a correlation between the level of enforcement of juvenile curfews laws and the presence of a parental responsibility statute in the jurisdiction, suggesting that curfew policies may be more successful when communities are invested in family roles. Finally, some studies have indicated that curfew policies may be targeted inappropriately and thus do not deter juveniles from offending. Gottfredson et al. (2001) note in this context that offending patterns suggest juveniles are most likely to offend during times of day when the curfew is not in force, such as immediately after school. McDowall (2000) cites a long history of research beginning with Wolfgang, Figlio, and Sellin (1972) that indicates that the majority of *serious* juvenile offending is committed by a small proportion of youth. He suggests that if these youth are not deterred by the penalties for such offenses, they are unlikely to be deterred by the mild and inconsistently-applied sanctions imposed for curfew violations.

The lack of any clear evidence of effectiveness of juvenile curfews makes this topic an important focus for a rigorous literature review and analysis. McDowall (2000) notes that even if curfew policies have no general preventive effects on crime, they may still be effective for some crime types or under some enforcement scenarios or times. The aim of this review is to update the previous systematic review conducted by Adams (2003). We aim to systematically review the empirical research on the effectiveness of juvenile curfew policies and assess the strength of the existing evidence. Admittedly, the literature base in this area is relatively small and we do not expect to find many more studies than Adams did. However, we will employ a broader search to identify non-US studies if available. Our main justification for a new review is that prior systematic reviews on this topic have been narrative and have not attempted to synthesize quantitative data across studies. This is largely because the statistical techniques usually used in curfew studies (such as time-series models) do not readily lend themselves to meta-analysis. We propose new techniques for computing and combining effect sizes for the type of outcome measures most commonly found in evaluations of juvenile curfews (see 'Data Synthesis' below).

OBJECTIVES

The objective of this review is to systematically review and synthesize credible evidence on the effectiveness of juvenile curfew policies. Of interest are the effects on criminal behavior, public safety, and victimization. It is anticipated that this review will help inform policy-makers' decisions regarding juvenile curfew policies. Many jurisdictions have already adopted and continue to enforce such policies, and a critical examination of the existing evidence is warranted.

METHODOLOGY

CRITERIA FOR CONSIDERING STUDIES FOR THIS REVIEW

Types of Interventions

Eligible studies will test the effect of an official (state or local) policy intended to restrict or otherwise penalize a juvenile's presence outside the home during certain times. The curfew policy must be a general preventive measure directed at all juveniles within a certain age range; we will not include studies that examine curfews imposed as one part of a specific sentence or probation conditions for individual adjudicated youth. The policy must have been imposed as a measure to improve public safety through the specific targeting of juvenile crime and delinquency; thus, military or riot curfews directed at all citizens are not eligible for inclusion. Curfew policies that include exceptions for certain types of legitimate activity, such as employment, will be considered.

Types of Studies

We expect that most studies of juvenile curfew policies will be conducted at the aggregate level (i.e., comparing crime and delinquency rates in jurisdictions where policies are imposed to rates in the same jurisdiction prior to the policy, or to comparable jurisdictions that do not impose curfews), rather than at the individual level (i.e., comparing offending outcomes for a specific sample of juveniles subject to curfews with those who are not). These are often called ecological studies (Hingson, Howland, Koepsell, & Cummings, 2001). This expectation stems from the nature of the intervention. Curfews are imposed categorically to all juveniles living within a specific geographic area. As such, randomized controlled trials at the individual-level are not possible. The strongest study design we expect to find is the true interrupted time series model, which allows for the measurement of outcomes before and after a policy change. A true interrupted time series design involves multiple measurements of the outcome both before and after the imposition of the curfew to reduce various threats to internal validity (e.g., regression to the mean, maturation, and testing effects). Interrupted-time series designs are often considered one of the stronger quasi-experimental designs (e.g., Shadish, Cook, and Campbell, 2002). The primary threat to internal validity is an historical artifact, that

is, some other change coinciding with the imposition of the curfew that might account for the change in crime rates. These interrupted time-series designs may also include a comparison time-series from a community that did not implement a curfew. A stronger, but more unusual, design is the 'ABAB' time series design, in which the curfew policy is implemented, removed, implemented again, removed again, and crime is measured at each stage.

