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Michael T. Baglivio

*Youth Opportunity Investments*

Kevin T. Wolff

*CUNY John Jay College of Criminal Justice*

Joan A. Reid

*University of South Florida St. Petersburg*

Sherry L. Jackson

*Florida Department of Juvenile Justice*

Alex R. Piquero

*University of Miami*

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## Did Juvenile Domestic Violence Offending Change During COVID-19?

Michael T. Baglivio, Ph.D.\*  
Youth Opportunity Investments, LLC.  
[michael.baglivio@youthopportunity.com](mailto:michael.baglivio@youthopportunity.com)

Kevin T. Wolff, Ph.D.  
John Jay College of Criminal Justice,  
[Kwolff@jjay.cuny.edu](mailto:Kwolff@jjay.cuny.edu)

Joan A. Reid, Ph.D.  
University of South Florida  
[jareid2@usf.edu](mailto:jareid2@usf.edu)

Sherry L. Jackson, Ph.D.  
Florida Department of Juvenile Justice  
[sherry.jackson@djj.state.fl.us](mailto:sherry.jackson@djj.state.fl.us)

Alex R. Piquero  
University of Miami  
[axp1954@miami.edu](mailto:axp1954@miami.edu)

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### Abstract

The current study adds some of the first light into the initial impacts of the largest global health crisis in a generation on family and domestic violence, the long-term repercussions of which may take decades to unpack. Statewide trends in juvenile arrests for domestic violence (DV)-related offending are examined, taking into account school closures for in-person learning in March 2020 and the subsequent mandate for an in-person learning option in Florida in August 2020. Additionally, trends by sex, race/ethnicity, and severity of the offense are examined. Contrasting with growing studies demonstrating an increase in DV-related arrests among adults, we find a significant decrease upon school closures then subsequent increase when schools reopened with an in-person option. Results held across examined subgroups, yet the extent of increase following mandatory in-person learning availability was not as uniform, with Hispanic youth showing the smallest increase and Black youth the largest. Implications are discussed.

**Keywords:** COVID-19, Domestic violence, juvenile offending, arrest trends

## **Author Bios:**

**Michael T. Baglivio** is the Vice President of Research & Development at Youth Opportunity, with focus on examining the effectiveness of juvenile treatment programming on short- and long-term performance measures and outcomes. He earned his PhD from the College of Criminology, Law, and Society at the University of Florida. For the past 10 years, he has evaluated the effectiveness of juvenile justice reform initiatives throughout Florida. His research interests include the repercussions of adverse childhood experiences exposures, structured decision-making tools, and policy-relevant research.

**Kevin T. Wolff** is an associate professor at John Jay College of Criminal Justice in New York City. He earned his PhD from the College of Criminology and Criminal Justice at Florida State University. His research interests include the spatial and temporal patterning of crime, juvenile justice, program evaluation, and quantitative methods. He has recently received a number of research awards including The Feliks Gross Award from The City University of New York and best paper of the year award from Youth Violence and Juvenile Justice.

**Joan A. Reid, Ph.D., LMHC** is an Associate Professor of Criminology and Director of the Trafficking in Persons Research Lab at the University of South Florida on the St. Petersburg campus. Dr. Reid has conducted research on human trafficking, commercial sexual exploitation, sexual victimization, and family violence. Dr. Reid has authored over 50 publications chiefly focused on human trafficking of minors in the United States. Additionally, Dr. Reid has extensive experience as a practitioner in the field providing trauma-informed care to fostered and justice-involved youth and survivors of human trafficking.

**Sherry L. Jackson** is the Director of Research & Data Integrity for the Florida Department of Juvenile Justice, supervising 26 researchers and data integrity officers throughout the state, as well as overseeing the FDJJ Institutional Review Board. She is responsible for overseeing all of the Department's research and data integrity activities and informing Department leadership, the Legislature, and the public on the effectiveness of all juvenile justice activities funded by the State of Florida. Sherry earned her Ph.D. in Social Work (policy focus) from Florida State University, College of Social Work in 2010. Sherry is currently working on two OJJDP Second Chance Re-entry grants.

**Alex R. Piquero** is Professor and Chair of the Department of Sociology & Criminology and Arts & Sciences Distinguished Scholar at The University of Miami and Professor of Criminology at Monash University in Melbourne Australia. He is also editor of Justice Evaluation Journal. His research interests include criminal careers, criminological theory, crime policy, evidence-based crime prevention, and quantitative research methods. He has received several research, teaching, and service awards and is fellow of both the American Society of Criminology and the Academy of Criminal Justice Sciences. He has received several research, teaching, and mentoring awards. In 2019, he received the Academy of Criminal Justice Sciences Bruce Smith, Sr. Award for outstanding contributions to criminal justice and in 2020 he was recipient of the Lifetime Achievement Award from the Division of Developmental & Life-Course Criminology of the American Society of Criminology.

## **Did Juvenile Domestic Violence Offending Change During COVID-19?**

The deleterious health consequences related to COVID-19 are staggering, with over 38 million confirmed cases and exceeding 630,000 deaths as of late-August 2021 in the United States alone (CDC, 2021; Johns Hopkins University, 2021). That number of deceased is larger than the entire population of Baltimore, Maryland. In addition to the health-related toll that the novel coronavirus has taken throughout the US and around the globe, a growing body of research is documenting the impacts of the COVID-19 pandemic on an array of factors including economic/social (Bartik et al., 2020; Schwab & Malleret, 2020), mental health symptomology and suicidal ideation (Gaidhane et al., 2020; Marchetti et al., 2020; O'Connor et al., 2021; Shanahan et al., 2020), family and domestic violence (Campbell, 2020; Ellis, Briggs, Lloyd, & Telford, 2021; Piquero, Jennings, Jemison, Kaukinen, & Knaul, 2021; Piquero, Riddell, Bishopp, Narvey, Reid, & Piquero, 2020), and criminal offending, including homicide (e.g., Rosenfeld & Lopez, 2021). The initial impacts of COVID-19 across these outcomes have overwhelmingly indicated detriment.

As the knowledge base accumulates, one glaring omission has been the extent to which there have been any potential changes in the nature and type of juvenile offending, especially given the school closures/suspension of in-person learning that occurred during 2020. Accordingly, the current study seeks to extend our knowledge of the pandemic's effects on unhealthy behavior to domestic violence-related offending among juveniles. Specifically, we advance from prior work by examining pre-pandemic through one-year post-pandemic onset of incidents of domestic violence-related arrests of youth across a statewide sample. Additionally, the current study explores differences by sex, race/ethnicity, and levels of offense severity.

### **COVID & Adult Domestic Violence Arrests**

For domestic violence and child abuse/neglect victims, the very ordinances aimed at flattening the COVID curve may have inadvertently led to a potential exacerbation of such victimization. Namely, social isolation due to stay-at-home orders, limited interactions with others outside of the home due to fear of COVID transmission and/or non-essential business and institution closures creating a situation unintentionally mimicking perpetrator-imposed restrictions, coercion and control (Campbell, 2020; Ellis et al., 2021; Piquero, Riddell et al., 2020). These restrictions coupled with any onset of and/or increase in substance abuse, financial difficulties and stress/strain may create the perfect storm for increases in the prevalence of family violence as victims are trapped at home with irritable perpetrators with limited outlets for relief. Indeed, initial increases in domestic violence post-pandemic onset were reported in China, Brazil, Italy, Spain, and in the United States (Campbell, 2020).

Most notably, Piquero and colleagues' systematic review of 18 studies across 37 estimates covering studies from the U.S., Mexico, Italy, Sweden, Australia, Argentina, and India found an overall 7.9% increase in domestic violence, with an 8.1% increase among studies conducted in the United States specifically (Piquero, Jennings et al., 2021). Notably, 29 of the 37 estimates included in their meta-analysis indicated a significant domestic violence increase in response to stay-at-home/lockdown orders. While the studies reviewed herein have largely focused on official records, additional work has indicated similar short-term domestic violence increases in both accounts from services providers (Pfitzner, Fitz-Gibbon, Myer, & True, 2020) and from self-reports (Jetelina, Knell, & Mosberry, 2021). Relatedly, evidence regarding increases in child abuse and neglect across countries as an unintended result of stay-at-home/lockdown orders has been documented (Ellis et al., 2021). Grounded upon theoretical and empirical work linking childhood maltreatment and later life violence (e.g., Ellis, Winlow, & Hall, 2017; Widom 1989), Ellis and colleagues argue such

increases in adverse childhood experiences/traumatic exposure may serve to substantively increase future violence and harm as these lockdown youth age (Ellis et al., 2021; see also Green, 2020).

