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There is a growing theoretical and empirical tradition that examines the relationship between social support and crime. While academic research supports the idea that social support inhibits crime, public discourse and the popular media often assert that support, especially instrumental support to the poor, can increase crime. This article adds to the growing literature by including multiple forms of social support in an investigation of the relationship between social support and property crime and violent crime over a ten year period. Results indicate that while some forms of support have the expected negative relationship with crime, others displayed a significant positive relationship, and others had no significant relationship. Implications for these findings are discussed.

Key words: *social support, crime, social policy*

For many years, the popular media, political leaders, and researchers have discussed the possible implications of social support policies on crime in the United States. One of the most recent trends in this public discourse is the connection between welfare recipients and drug use, which led to drug-related restrictions for Temporary Assistance for Needy Families (TANF) eligibility in the 1996 welfare reform, and has contributed to recent debates regarding the drug testing of welfare recipients (Amundson, Zajicek, & Hunt, 2014). Much of this public discourse and the resulting policies contradict the academic literature, which posits that providing support decreases the necessity of criminal activity, thus reducing the likelihood of crime. While opinions have gone back and forth over time and often depend in part on the form of social support and population being discussed, there is a dearth of

scientific research that addresses this relationship to contribute to the discussion.

This article examines how different social support policies affect crime. In public discussions, social support is often equated with welfare, especially programs which target low income mothers with dependent children. While much of the criminological literature also explores the connection between welfare and crime, recent theorizing has emphasized the importance of incorporating other forms of social support to gain a full understanding of this relationship. The overarching hypothesis regarding the relationship between social support and crime is that the relationship is negative, but scholars have also hypothesized that the strength of the relationship may differ by the type of support under consideration, as well as the level of measurement.

There are two major reasons why this research is important to the field. One contribution of this research lies in expanding the concept of social support as it is generally used in the sociological literature. Social support is an important theoretical concept, yet quantitative analyses have not yet utilized multiple measures of social support in empirical models. Incorporating recent findings from the sociology of the family helps to frame conceptualizations of social support, especially the different forms that support can take. Additionally, this research investigates the relationship between social support and crime on the state level, as many decisions regarding policy development, programming and treatment occur on this level of analysis.

Second, knowing which types of support have the strongest effect on crime will help to develop more effective public policies. Often, policies are evaluated solely on their intended outcomes, without consideration for any unintended outcomes that may result from them. However, these policies may play an important role in reducing crime and may have other unintended consequences. This research can help uncover the interrelationships that exist between different support programs.

Conceptualization and Prior Research

Social support is referenced within a number of different criminological perspectives, including strain theory, anomie

theory, and social altruism theory (Agnew, 1992; Chamlin & Cochran, 1997; Messner & Rosenfeld, 2006). However, it was not until relatively recently that social support has received sustained attention as a primary variable of interest (Cullen, 1994). Social support can be defined as "the delivery (or perceived delivery) of assistance from communities, social networks, and confiding partners in meeting the instrumental and expressive needs of individuals" (Colvin, Cullen, & Vander Ven, 2002, p. 20). This definition encompasses a wide variety of programs and behaviors. Social support occurs at both the micro and macro level, can be provided by formal sources (like the government) or informal sources (such as spouses), and can be either instrumental or expressive in nature. Instrumental support includes any kind of material assistance, such as money, goods, or services, while expressive support refers to the emotional dimension, such as having someone with whom to discuss problems (Colvin et al., 2002; Cullen, 1994; Lin, 1986).

Much of the previous work in this tradition has been theoretical in nature, expressing the general assertion that high levels of social support reduce crime. Cullen (1994) provides a comprehensive explanation of this relationship, and posits that the relationship between social support and crime may vary depending on the type, source and nature of support. More recently, social support has been utilized in conjunction with coercion to develop an integrated theory of crime control (Colvin et al., 2002; Cullen, Wright, & Chamlin, 1999). This integrated theory posits that increasing legitimate sources of support while simultaneously reducing coercive forces will lead to a reduction in crime.

Empirical work investigating social support specifically has been somewhat limited. There are a number of studies that investigate the impact of social support on mental health (e.g., Cohen & Wills, 1985), but few that focus on the relationship to crime. There are, however, a number of articles that come from a social altruism perspective to explore the relationship between social support policies and crime. While social altruism is a concept distinct from social support, these studies can inform research in this area.

Social altruism theory is derived from multiple theoretical perspectives, combining components of Cullen's (1994) social

support theory, Messner and Rosenfeld's (2006) institutional anomie theory, and Braithewaite's (1989) reintegrative shaming theory into one perspective. Social altruism theory posits that societies in which citizens value the welfare of others above their own and perform behaviors that reflect that belief will have lower rates of crime (Chamlin & Cochran, 1997).

Chamlin and Cochran (1997) explore the relationship between social altruism and crime using a sample of cities in the U.S. They show that United Way contributions are significantly negatively related to both violent and property crime rates. Chamlin, Novak, Lowenkamp, & Cochran (1999) extend this research by looking at the relationship between the contribution ratio (the ratio of tax deductible contributions to the total number of tax returns) and violent and property crime. Contrary to their expectations, they found that the contribution ratio was positively related to violent crime, and not significantly related to property crime. They explain this using the free-rider hypothesis—where citizens benefit from tax deduction without incurring any of the costs (Chamlin et al., 1999).