We will, of course, include any true experimental designs (i.e., randomized controlled trials) identified by the systematic search. Given the ecological nature of curfew policies, such designs would randomize at the level of geographic units, such as communities or cities. That is, it is feasible, but unlikely, that a study randomly assigned some communities to receive the curfew and other not. Our preliminary searches have failed to identify any such studies.

We anticipate finding study designs that involve comparison communities. In these designs, communities with a curfew may be compared to a non-equivalent comparison community or communities without such a policy. These quasi-experimental non-equivalent comparison group designs will be included so long as baseline differences are measured and incorporated into the statistical model used to assess the effect of the curfew.

We also expect to find a number of simple pre-post analyses in which outcomes are measured once before and once after the imposition of the curfew (thus, these are not true time-series designs but rather a simple one-group pre-post test design). We will document the findings of these studies but will not include them formally in the meta-analysis or main findings of the systematic review because of the potential serious threats to internal validity inherent in these designs.

Types of Participants

Because of the ecological nature of these designs, they do not have participants in the typical sense. The curfew policies will apply to all juveniles meeting the age and other criteria set out in the jurisdiction's curfew policy. Generally the term 'juvenile' refers to young people up to and including the age of eighteen, but we will account for different cultural norms across countries by including evaluations of any curfew policy directed at youths. Juveniles subject to the curfew may or may not have been arrested or convicted in the past; many curfew policies target all young people of a certain age regardless of offending status.

Types of Outcome Measures

The primary outcome of interest in this systematic review is criminal behavior committed by juveniles subject to curfew. Outcome data may comprise official records of arrests, charges, or convictions; or juveniles' self-reported delinquency. However, as discussed above, we do not expect to find many studies in which official

records or self-reports of individual juveniles are collected and examined before and after the imposition of a policy, or compared to similarly-situated juveniles who are not subject to curfews. It is more likely that such reports will be aggregated at the level of the jurisdiction. For example, overall rates of juvenile arrests or convictions (or even crime rates for offenders of all ages) in the jurisdiction imposing the curfew will be examined before and after the policy or compared to crime rates in other jurisdictions, using statistical methods to increase the likelihood that any observed change in crime resulted from the change in policy.

Secondary outcomes examined in this review will be other measures of public safety and victimization, since the ultimate goal in imposing a curfew policy is to improve public safety through the control of juvenile crime. Data on these outcomes may be collected from police calls for service, which provide both citizen- and police-initiated reactions to both victim crimes and public disorder; official police or court records that provide information about crime victims; citizen victimization surveys; and citizen surveys about perceptions of juvenile crime, neighborhood disorder, and fear of crime.

It is important to note that it may not always be possible, especially in studies that examine aggregate-level data, to identify whether changes in crime rates or calls for service came about because of a reduction in offenses committed *by juveniles during the curfew period*. We recognize this limitation of our study and will account for variations in the methodological quality and statistical conclusion validity of eligible studies as appropriate. Studies that have been able to measure crime committed by juveniles, or surveys in which victims perceive their offenders as juveniles, will obviously be more sensitive to change, but we will not exclude other studies that allow us to infer that an overall change in crime is associated with the imposition of a curfew. Such studies are still meaningful for measuring the overall societal benefit of the curfew policy.

Settings and Timeframe

We will not exclude studies on the basis of language or geography. We will work with our international contacts to learn which countries are likely to have used and evaluated juvenile curfew policies so that we can target foreign language and location searches appropriately. Studies using data collected from 1960 onwards will be included. The rationale for this timeframe is twofold: first, it is unlikely that any older studies with eligible research designs exist; and second, the social context is markedly different. For example, crime and victimization rates changed extensively between the 1970s and 1990s. Furthermore, the structure of the juvenile justice system has changed considerably since the 1960s, which would potentially make the coding of offense types difficult.