### **COVID & Juvenile Delinquency**

While COVID-related research in crime and delinquency is steadily increasing, little prior work has examined juvenile offending specifically. Initial theoretically-driven forecasting predicted the ordinances imposed in efforts to flatten the curve of COVID transmission, such as stay-at-home orders and social distancing would lead to a decline in juvenile delinquency (Buchanan, Castro, Kushner, & Krohn, 2020). This assumption of delinquency decline was related to 1) decreased peer associations, 2) increased parental monitoring, and 3) reduced opportunities (all three of which are primarily due to stay-at-home orders, closures of in-person education, and non-essential business closures), coupled with a law enforcement strategy response to COVID-19 related to juvenile delinquency of using arrest as a “last resort” (Buchanan et al., 2020). Early empirical data through March 2020 on juvenile arrests, detention, and confinements confirmed their predictions of such decreases, while they predicted an uptick towards pre-pandemic levels as COVID-related restrictions loosened (stay-at-home orders, return to in-person schooling, etc.; Buchanan et al., 2020).

Leveraging a feminist criminology perspective, Terry and colleagues examined rural and urban differences in the impact of COVID-19 on the rates of male and female intakes to the 30 juvenile intake and assessment facilities in a Midwestern U.S. state from January 2018 through January 2021 (Terry, Lockwood, Steele, & Milner, 2021). A nearly 35% decline in intakes was found post-COVID lockdown. This decline is in keeping with additional work indicating the 24% dramatic and rapid reduction in the use of juvenile detention at the onset of the pandemic (Annie E. Casey, 2020). Importantly, the Terry and colleagues (2021) findings of declining intakes differed based for girls and boys and rural versus urban, such that the urban boys decline was greatest (41%), while the rural girls evidenced the smallest decline (23%). Reasons for the declines (based on staff comments)

were related to law enforcement avoiding contact except for more serious/felony behaviors (Terry et al., 2021). Further, staff noted an increase in mental health-related referrals. However, as the researchers showed, declines for girls were not as pronounced as those for boys, with rural girls lagging the furthest behind with respect to such decline. Findings illustrated the importance of taking into account potential sex differences (as well as accounting for geography) in examining the impacts of the pandemic on juvenile offending.

In Florida, the focus of the current study, juvenile arrests during fiscal year 2019-20 (July 1, 2019-June 30, 2020) were 17.3% lower than those of the prior fiscal year (compared to the 7.9% reduction from FY2017-18 to FY 2018-19, and the 8.2% reduction from FY2016-17 to FY2017-18; Florida Department of Juvenile Justice (FDJJ), 2021). Even more telling is the decline post-pandemic when comparing only the months of April through June of each fiscal year. From April through June 2020 there were only 7,961 arrests, down an astonishing 44% compared to April through June 2019 (compared to 5.5% and 9.1% the prior two April through June comparisons; FDJJ, 2021). Of note, the decline in male juvenile arrests during April through June 2020 compared to April through June 2019 was 40.6%, while the decline for females was even greater at 54.5%, which stands in contrast to the findings by Terry and colleagues (2021) of less dramatic declines for female youth in their examination of a Midwestern state. Whether such declines in the Midwestern state's juvenile offending occurred among the current study's sample (Florida youth) or focal offense type, domestic violence-related offending, is unknown.

There are several reasons to expect that the domestic violence-related offending trends among juveniles may not mimic overall trends in arrests seen in Florida. Specifically, the COVID ordinances such as stay-at-home/lockdown orders and in-person school closures that were predicted to decrease antisocial peer association and enhance parental monitoring thereby reducing

juvenile offending (e.g., Buchanan et al., 2020) may actually have increased family violence (as shown in the adult studies reviewed above; e.g., Piquero, Jennings et al., 2021), which could include offenses of juveniles against other family members. As such, there are opposing forces by which juvenile offending could be impacted related to COVID and associated ordinances, such as increasing strain and stress (Agnew, 2001) related to being stuck at home with potentially financially and emotionally strained parents/family, while simultaneously having limited opportunities to offend related to changes in routine activities (Cohen & Felson, 1970) and peer exposure (Akers, 1973; Pratt et al., 2010). Interestingly, and relatedly, while perhaps contrary to popular opinion, juvenile delinquency in Florida historically declines both during the summer and in December, when school is not in session (FDJJ, 2015). Again, contradictory factors (lower delinquency when school is not in session versus unprecedented societal strain brought on by COVID and related ordinances) suggest that examining the impacts of the pandemic on domestic violence-related offending among juveniles is an undeveloped yet critical and policy-relevant line of inquiry. The current study provides a statewide analysis of such offending, examining the entire population of such offenses and providing sex-, race/ethnic-, and offense severity-specific findings.

### **Current Study**

The current study examines the impacts of COVID-19 on juvenile domestic violence-related offending across a large diverse state. Specifically, we examine deviations from the existing trends in juvenile domestic violence offending in Florida, with attention to school closures for in-person instruction and subsequent mandated re-opening. Importantly, the current study advances from the limited prior work on juvenile offending pre- to post-pandemic onset (e.g., Buchanan et al., 2020; Terry et al., 2021) by examining 1) statewide trends, 2) modeling male and female domestic violence offending separately, 3) examining differences across race/ethnicity, and 4) differences based on offending severity (misdemeanor, felony, violent felony). The intent is to provide a comprehensive

understanding as to whether juvenile domestic violence-related offending has mimicked the same initial increases post-pandemic onset as found in studies of adult domestic violence arrests (e.g., Kurland et al., 2021; Piquero et al., 2021) as well as explore differences based on offense severity and characteristics of the reported aggressor.

Additionally, as the study examines juvenile offending, we advance from prior work in our attention to the implications of Florida's rather unique situation of avoiding statewide lockdown, coupled with closure of in-person schooling and subsequent Governor-mandated statewide return to in-person classes. This allows us to build on previous work by examining not just the impacts of pandemic onset and associated ordinances/restrictions on DV-related offending, but also the impacts of a step back towards "normalcy" with return of in-person schooling for many youth (while in-person education was mandated to be available to all students, online versus in-person schooling remained optional for parents/students, and was a popular option).

### **Sample**

The current study leverages the entire population of all domestic violence-related referrals (equivalent to an adult arrest) of all youth under the age of 18 (the age of majority in Florida) from January 1, 2019 through April 30, 2021. The Florida Department of Juvenile Justice (FDJJ) maintains a centralized information system which captures complete demographics, offense, placement, and risk/need assessment information for all referrals (arrests) within the State. All charges for which the offense was domestic violence-related (DV-related) are flagged internally. To provide clarity, DV-related offenses in this context is an inclusive definition, encompassing offenses involving parents, children, siblings, and other family members and intimate partners (similar to prior OJJDP reporting definitions; OJJDP, 2008). The current study leverages that unique "DV-indicated" flag to select only DV-related offenses for the current study. As many referrals have multiple charges, the current study selected the most serious DV-related charge of a given referral

for all offenses that occurred within the study period (January 1, 2019 to April 30, 2021), resulting in the final study sample of 11,388 unique arrests for a DV-related offense. Again, this is the entire population of statewide DV-related juvenile referrals.

Importantly, there are several key dates to remain mindful of with respect to the pandemic onset as well as school in-person closures and mandatory in-person school reopening in Florida. Specifically, March 10<sup>th</sup>, 2020 represents the first day after the Florida Governor declared a public health emergency (Executive Order Number 20-52), wherein schools were closed for in-person learning. Further, statewide mandatory re-opening for the in-person learning option was set for August 31, 2020 (Department of Education Order Number 2020-EO-06).