SEARCH METHODS FOR IDENTIFICATION OF STUDIES

Two categories of keywords were developed for this search. The first category lists key terms and synonyms related to juvenile curfew policies. The second category addresses measured study outcomes, including terms such as crime, delinquency, arrest, etc. The intention of separating the terms in this manner is to include all the potentially relevant results, while simultaneously excluding the large bodies of literature on parenting and adolescent development from non-criminological disciplines. These two sets of keywords were combined with a Boolean AND.

1. Policy of Interest

> CURFEW and (JUVENILE* or YOUNG* or YOUTH* or MINOR* or CHILD*
> or KID* or TEEN* or ADOLESCEN* or PUBESCENT*)

2. Outcomes

> CRIM* or DELINQUEN* or ARREST* or DETAIN* or DETENTION or
> "CALL* FOR SERVICE*" or OFFEND* or ADJUDICAT* or STATUS or
> VICTIM* or SAFE* or FEAR* or DRUG* or ALCOHOL* or LOITER* or
> STEAL* or STOLE* or THEFT or JOYRIDE or JOY-RIDE or "JOY RIDE" or
> VANDAL* or GANG or VIOLEN* or ASSAULT or FIGHT*

A bibliography of studies identified in a preliminary literature search is included in the References section of this protocol.

Electronic Sources

The search strategy described above will be applied to the following databases, which cover both the more accessible sources as well as the grey literature.

> AIC – Australian Institute of Criminology
> ASSIA – Applied Social Science Index and Abstracts
> CINCH (the Australian Criminology Database)
> Criminal Justice Abstracts
> EconLit
> First Search - Dissertation Abstracts
> Google Scholar
> HeinOnline
> Jill Dando Insitute of Crime Science (JDI)
> NCJRS (National Criminal Justice Reference Service)
> Policy Archive
> PolicyFile
> Criminal Justice Periodicals
> Dissertations & Theses: Full Text
> Evidence-Based Resources from the Joanna Briggs Institute
> PubMed
> PsycINFO
> Public Affairs Information Service
> RAND Documents
> ResearchNow
> Social Sciences Citation Index
> Social Services Abstracts

Sociological Abstracts
SSRN – Social Science Research Network
Worldwide Political Science Abstracts

We will also search the following databases and websites to better cover the gray literature:

Association of Chief Police Officers ACPO
Association of Chief Police Officers of Scotland ACPOS
Association of Police Authorities APA
Australian Research Council Centre of Excellence in Policing and Security (CEPS)
Canadian Police Research Centre
Her Majesty's Inspectorate of Constabulary HMIC
Home Office (UK)
Medline/Embase
Ministry of Justice (UK)
National Council for Crime Prevention (Sweden)
National Institute of Justice
Office of Juvenile Justice and Delinquency Prevention
Scottish Institute for Policing Research SIPR
U.S. state juvenile justice agencies and court services

In addition to searching the electronic resources listed above, we will also scan the references of relevant reviews and identified studies, and consult with an information search specialist and experts in the field.

DATA COLLECTION AND ANALYSIS

Assessment of Risk of Bias in Included Studies

The assessment of risk and bias in the study designs that will be eligible for this study is challenging (see Hingson et al., 2001; Hartling et al., 2004). The typical quality assessment tools used in Cochrane and Campbell systematic reviews are designed for non-ecological studies that are implemented at the individual level or other units that can be assigned randomly to conditions (e.g., small geographic regions such as crime hot spots). The potential sources of bias vary depending on the design. Below are potential sources of bias that will be assessed.

a) Historical artifacts: anything that might be confounded with the intervention, such as other community initiatives directed at reducing crime.

b) Measurement confounds: any change in the way data were collected over-time that might bias the findings, such as a change in police recording practices.

c) Non-comparability of communities at baseline: observed non-trivial differences between curfew and non-curfew communities.

d) Selection-bias: selection of curfew locations or imposition of curfew policy based on high baseline crime rates.

e) Statistical analysis: curfew effects were not statistically adjusted for measured baseline differences.

f) Statistical analysis: failure to model autocorrelation in time-series data.