### **Focal Dependent Measure- DV-related Referrals.**

The trend in weekly DV-related juvenile referrals is the focal measure of the study. To examine DV-related offending, a weekly count of DV-related referrals was constructed beginning January 1, 2019 (Week 1) and for each successive week through April 30, 2021 (Week 122). In order to examine differences across subgroups of DV-related referrals we generated a number of weekly time series that included the count of DV-related referrals disaggregated by sex (*males* = 60.5%, *females* = 29.5%), race/ethnicity, and offense severity allowing us to analyze the subgroup-specific trends. We follow FDJJ's internal protocol wherein Hispanic ethnicity supersedes race such that all *White* (44.5%) and *Black* (36.1%) youth are non-Hispanic, while *Hispanic* (18.8%) youth may be either White or Black. Additionally, there were 75 (0.7%) referrals which involved youth classified as "other race" (not analyzed separately). With respect to offense severity, DV-related charges were disaggregated by charge severity so that trends in *misdemeanor* (77.8%), *felony* (non-violent or violent, 22.2%), and *violent felonies* (21%) dv-related referrals could be assessed. Of note, the felony and violent felony measures are not mutually exclusive (all violent felonies are included in the felony measure). Violent felonies include felony offenses of murder/manslaughter, sexual battery, kidnapping, other felony sexual

offenses, armed robbery, and aggravated assault and/or battery, and make up the vast majority of all felony DV-related offenses.

### **Analytic Strategy**

Prior to assessing whether the trends in DV-related referrals were impacted by the school closures associated with the onset of the COVID-19 epidemic (and their subsequent reopening) some preprocessing of the raw referral data was necessary. Following Hodgkinson and Andresen (2020), we use the Hodrick and Prescott (1997) filter to extract the trend portion of the time series, effectively smoothing the data and removing the volatility present in the weekly counts of DV-related referrals. Doing so allows us to confidently identify deviations in the trend, during the period under investigation and assess whether these deviations are related to the timing of school closures in Florida due to the COVID-19 epidemic. One benefit of the Hodrick and Prescott (1997) filter is that it smooths the data without any loss of observations which occurs when using more traditional time-series methods such as moving average calculations, allowing us to both visualize and evaluate the trend in domestic violence-related referrals for the entire period for which data was available. In addition to the data smoothing procedure, we account for the known seasonality of crime data by including both a week (1 -122) and week squared variable in the estimation of our time-series regression models (McDowall, Loftin, & Pate, 2012). In addition to accounting for the underlying trend in the model, the inclusion of the squared term picks up any seasonality that is also present in the data.

In addition to a simple descriptive analysis, we assess the potential for the state mandated school closures associated with COVID-19 to impact the trend in DV-related referrals (both smoothed and unsmoothed) using a series of structural break analyses in which we test for the existence of a structural break at two known places in the time series. Specifically, we test for a structural break using a Wald test to determine whether the coefficients in a time-series regression

model vary between the periods defined by the known break dates, which in our case are the dates associated with school closures (March 10<sup>th</sup>, 2020; Week 63) and reopening (August 31<sup>st</sup>, 2020, Week 88) across the state.

## **Results**

Prior to presenting the results of our structural break analysis, we provide a simple descriptive look at the incidence of DV-related referrals during the three periods of interest. As seen in the first row of Table 1, the average statewide weekly total of DV-related referrals during the 62 weeks leading up to the COVID-19 crisis was 103.2 referrals per week (SD = 12.53). During the period which schools were closed, this number dropped just over 25% to an average of 76.9 referrals (SD = 8.96) per week. When the schools reopened in August, this number rebounded by nearly 13%, but remained well below the pre-COVID average at 86.89 referrals per week across the state (SD = 11.39). This trend along with the relevant periods is shown in Figure 1 (shown below).

Looking across the various subgroups, the dip in DV-related referrals is, for the most part, fairly consistent. The decline was similar between male and female youth (-25.59% vs -25.26%, respectively), although the number of females referred to FDJJ once schools reopened was closer to that during pre-pandemic period, while the number of males referred weekly remained lower, shown in Figure 2. Looking across each of the racial/ethnic groups considered, the largest decline was observed among white youth (-28.35%), however referrals of both Black (-24.64%) and Hispanic (-21.42%) youth also declined substantially during the period that schools were closed. Also notable, while referrals of Hispanic youth did not increase much at all once schools reopened, the average

weekly number of referrals among Black youth rebounded to their pre-pandemic levels during the follow-up period (shown in Figure 3).

Finally, we examined the change in DV-related referrals according to their level of severity. More specifically we disaggregated the total number of referrals into the weekly count of misdemeanor, felony, and violent felony DV-related referrals from across the state. We observed a substantial drop across all three categories, with the largest decline (-27.10%) occurring among misdemeanor referrals. Similarly, misdemeanor DV-related referrals rebounded just over 14% during the weeks that followed the reopening of schools, while felonies and violent felonies saw smaller increases (8.32% and 8.09%, respectively). These preliminary results suggest that the onset of the COVID-19 crisis and related school closures were associated with a substantive decrease in DV-related referrals, and that these declines cut across demographic groups and levels of crime severity. Next, we present the results of the structural break analysis which examines whether these shifts were a significant departure from the longer-term trend in DV-related referrals.

Table 2 presents the results of the structural break analysis where we examined whether there was a significant shift in the trend of DV-related referrals present at the time schools were closed as a precautionary measure to stop the spread of COVID-19 and then their reopening later in the fall of 2020. Again, because of the volatility in the raw weekly count of referrals we also conducted this analysis on smoothed trend data that was created using the Hodrick and Prescott filter. In the vast majority of instances, the results suggest that there were indeed two statistically significant shifts in the trend during the periods identified. Only among Hispanic DV-related referrals and violent felony

DV-related referrals did the structural break test fail to indicate a significant shift in the time-series (after accounting for the seasonality present in the data). Interestingly, among the analyses that examined the smoothed trends, there was evidence of structural breaks at both week 63 and 88 among every subgroup analyzed. Overall, these results provide fairly compelling evidence that the onset of COVID-19, and the school closures that followed, were significantly associated with a significantly lower number of DV-related referrals among youth across the state of Florida. These results are discussed in greater detail below.

## **Discussion**

The impact of the COVID-19 pandemic and associated restrictions aimed at flattening its curves on health outcomes (i.e., cases, hospitalizations, and deaths; Piquero & Kurland, 2021) local and global economics (Congressional Research Service, 2021), physical, behavioral, and mental health (Brooks et al., 2020), and antisocial behavior (Nivette et al., 2021; Rosenfeld & Lopez, 2021) is beginning to be documented, with a great many outcomes pointing to much harm in just about every facet of human life across the globe. Since the first quarter of 2020, there is an argument to be made that adolescents in particular have faced unique difficulties related to stay-at-home/lockdown and school closure ordinances, as their entire daily lives are turned upside down and peer connections so important during that developmental period are dramatically altered (Magson et al., 2021). The pandemic has brought changes to family life for both youth and adults, and while a growing body of research has detailed the increases in family domestic violence among adults (e.g., Ellis, Briggs, Lloyd, & Telford, 2021; Piquero, Jennings, Jemison, Kaukinen, & Knaul, 2021), no research to date has focused exclusively on domestic violence-related offending among adolescents. The current study examined changes in statewide incidents of domestic violence perpetration by juveniles related

to in-person school closures brought on by the pandemic and subsequent mandatory reopening of available in-person learning. Further, we build understanding as to whether DV-related referral trends differed across sex, race/ethnicity, and severity of offenses.

Results demonstrate that statewide trends of DV-related referrals among adolescents dropped significantly when schools were closed, and subsequently increased significantly upon orders to make an in-person learning option mandatory for all schools in the state. One remarkably consistent finding to emerge from our investigation was that the overall trend of a decrease in domestic violence at school closure and increase in domestic violence at in-person reopening held true across sex, race/ethnicity, and regardless of examining misdemeanors, felonies, or violent felonies only. Notably, with respect to Hispanic DV-related offending, and violent felony DV-related referrals, while the raw weekly structural break test failed to indicate a significant shift in the time-series (after accounting for the seasonality present in the data), the smoothed trend did indicate significant shift. The consistency of the drop at closure and subsequent increase at in-person reopening is noted, as is the similarity in the extent to which DV-related referrals dropped at school closure across subgroups. The statewide drop was on the order of 25.5%, with all subgroups experiencing between an 18% (violent felony referrals) and 28% (White referrals) decline.

Interestingly, the extent of increase following mandatory in-person learning availability, was not as uniform. Black referrals for DV completely reversed their drop back (nearly) to pre-school closure levels (a 23.5% increase after the 24.6% decrease), while no other sex, racial, or ethnic group came close to that sizable increase (females were the only other subgroup over half the reversal (15% increase after a 25% decrease), and referrals for DV-related offenses among Hispanics evidenced less than a 2% reversal (a 1.5% increase at reopen after a 21.4% decrease at closure). With respect to offending severity, misdemeanor referrals did bounce back halfway to pre-closure levels at reopen, with a 14% increase at in-person learning availability reopen after a 27% decline at school

closure, while felony and violent felony referrals each had 8% increases after a 19.6% decrease and 18% decrease at school closure, respectively. Unfortunately, data prohibit our examining whether each youth referred did or did not return to in-person learning (while the availability of in-person learning was mandatory for schools, youth/families could opt for either in-person or distance learning). However, available indicators suggest that Black and Hispanic youth in Florida were more likely to continue online learning after schools reopened for in-person learning. An analysis of school district data from Central Florida demonstrated that public schools with the highest proportion of Black or Hispanic youth had the highest proportion of students opt for online learning rather than return to in-person classes (Postal, 2020). Highlighting racial and ethnic differences in parental concerns over returning to in-person classes, a report by the CDC concluded that in comparison with White parents, non-White parents had greater concerns about reopened schools adhering to COVID-19 mitigation strategies, schools being safe, their child contracting COVID-19, and their child spreading COVID-19 to other family members if they returned to school (Gilbert et al., 2020).

Future work would benefit from examining why Black DV-related referrals would have the largest shift back towards pre-closure levels. One explanation, given the likelihood of Black students continuing at home for online learning after schools reopened (Gilbert et al., 2020; Postal, 2020) is that the accumulated tensions and pressures related to social isolation and limited interactions with others outside of the home due to fear of COVID transmission eventually become an intolerable strain, resulting in domestic conflicts. Yet, this does not explain the only 1.5% increase at the return of in-person learning availability among Hispanic DV-related referrals, since indications are that Hispanic youth were also more likely than White youth to continue at home with online learning.

As DV-related referrals most often involve issues among family members (but may be romantic partners), we assume most involve either family members themselves calling law

enforcement and/or calls related to others overhearing or witnessing such occurrences. Again, as is true of every other analysis studying crime (including domestic violence) during the COVID-19 lockdown period data limitations prohibit our examination into whether law enforcement arrived on the scene similarly across sex, race/ethnic, and offense severity occurrences and discrepancies were at the point of arrest, or whether the discrepancies were more in terms of calls made/officers arriving (i.e., were there differences across subgroups in actual incidents of DV-related offending, differences in calls related to DV-related offending, and/or differences in police decisions to arrest). For instance, law enforcement responding to DV-related offenses, may use discretion and decide to make an arrest based on whether there is sufficient parental monitoring of the children in the home and/or if small children in the home witnessed the violence or may be at risk for further violence should the conflict reignite and escalate. The extent to which there are single-parent multi-children household differences by race/ethnicity may explain some differences in DV-related arrests of juveniles, as arresting a mutually-culpable parent could compromise the care of the other children in the household. Of note, Florida statutes consider committing domestic violence in the presence of a child under the age of 16 years who is a family or household member with the victim or perpetrator as an aggravating circumstance with increased penalties, if convicted (Ann. Stat. § 921.0024).

Further, as prior work has indicated racial/ethnic differences in reporting victimization (e.g., Baumer, 2002), future research should examine the impact that the pandemic has had on the likelihood and/or willingness to report crimes in general, and DV-related victimization specifically, in addition to the work that has been accumulating on incidents of arrest. Again, however, crime reporting work indicates Black victims less likely to report to the police, meaning reporting by the victims may not be a viable explanation of our findings (though data limitations prohibit ruling out calls from neighbors and the race/ethnicity of those neighbors).

There are several additional lines of future inquiry that would be valuable to add to our understanding the impacts of the pandemic and associated ordinances on juvenile DV-related referrals. The limited prior work on the pandemic's effect of juvenile offending has noted girls residing in rural contexts evidenced the smallest post-pandemic onset decline while urban-located males had the largest decline (Terry et al., 2021). Future work should attempt to replicate that finding, included examining DV-related referrals in particular. Additionally, given some evidence of geographic variability in crime during the COVID-19 era—especially the lockdown period—across neighborhoods in Chicago (Campedelli et al., 2020), Detroit (Felson, Jiang, & Xu, 2020), and Miami-Dade (Moise & Piquero, 2021) examining DV-related referrals accounting for the unique socioeconomic context of each youth's neighborhood is warranted, as is examining whether the concentration of immigrants in the neighborhood effected DV-related referrals throughout the pandemic-associated ordinances (in light of the remarkably small 1.5% increase in Hispanic DV referrals found at the time of the return of in-person learning availability in the current study). Prior work examining juveniles involved in the justice system in Florida demonstrates both concentrated disadvantage as well as immigrant concentration play a significant role in the recidivism of such youth (disadvantage increasing reoffending while immigrant concentration decreases recidivism; e.g., Baglivio, Wolff, Jackowski, & Greenwald, 2017; Wolff, Baglivio, Intravia, & Piquero, 2015; Wolff, Baglivio, Piquero, Vaughn, & DeLisi, 2016; Wolff, Intravia, Baglivio, & Piquero, 2017). Relatedly, examining the factors, including neighborhood measures, that impact DV-related repeat offending among juveniles is warranted.

Further, the intent of the current study was to focus specifically on the changes in juvenile DV referrals at specific breakpoints during the COVID-19 crisis and the policy options instituted that most affected the lives of juveniles (i.e., school closures). Our analytic approach fits squarely in line with those contained in the existing literature, though, noteworthy, our investigation is among

the first to consider DV offending among juveniles. The approach taken essentially holds all other factors constant, whether or not they influence DV referrals among juveniles, as we simply examine trends before and after specific breakpoints, as is standard in examinations of the effects of COVID-19 on crime and time series intervention analysis more generally. Nevertheless, we acknowledge that other variables may have coincided with the structural breaks examined. Namely, food insecurity (due to lack of food which had been available at school prior to closures), exposure to violence (within the household, as we know adult DV offending increased), and changes in parental stress (whether in the form of unemployment, changes in substance use, etc.) could have been implicated in some extent of the changes observed in juvenile DV offending.<sup>1</sup>

The current study's findings contrasted the increases found from the pandemic on family violence/DV arrests among adults, instead demonstrating wholesale declines in DV-related offending among all subgroups of juveniles examined in response to in-person school closures. Nonetheless, we caution inference regarding the extent to which virtual education and/or COVID restrictions may have actually had a preventive effect on juvenile DV-related offending. While beyond the scope of the current work, alternative possibilities for the results that emerged from our analysis may be more related to whether a substantial proportion of DV offending among juveniles stems from disputes between youth and parents/caregivers surrounding education-related concerns (completing nightly homework assignments, not coming home late, going to bed at a reasonable hour, etc.), that were likely diminished during restrictions, even as schooling was conducted virtually. Certainly, these remain possibilities and conjectures to be investigated in subsequent work.