Measures of Treatment Effect

See DATA SYNTHESIS section.

Unit of Analysis Issues

The primary unit-of-analysis within the studies of interest will usually be a jurisdiction, such as a city or town. The particular population of interest is the jurisdiction or site implementing the juvenile curfew policy. It is expected that these studies will use mostly aggregate level data for a jurisdiction. It is possible, but not anticipated, that we may find studies using individual level data to address the effects of juvenile curfew policies, such as citizen surveys. Studies reporting results (separate analyses) on distinct non-geographically contiguous jurisdictions will be treated as independent units-of-analysis for the purpose of this systematic review. Multiple reports or manuscripts based on the same study or data will be treated as a single entity for purposes of this review. We will either select the most complete references if all of the relevant information in secondary reports (e.g., journal manuscript) is contained within the primary report (e.g., technical report). However, if the multiple reports each provide unique information (e.g., different outcomes or different jurisdictions), then all reports will be coded as a single study.

ASSESSMENT OF REPORTING BIASES

Reporting bias will be addressed in several ways. First, the search for and inclusion of unpublished works, such as technical reports, will help guard against reporting and publication bias. If possible, we will compare the results from published and unpublished studies as one estimate of potential bias. Second, we will list any outcomes (dependent measures) included in a study for which an effect size could not be computed. These outcomes are more likely to have negative or null results. A large number of such outcomes, particularly for primary outcome measures, raise concerns regarding reporting bias. We will only perform more formal statistical assessments of publication bias if sufficient data permit, such as the funnel plot and the trim-and-fill method (Duval & Tweedie, 2000).

DATA SYNTHESIS

As discussed in Hartling et al's (2004) Cochrane review of graduated driver licensing for young drivers, the design of the relevant studies for this review does not easily lend itself to traditional meta-analysis. Most primary outcomes, however, can be represented as a percentage change in a rate, such as the crime rate. For example, if the crime-rate per 100,000 during the baseline period was 450 and this dropped to 400 during the post (curfew) period, then the percentage change is computed as:

Thus, the crime-rate dropped by 11% following the curfew. For comparison group designs, the percentage change will be adjusted for the percentage change in the comparison areas by subtracting the PC for the comparison area from the PC from the curfew area. These methods are consistent with those used by Hartling et al (2009).

We will work with the Campbell Methods group to explore methods of synthesizing these percentage change effect sizes across studies. For example, it may be possible to construct a standard error for PC that would produce the same z or t as that of the formal test of the curfew effect presented by the study authors. Having a standard error for each PC would allow for an assessment of the mean PC across meaningful subsets of studies and an examination of the variability in results across these studies using traditional inverse variance weighted meta-analytic methods.

Secondary outcomes, such as the results from citizen victimization surveys, will be meta-analyzed using traditional inverse-variance weighted meta-analysis if possible. This will require at least two studies that examine a common secondary outcome that can be expressed in a common effect size such as a standardized mean difference or odds-ratio. In all cases, a random effects model will be assumed a priori.

Through formal moderator analysis, we will examine the pattern of evidence for different types of curfew policies, if possible. We will also interpret the findings in light of the methodological quality and potential bias inherent in the study designs.

SOURCES OF SUPPORT

ACKNOWLEDGMENTS

DECLARATION OF INTEREST

We have no conflicts of interest related to the use of juvenile curfew policies or the studies included in this review.

REFERENCES

Adams, K. (2003). The effectiveness of juvenile curfews at crime prevention. *The Annals of the American Academy of Political and Social Science*, *587*(1), 136-159.

Adams, K. (2007). Abolish juvenile curfews. *Criminology and Public Policy, 6*(4), 663-669.