Furthermore, the long-term impacts are yet unknown related to both ordinances (school closures,

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<sup>1</sup> Of note, only 1.0% of the DV-related referrals across the entire 122-week study period were flagged by the FDJJ information system as school-related offenses (occurring at school or during a school-related function). As such, we do not believe that school closures resulted in less DV-related juvenile offending being reported to police. School closure of in-person learning may have resulted in fewer instances of abuse of the child by parents being reported by teachers/school personnel, which is an empirical question separate from that of the current study which involves the youth being referred not the parents/guardians.

stay-at-home orders/lockdowns) and the increases in potentially witnessing domestic violence in the household (as DV adult arrests increased). An ever-growing body of work devoted to childhood maltreatment has indicated the negative physical, behavioral, and mental health implications of witnessing and/or experiencing violence in the home, history of jail/prison among household members, and also emotional abuse/neglect (Feletti et al., 1998). The implications of the dramatic increases in domestic violence among adults and the increased stress associated with the pandemic and related stay-at-home/lockdowns and business and school closures, to the extent to which adverse childhood experience exposures were indeed exacerbated among children and adolescents, may be felt for decades.<sup>2</sup> Regarding antisocial behavior specifically, such enhanced ACE exposure has demonstrated implications for juvenile delinquency (e.g., Fox, Perez, Cass, Baglivio, & Epps, 2015) and criminal offending well into adulthood (Craig, Piquero, Farrington, & Ttofi, 2017). Relatedly, in anticipation of increased ACE exposure and associated repercussions on mental health and internalizing and externalizing behaviors, state agencies (including juvenile justice systems) and providers across disciplines (mental health, prevention services for at-risk youth, etc.) would be wise to prepare for an increased need for services. Fortunately, research is beginning to elucidate the protective effects of building resiliency even among highly ACE-exposed youth (e.g., Baglivio & Wolff, 2020; Brown & Shillington, 2017; Clements-Nolle & Waddington, 2019; Racine et al., 2020). These resiliency factors include strategies such as building school engagement and support, supportive relationships with prosocial adults, involvement in healthy structured and unstructured activities and/or groups, and building both family support networks and support and communication within families. One could further anticipate the increased need for access to

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<sup>2</sup> And this is especially likely to be the case as most domestic violence that comes to the attention of the justice system tends to be physical in nature. What all of these children may have seen (via exposure to violence) or been subject to (via emotional violence) is something that will be incredibly difficult to capture without in-depth interviews with domestic violence survivors (see Wood et al., 2021).

trauma-specific interventions as well, such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; see Cohen et al., 2016). Due to high numbers of COVID-19-related deaths and complications of mourning during lock-down conditions, there is expected to be a substantial escalation of traumatic and chronic grief in the aftermath of COVID-19 (Kokou-Kpolou, Fernández-Alcántara & Cénat, 2020).

## **Conclusion**

As has often been stated, there are pandemics within the global health pandemic brought on by COVID-19. When it is all said and done, it may very well end up being that the greatest toll this pandemic has taken has been on children and young adults who witnesses their parents and loved ones become sick, hospitalized, or even die. Add to this, the stress and anxiety these children faced when having to switch to remote learning, thereby losing out on the benefits of in-class instruction and the social interactions that are a critical component of the educational experience. Evidence is strong regarding 'absent students' virtually record numbers of failures in classes, and low passing rates on standardized examinations. It is almost if these individuals lost one full grade. Amidst all of this, these individuals were literally stuck at home with family members who themselves had to deal with all the bad that COVID-19 and its associated lockdowns brought forth. Our results add some of the first light into the initial impacts of the largest global health crisis in a generation on family and domestic violence, the long-term repercussions of which may take decades to unpack. Studying the various crime offending and crime victimization effects emerging directly or indirectly from the COVID-19 era represents a significant inter- and multi-disciplinary opportunity not just for criminologists, but also for pediatricians, psychologists, and policy makers worldwide. Lessons learned from their experience with COVID-19 will be critical for planning and dealing with the next, eventual pandemic.

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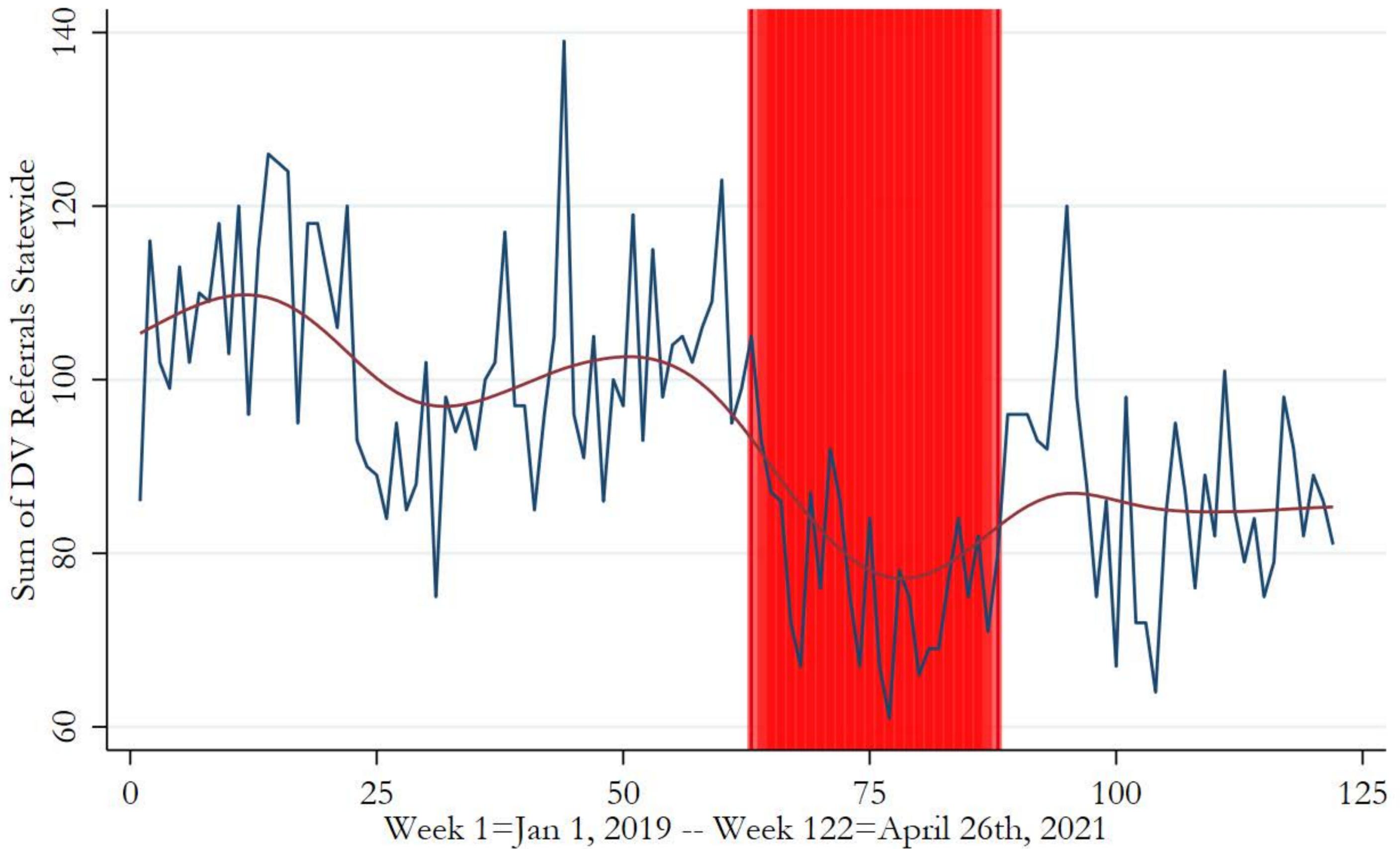
Table 1: Descriptive analysis of statewide domestic violence referrals during COVID-19 pandemic

	Pre-COVID-19 (Weeks 1-62)		During COVID-19 School Closures (Weeks 63-87)			Post-School Closure Period (Weeks 88-122)		
	Mean	SD	Mean	SD	% Change	Mean	SD	% Change
All DV Referrals	103.19	12.53	76.92	8.96	-25.46%	86.89	11.39	12.96%
Male DV Referrals	62.71	9.12	46.67	6.56	-25.59%	52.08	8.23	11.60%
Female DV Referrals	40.48	7.20	30.25	6.40	-25.26%	34.80	6.11	15.04%
White DV Referrals	47.05	7.37	33.71	5.56	-28.35%	36.97	8.19	9.68%
Black DV Referrals	36.16	6.72	27.25	5.63	-24.64%	33.66	7.40	23.51%
Hispanic DV Referrals	19.46	5.20	15.29	4.37	-21.42%	15.51	4.83	1.46%
Misdemeanor DV Referrals	80.76	11.17	58.88	7.76	-27.10%	67.34	9.73	14.38%
Felony DV Referrals	22.43	5.13	18.04	4.63	-19.56%	19.54	4.32	8.32%
Violent Felony DV Referrals	21.02	5.07	17.21	4.80	-18.12%	18.60	4.22	8.09%

Table 2: Summary of structural break tests at time of school closure and reopening

	Raw Weekly Count	Smoothed Series
	Known Breaks at Weeks 63 & 88?	Known Breaks at Weeks 63 & 88?
All DV Referrals	$\chi^2=80.77; p < .001$	$\chi^2=2,970; p < .001$
Male Referrals	$\chi^2=65.78; p < .001$	$\chi^2=4,404; p < .001$
Female Referrals	$\chi^2=55.80; p < .001$	$\chi^2=2,468; p < .001$
White Referrals	$\chi^2=43.40; p < .001$	$\chi^2=8,241; p < .001$
Black Referrals	$\chi^2=40.43; p < .001$	$\chi^2=2,472; p < .001$
Hispanic Referrals	$\chi^2=10.69; p > .05$	$\chi^2=6,354; p < .001$
Misdemeanor Referrals	$\chi^2=54.52; p < .001$	$\chi^2=3,239; p < .001$
Felony Referrals	$\chi^2=14.20; p < .05$	$\chi^2=2015.17; p < .001$
Violent Referrals	$\chi^2=12.16; p > .05$	$\chi^2=2,459; p < .001$

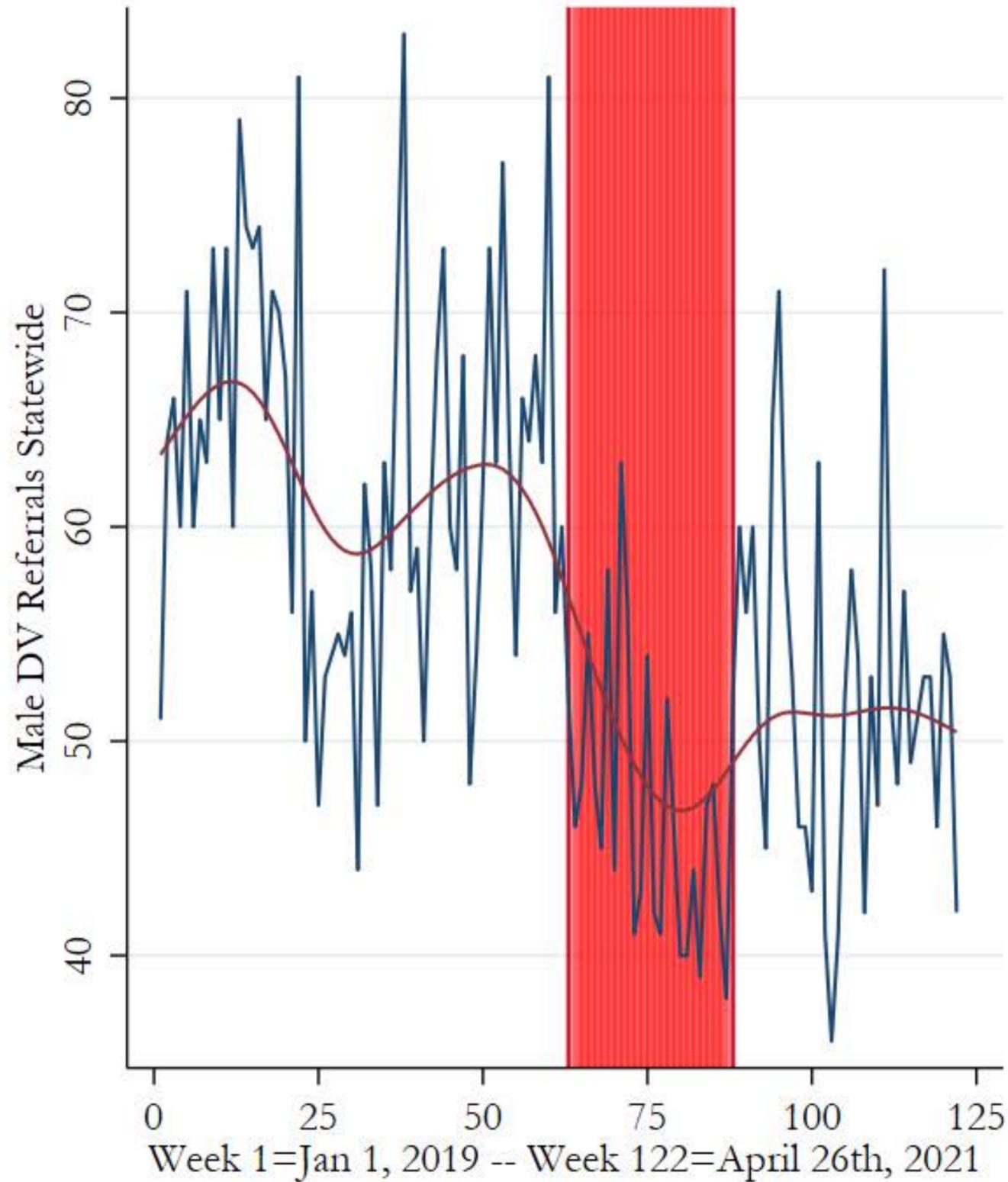
Note: Significant findings in bold.



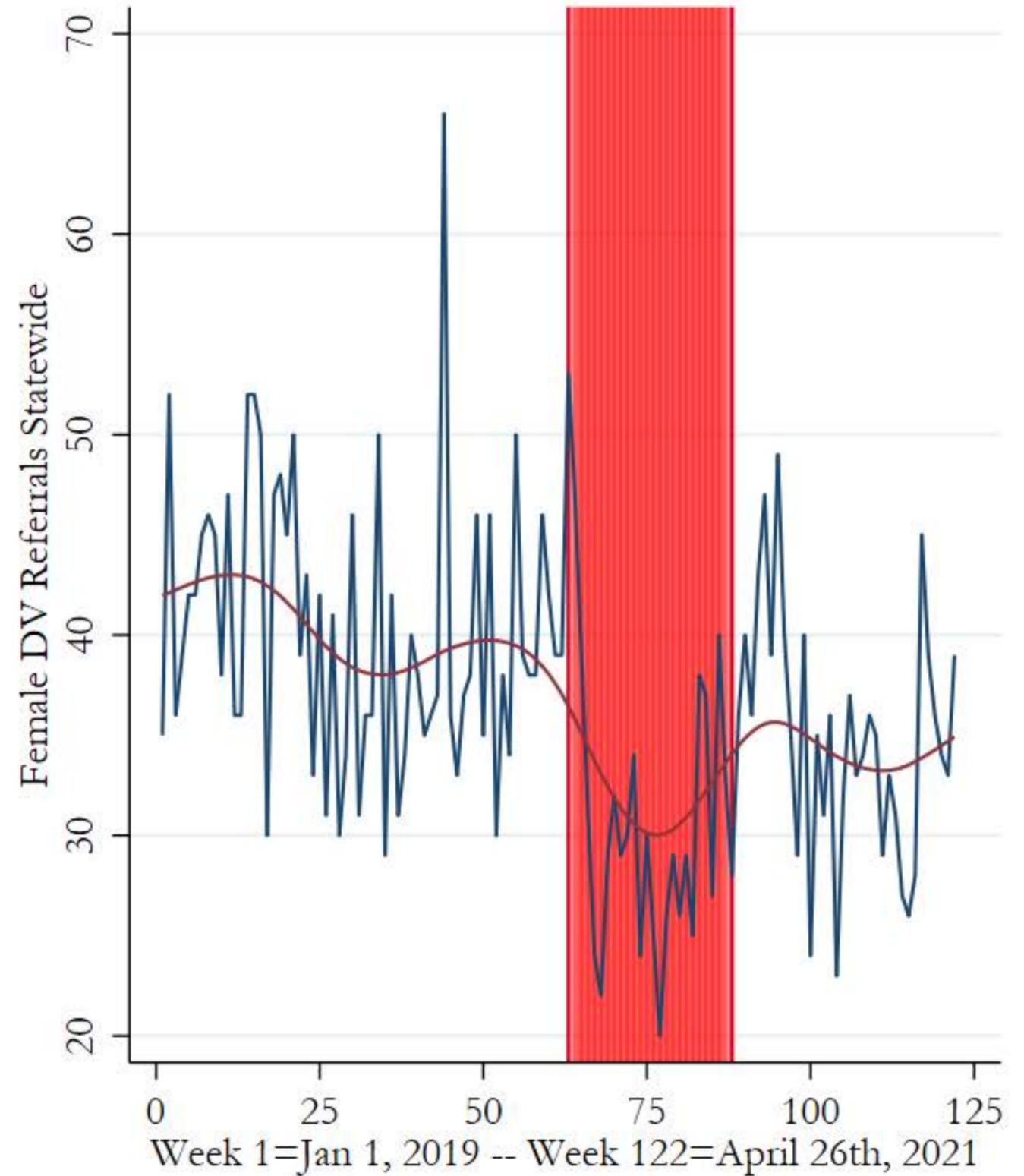
— Raw Weekly Count      — Hodrick-Prescott Smoothed Trend

Note: Shaded area represents period of school closures due to COVID-19.