Bannister, A. J., Carter, D. L., & Schafer, J. (2001). A national police survey on the use of juvenile curfews. *Journal of Criminal Justice*, *29*(3), 233-240.

Cole, D. (2003). The effect of a curfew law on juvenile crime in Washington, D.C. *American Journal of Criminal Justice*, *27*(2), 217-232.

Duval, S., & Tweedie, R. (2000). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics, 56*(2), 455-463.

Ford, R. T. (1994). Juvenile curfews and gang violence: Exiled on Main Street. *Harvard Law Review*, *107*(7), 1693-1710.

Foss, R., & Evenson, K. (1999). Effectiveness of graduated driver licensing in reducing motor vehicle crashes. *American Journal of Preventive Medicine*, *16*(1, Supplement 1), 47-56.

Fried, C. S. (2001). Juvenile curfews: Are they an effective and constitutional means of combating juvenile violence? *Behavioral Sciences & the Law*, *19*(1), 127-141.

Good, L. (2006, February 13). Youth curfews continue to show promise. *Nation's Cities Weekly*, *29*(4). Retrieved from http://icma.org/en/Article/10270/Youth_Curfews_Continue_to_Show_Promise

Gottfredson, D. C., Gottfredson, G. D., & Weisman, S. A. (2001). The timing of delinquent behavior and its implications for after-school programs. *Criminology & Public Policy*, *1*(1), 61-86.

Harris, L. J. (2006). An empirical study of parental responsibility laws: Sending messages, but what kind and to whom? *Utah Law Review, 2006*(1), 5-34.

Hartling, L., Wiebe, N., Russell, K., Petruk, J., Spinola, C., & Klassen, T. P. (2004). Graduated driver licensing for reducing motor vehicle crashes among young drivers. *Cochrane Database of Systematic Reviews*, (2).

Hingson, R., Howland, J., Koepsell, T. D., & Cummings, P. (2001). Ecological studies. In F. P. Rivara, P. Cummings, T. D. Koepsell, & D. C. Grossman

(Eds.). *Injury control: A guide to research and program evaluation* (pp 157-167). Cambridge: Cambridge University Press.

Marketos, A. K. (1995). The constitutionality of juvenile curfews. *Juvenile and Family Court Journal*, *46*(2), 17-30.

McDowall, D. (2000). Juvenile curfew laws and their influence on crime. *Federal Probation*, *64*(2), 58-63.

Mears, D. P., Shollenberger, T. L., Willison, J. B., Owens, C. E., & Butts, J. A. (2010). Practitioner views of priorities, policies, and practices in juvenile justice. *Crime and Delinquency, 56*(4), 535-563.

Privor, B. (1999). Dusk 'til dawn: Children's rights and the effectiveness of juvenile curfew ordinances. *Boston University Law Review*, *79*(2), 415-492.

Reynolds, K. M., Seydlitz, R., & Jenkins, P. (2000). Do juvenile curfew laws work? A time-series analysis of the New Orleans law. *Justice Quarterly*, *17*(1), 205-230.

Ruefle, W., & Reynolds, K. M. (1995). Curfews and delinquency in major American cities. *Crime & Delinquency*, *41*(3), 347-363.

Ruefle, W., & Reynolds, K. M. (1996). Keep them at home: Juvenile curfew ordinances in 200 American cities. *American Journal of Police*, *15*(1), 63-84.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton Mifflin.

Simpson, B., & Simpson, C. (1993). The use of curfews to control juvenile offending in Australia: Managing crime or wasting time. *Current Issues in Criminal Justice*, *5*(2), 184-199.

U.S. Conference of Mayors. (1997). *A status report on youth curfews in America's cities: A 347-city survey*. Washington, D.C.: The U.S. Conference of Mayors. Retrieved from http://www.usmayors.org/publications/curfew.htm

Watzman, N. (1994). The curfew revival gains momentum. *Governing*, *7*(5), 20-21.

White, R. (1996). Ten arguments against youth curfews. *Youth Studies Australia*, *15*(4), 28-30.

Wolfgang, M. E., Figlio, R. M., & Sellin, J. T. (1972). *Delinquency in a birth cohort*. University of Chicago Press.

References of Preliminary Search Results

Cole, D. (2003). The Effect of a curfew law on juvenile crime in Washington, D.C. *American Journal of Criminal Justice*, *27*(2), 217-232.

Cole, D. (2002). *An examination of Washington, D.C.'s juvenile curfew act of 1995: A single-system approach* (Doctoral Dissertation). University of Maryland, Baltimore, Maryland.

Fivella, K. A. (2000). *Curfews, help or hindrance: An analysis of Concord Police Department's 1995 curfew law* (Master's Thesis). San Jose State University, California.

Fritsch, E. J., Caeti, T. J., & Taylor, R. W. (1999). gang suppression through saturation patrol, aggressive curfew, and truancy enforcement: A quasi-experimental test of the Dallas Anti-Gang Initiative. *Crime & Delinquency*, *45*(1), 122-139.

Gouvis, C. (2000). *Evaluation of the youth curfew in Prince George's County, Maryland, final report* (Program/Project Evaluation No. NCJ 200519) (p. 34). Washington, D.C.: The Urban Institute.

Gouvis, C., & Moore, G. (2003). *Evaluation of the youth curfew in Prince George's County, Maryland: The curfew's impact on arrests and calls for service* (Program/Project Evaluation No. NCJ 200520) (p. 38). Washington, D.C.: The Urban Institute.

Hunt, A. L., & Weiner, K. (1977). The impact of a juvenile curfew: Suppression and displacement in patterns of juvenile offenses. *Journal of Police Science and Administration*, *5*(4), 407–412.

Macallair, D., & Males, M. (1998). *The impact of juvenile curfew laws in California*. (p. 9). San Francisco, California: Justice Policy Institute. Retrieved from http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED427147

Males, M. A. (2000). Vernon, Connecticut's juvenile curfew: The circumstances of youths cited and effects on crime. *Criminal Justice Policy Review*, *11*(3), 254-267.

Males, M. A., & Macallair, D. (1999). An analysis of curfew enforcement and juvenile crime in California. *Western Criminology Review*, *1*(2).

McDowall, D., Loftin, C., & Wiersema, B. (2000). The impact of youth curfew laws on juvenile crime rates. *Crime & Delinquency*, *46*(1), 76-91.

Moscovitz, H., Milzman, D., & Haywood, Y. (2000). The Washington, D.C. youth curfew: Effect on transports of injured youth and homicides. *Prehospital Emergency Care*, *4*(4), 294-298.

Reynolds, K. M., Seydlitz, R., & Jenkins, P. (2000). Do juvenile curfew laws work? A time-series analysis of the New Orleans law. *Justice Quarterly*, *17*(1), 205.

Reynolds, K. M. (1997). *The impact of juvenile curfews on crime prevention* (Doctoral Dissertation). University of New Orleans, Louisiana.

Shatz, D. V., Zhang, C., & McGrath, M. (1999). Effect of a curfew law of juvenile trauma. *The Journal of Trauma: Injury, Infection, and Critical Care*, *47*(6), 1013.

Sutphen, R. D., & Ford, J. (2001). The effectiveness and enforcement of a teen curfew law. *Journal of Sociology & Social Welfare*, *28*(1), 55.

Juvenile Curfew Systematic Review
Study Level Code Sheet

Use one study level code sheet for each study. If multiple documents report on the results from the same study, identify one of the documents as primary and use its document ID as the StudyID below. Record the document ID for the related documents in the CrossRef# fields.