### Male DV Referrals

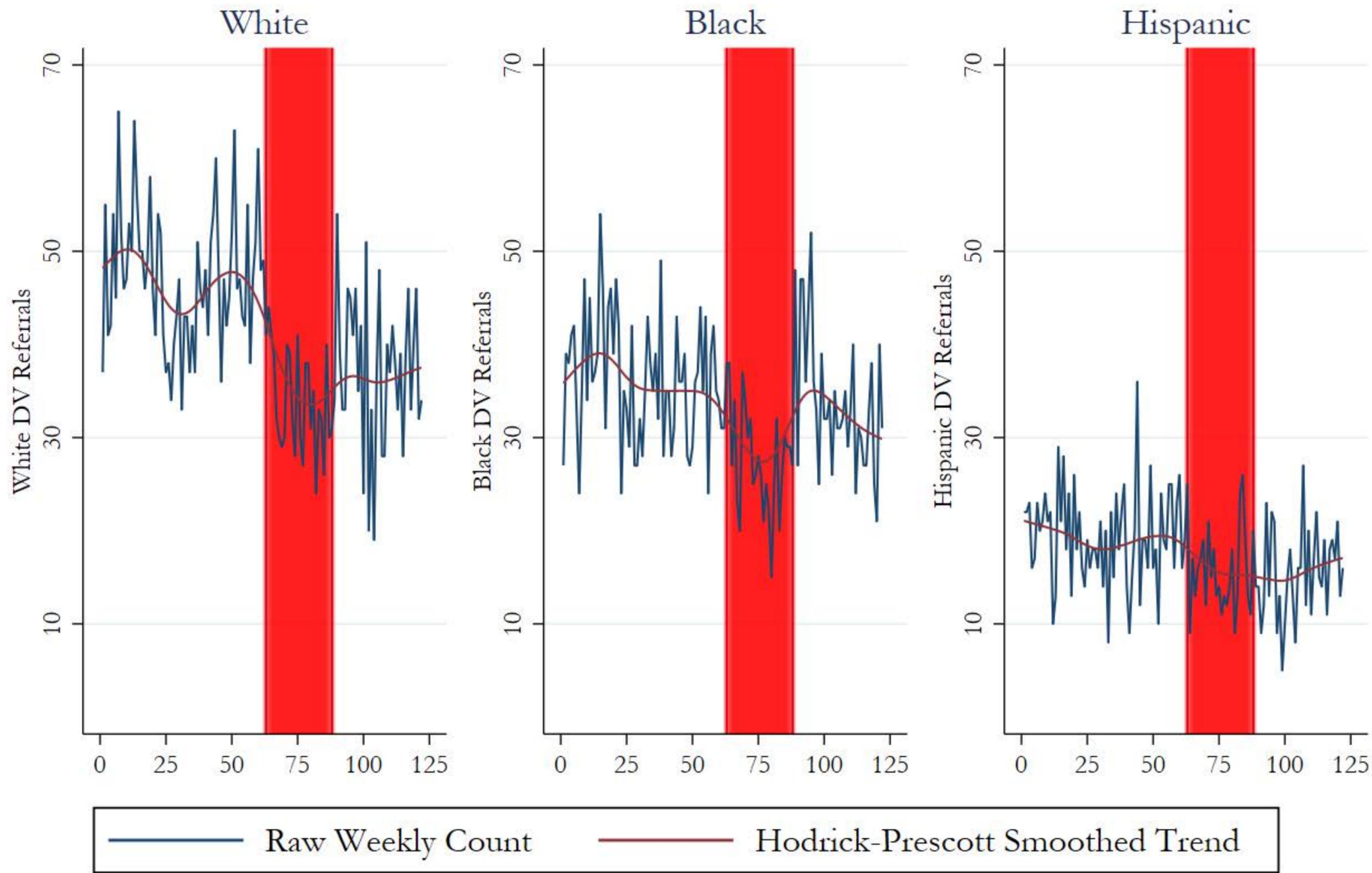


### Female DV Referrals



— Raw Weekly Count      — Hodrick-Prescott Smoothed Trend

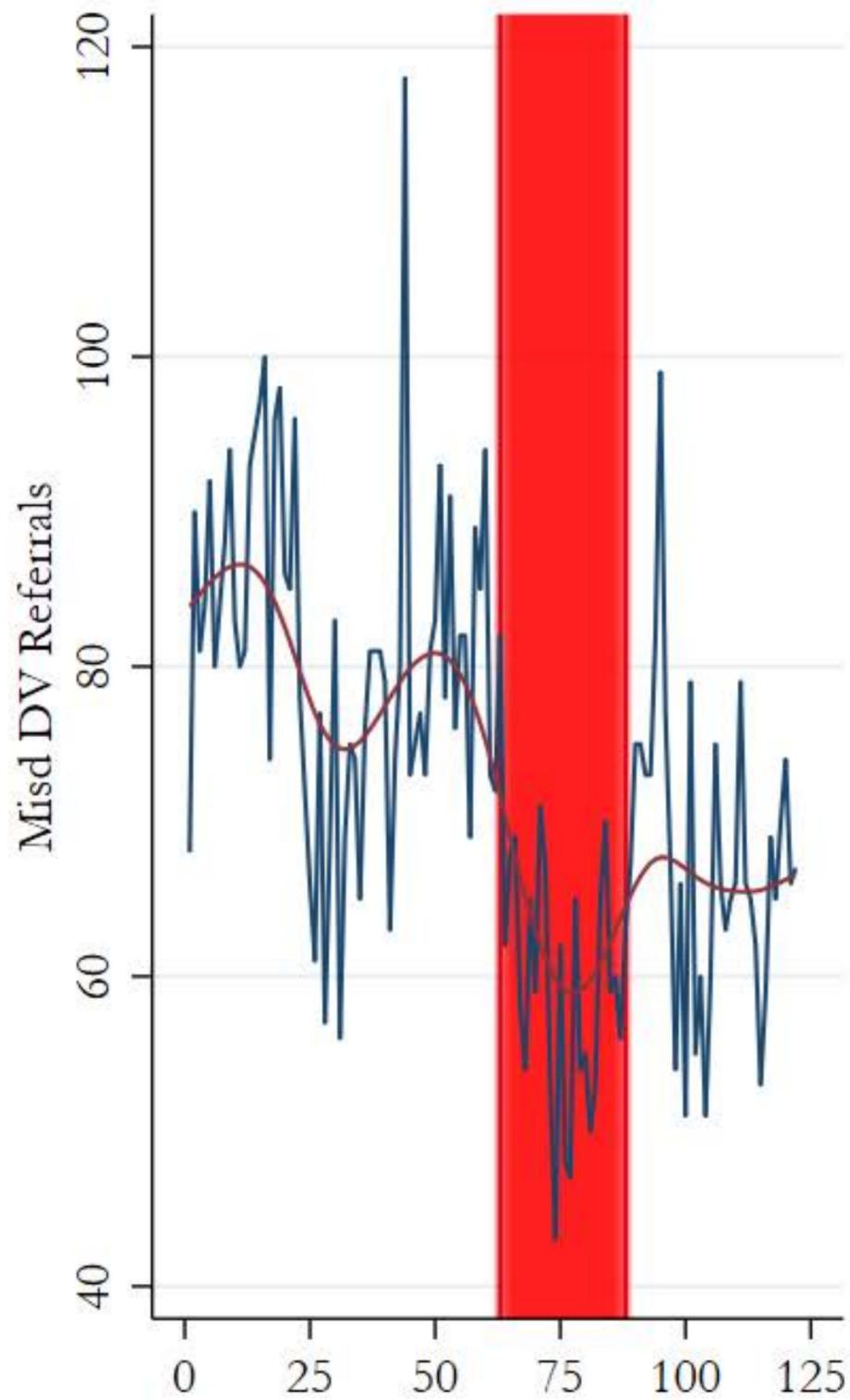
Note: Shaded area represents period of school closures due to COVID-19.