Identifying Information:

1. Study (document) identifier   StudyID _____

2. Cross reference document identifier   CrossRef1 _____

3. Cross reference document identifier   CrossRef2 _____

4. Cross reference document identifier   CrossRef3 _____

5. Coder's initials   SCoder _____

6. Date coded   Date ___ - __ - __

General Study Information:

7. Author   Author _____

8. Funder (e.g., NIJ)   Funder _____

9. Geographical Location of Study   SLocale _____

10. Geography (1=single site; 2=multiple sites; 9=cannot tell)   Sites _____

11. Country   Country _____

12. Date range for data collection   StartDate ___ - __ - __

      DoneDate: ___ - __ - __

13. Publication Type   PubType _____

    1. Book   4. Book Chapter

    2. Journal (peer reviewed)   5. Federal Gov't Report

    3. State/Local Gov't Report   6. Dissertation/Thesis

    4. Unpublished (tech report, conference paper)

Information on the Curfew Policy:

14. Description of policy_____

_____

_____

Juvenile Curfew Systematic Review
Study Level Code Sheet

15. Exceptions to the policy   [PolicyExcept] _____

      1. Travel for School/Sports/Employment

      2. Accompanied by Guardian or Adult over certain age

    3. Other _____

16. Time that curfew begins (use military time, e.g.., 1830)   [CurfewStart] _____

   (9999 if missing; 8888 if not applicable to this type of curfew)

17. Time that curfew ends (use military time, e.g.., 1830)   [CurfewEnd] _____

   (9999 if missing; 8888 if not applicable to this type of curfew)

18. Youngest age affected by this curfew   [CurfewAge1] _____

19. Oldest age affected by this curfew   [CurfewAge2] _____

20. Level at which curfew implemented   [CurfewSize] _____

      1. Neighborhood

      2. City

      3. County

      4. Metropolitan area

      5. State

    6. Country

21. Number distinct jurisdictions included in curfew (this reflects the entities on which data was collected)   [CurfewN] _____

22. Total population in the curfew condition jurisdictions   [CurfewPop] _____

22b. Juvenile population in the curfew condition jurisdictions (if reported) [JuvPop]____

23. Nature of geographic areas   [AreaType] _____

      1. Urban

      2. Rural

      3. Surburban

      4. Metropolitan (urban/suburban)

    5. Other mixed

24. Implementation problems_____

Juvenile Curfew Systematic Review
Study Level Code Sheet

25. Is information regarding enforcement reported?   [EnfData]____

    (1=yes; 0=no)   page number:_____

Information on Comparison Communities

26. Nature of comparison units   [CompSize] _____

        1. Neighborhood
        2. City
        3. County
        4. Metropolitan area
        5. State
        6. Country

27. Number distinct jurisdictions included in comparison (this reflects the entities on

which data was collected)   [CompN] _____

28. Total population in the comparison condition jurisdictions   [CompPop] _____

28b. Juvenile population in the comparison condition jurisdictions (if reported)

[JuvCompPop]____

29. Nature of geographic areas   [AreaTypeC] _____

        1. Urban
        2. Rural
        3. Surburban
        4. Metropolitan (urban/suburban)
        5. Other mixed

Study Methodology:

30. Design Type   [DesignType] _____

        1. Interrupted times-series (single series)
        2. Interrupted times-series (multiple treatment series)
        3. Interrupted times-series (with comparison series)
        4. Non-equivalent comparison group with pre-post test
        5. One-group, pre-post test
        6. ABAB design
       7. Randomized controlled trial (true experiment)
       If 1, 2, or 3, go to #31; If 4, 5, 6, or 7, skip to #34

31. Number of measures prior to implementation of curfew   [PreMeasures] _____

      (9999 if not reported)

Juvenile Curfew Systematic Review
Study Level Code Sheet

32. Number of measures following implementation of curfew   [PostMeasures] _____

    (9999 if not reported)

33. Number of days between measures   [Interval] _____

    (9999 if not reported; 8888 if varying intervals)

34. Baseline characteristics measures_____

_____

35. Analysis type   [AnalysisType] _____

    1. OLS regression
    2. ARIMA
    3. Other regression
    4. Simple comparison of rates
    5. Other

36. Analysis adjusted for covariates

    (1=yes; 0=no)   [Covariates] _____

Assessment of Risk and Bias:

37. Any noted or apparent historical artifacts

    (1=yes; 0=no)   [HistArt] _____

    Description: _____

38. Measurement confounds (change in measure over time)

    (1=yes; 0=no)   [HistArt] _____

39. Selection of curfew area based on high baseline crime rate

    (1=yes; 0=no)   [SelArt] _____

40. Appropriate statistical analysis for design (e.g., ARIMA for interrupted

    time-series design)

    (1=yes; 0=no)   [StatApp] _____

[41-42 for non-equivalent comparison groups only]

41. Non-trivial baseline differences (statistically significant baseline differences or

    baseline differences that are potentially substantively meaningful – i.e., $d > .10$)

    (1=yes; 0=no)   [BaseDiff] _____

42. Statistical analysis failed to adjust for measured baseline differences

    (1=yes; 0=no)   [NoAdjust] _____

Juvenile Curfew Systematic Review
Effect Level Code Sheet

Code these items for each eligible outcome.

Identifying Information:

1. Study (document) identifier   StudyID _____

2. Effect identifier   ESID _____

3. Coder's initials   GrpCoder _____

4. Date coded   Date ___ - __ - __

Outcome Type:

5. Label for outcome _____

6. Primary outcome? (crime or disorder) (1=yes; 0=no)   [Primary] _____

7. Outcome type   [OutType] _____

    1. Crime (any type)

    2. Crime (juvenile only)

    3. Public disorder crimes

    4. Public perception of crime and disorder

    5. Public fear of crime

    [will build list as needed]

8. Source of data   [DataSrc] _____

    1. Official record

    2. Self-report (juvenile self-report of crime)

    3. Citizen report

Sample size information:

9. Unit-of-analysis   [Unit-of-analysis] _____

10. Number of units, curfew condition   TxN _____

11. Number of units, comparison condition (-888 if not applicable)   CgN _____

Effect Data

12a. Baseline rate – curfew communities (Time 1)   TxBaseRate1 _____

12b. Baseline rate – curfew communities (Time 2)   TxBaseRate2 _____

12c. Baseline rate – curfew communities (Time 3)   TxBaseRate3 _____

13a. Baseline rate – comparison communities (Time 1)   CgBaseRate1 _

13b. Baseline rate – comparison communities (Time 2)   CgBaseRate2 _____

Juvenile Curfew Systematic Review
Effect Level Code Sheet

13c. Baseline rate – comparison communities (Time 3)   CgBaseRate3 _____

14a. Intervention rate – curfew communities (Time 1)   TxRate1 _____

14b. Intervention rate – curfew communities (Time 2)   TxRate2 _____

14c. Intervention rate – curfew communities (Time 3)   TxRate3 _____

15a. Intervention rate – comparison communities (Time 1)   CgRate1 _____

15b. Intervention rate – comparison communities (Time 2)   CgRate2 _____

15c. Intervention rate – comparison communities (Time 3)   CgRate3 _____

16. Rates adjusted for covariates (1=yes; 0=no)   CovAdj _____

17. Unstandardized coefficient from statistical model   Bcoef _____

18. SE for unstandardized coefficient from statistical model   SEBcoef _____

19. Type of statistical model   [ModelType] _____

    1. OLS regression

    2. ARIMA

    3. Other regression

    4. Simple comparison of rates

    5. Other

Hand Calculated Effect Size   *Using the Effect Size Calculator by David Wilson*

20. Hand calculated *d*-type effect size   ES_Hand1 _____

21. Hand calculated standard error of the *d*-type effect size   ES_Hand2 _____

22. Hand calculated odds-ratio effect size   ES_Hand3 _____

23. Hand calculated odds-ratio standard error   ES_Hand4 _____

24. Effect Size adjusted for covariates (1=yes; 0=no)   CovAdj _____

25. Page of effect size data   [ESPage] _____

26. Effect Size Calculator Computation Type _____