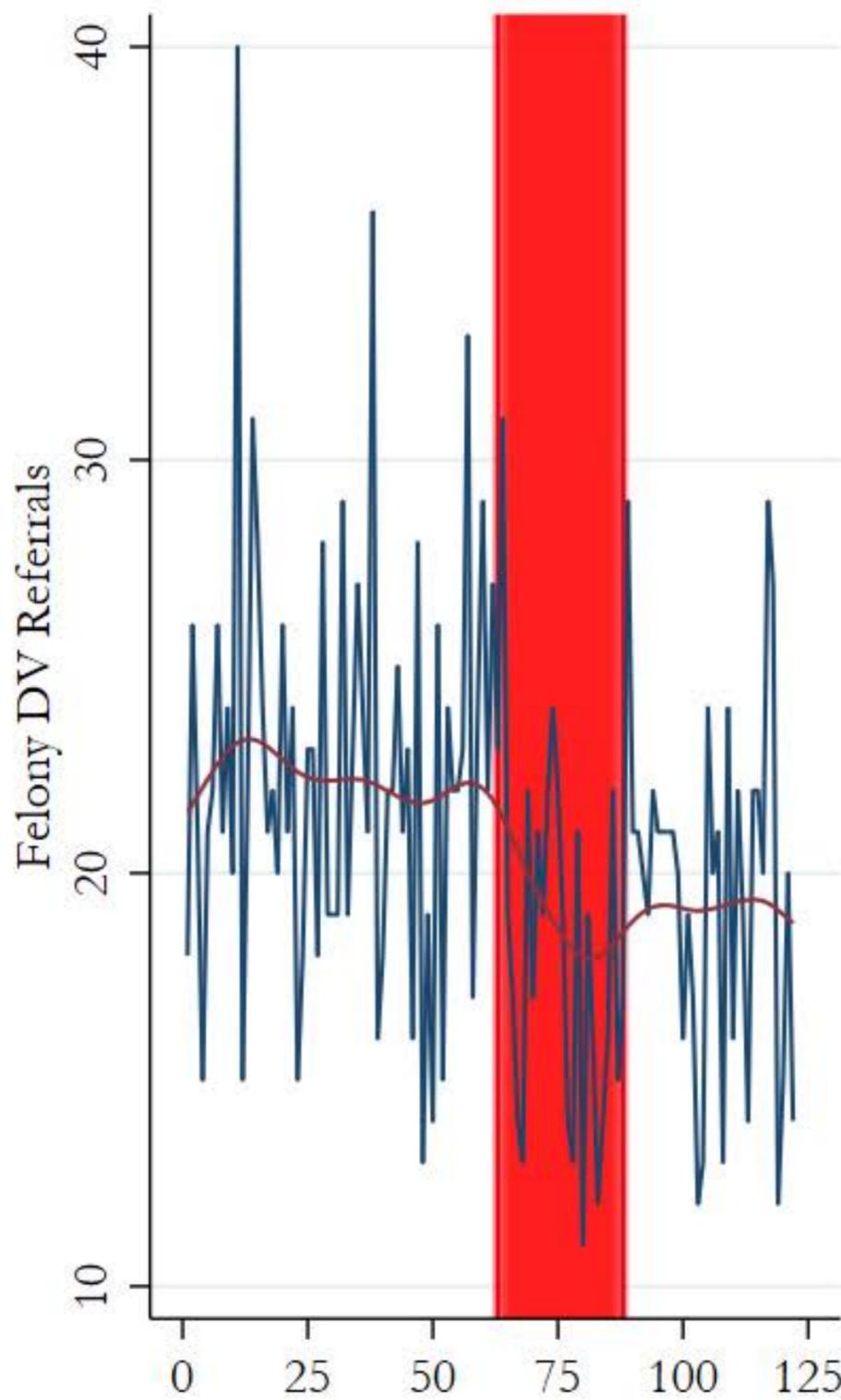
Week 1=Jan 1, 2019 - Week 122=April 26th, 2021

Note: Shaded area represents period of school closures due to COVID-19.

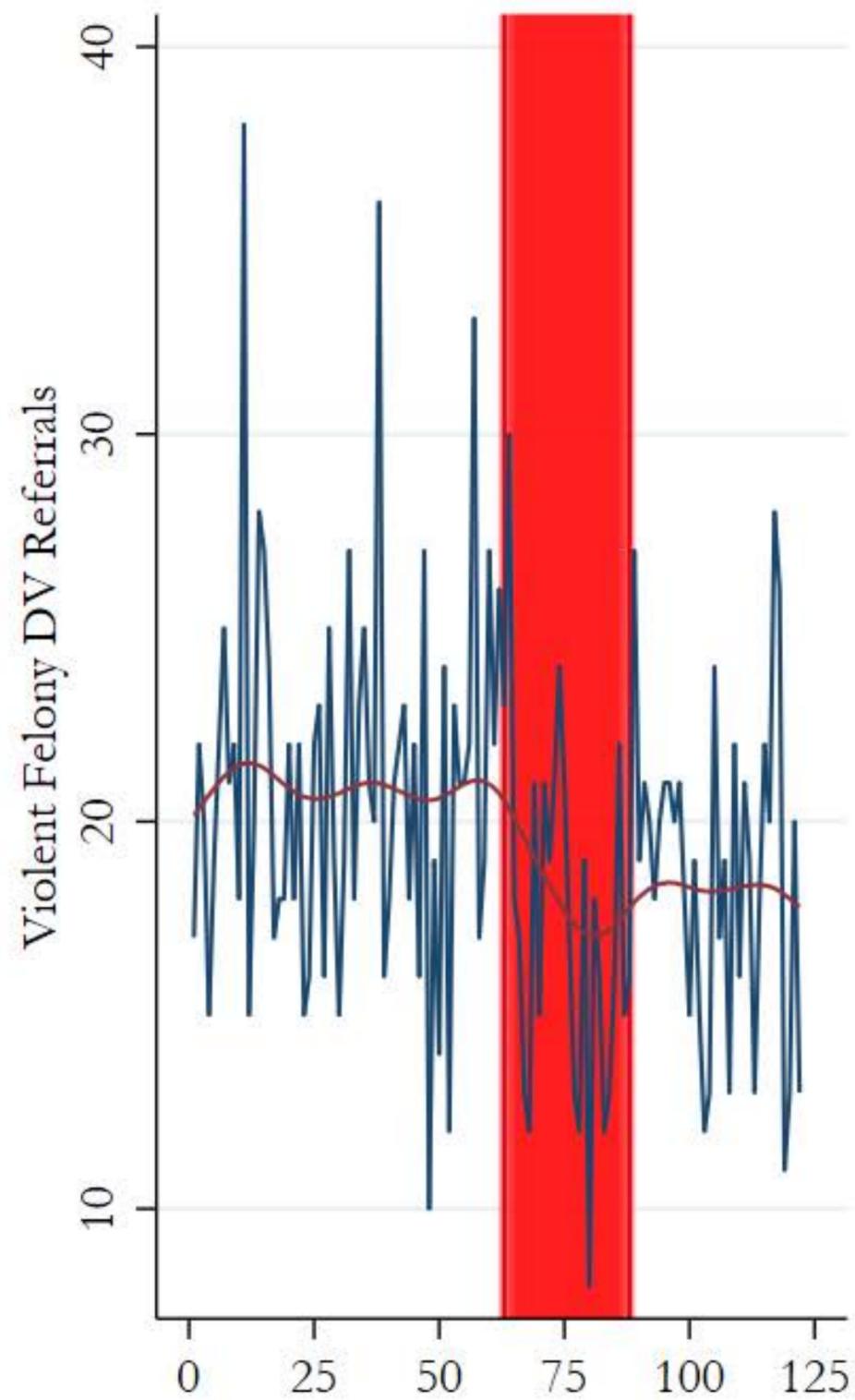
Misdemeanors



Felonies



Violent Felonies



Raw Weekly Count
  Hodrick-Prescott Smoothed Trend

Week 1=Jan 1, 2019 - Week 122=April 26th, 2021

Note: Shaded area represents period of school closures due to COVID-19.