Pratt & Godsey (2002) also come from a social altruism perspective to investigate the relationship between social support and homicide using a sample of 46 nations. They construct an index of social support using the percent of the GDP spent on health care and the percent of the GDP spent on education. They find a significant inverse relationship between social support and homicide using their cross-national sample.

There is also a body of research that looks specifically at the relationship between welfare and crime, although not all of these studies are grounded in the social support paradigm (Burek, 2005, 2006; DeFronzo, 1996; DeFronzo & Hannon, 1998; Hannon, 1997; Hannon & DeFronzo 1998; Worral, 2005; Zhang, 1997). Overall, these studies tend to show a negative relationship between welfare and crime, although the relationship is not always statistically significant and is sometimes positive.

Control variables play an important role in the analysis—especially variables which measure poverty and family disruption (Burek, 2005; Hannon & DeFronzo, 1998; Worrall, 2005). It is also important to consider the measure of support, which is generally some form of cash assistance from the government, especially Aid to Families with Dependent Children

(AFDC) or the more recent version of this program, Temporary Assistance to Needy Families (TANF). Few studies include more than one measure of aid to the poor, and most do not include other measures of instrumental social support, such as medical insurance or tax incentives.

Integrating research from the sociology of the family adds a new dimension to the existing criminological research. This research tends to be qualitative, which allows respondents to share their stories in their own words. In terms of social support, this is important because respondents have the ability to list their sources of social support, and also to describe which sources are most important to them and why. There are two pieces in particular that explicate these issues: *Making Ends Meet: How Single Mothers Survive on Welfare and Low-Wage Work* (Edin & Lein, 1997) and *"So You Think I Drive a Cadillac?" Welfare Recipients' Perspectives on the System and Its Reform* (Seccombe, 2007). Similar themes were observed in both of these works. While the actual welfare payment provided to most of these women is important, other forms of support, both governmental and non-governmental, are considered by the woman to be more important to their survival. Having adequate and reliable childcare, transportation, health insurance, housing, food supplements, child support and ways of coping with stress were just as important forms of support as the monetary payment from AFDC/TANF.

This research indicates that using measures of AFDC/TANF payments does not fully capture the reality of social support in the United States. This article builds on the existing literature by using multiple measures of social support to explore its relationship to crime. Programs such as Medicaid, food stamps, and the Earned Income Tax Credit (EITC) are directed at helping the poor at a larger scale than AFDC/TANF, but have rarely been included in past research. As Zhang (1997) indicates, those programs that affect more people seem to have a more robust effect on crime, and so including programs that target a greater proportion of the population (like food stamps) as well as a different population (like the EITC) will significantly contribute to the existing literature.

Expressive support is not explicitly measured in most previous studies, although some variables used as controls in previous studies may also be capturing a dimension of

expressive support. Previous research has indicated a significant relationship between family variables and crime, including family size, parent-child relations, parental supervision, and child-rearing strategies (Derzon, 2010; Farrington, 2011). While the relationship between these variables is clearly indicated, the mechanism through which these variables influence crime is less clear. That is, it is unclear whether these variables influence propensity towards crime because of parental love and support, because of parental supervision and control, or because of some combination of the two. Previous research has included some family variables in the analysis as controls, and arguably these controls may be indicative of levels of expressive support at the macro level. However, based on research to date, it is impossible to say with certainty whether that is the case.

This article expands the literature in the area by including different types of social support in a single analysis. In addition to governmental assistance to the poor as an indicator of instrumental support, the analysis includes other instrumental support programs such as the Earned Income Tax Credit (EITC) and Supplemental Nutrition Assistance Program (SNAP). Additionally, forms of instrumental support from alternate sources are considered, including medical insurance and private donations. Expressive support is also included in the analysis, both in the form of control variables that may be indicative of family support, as well as an attempt to measure access to expressive support at the macro level. Finally, the current analysis uses two different measures of crime, to discover whether the effect of social support on crime differs by type of crime.

This study is largely exploratory in nature. While the relationship between social support and crime is generally hypothesized to be negative, Cullen (1994) suggests that different types of support may influence crime in different ways. Previous research has tended to focus on instrumental support from the government, and other types of support are generally not included in the analyses. This article explores whether the relationship between social support and crime varies depending on the type of support, and whether the same relationships occur with both violent and property crime.

Data and Method

Data for this analysis come from a variety of sources, including the Uniform Crime Reports, Current Population Survey, Health and Human Services, and a number of other organizations. Data was collected for the years 1997–2006 for all 50 states. For a complete list of state-level variables and their sources, please see the Appendix.

Crime

Two crime types are included in this analysis: violent crime and property crime. The measure of violent crime includes four offenses: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault. Property crime includes four offenses, as well: burglary, larceny-theft, motor vehicle theft, and arson. All crime rates are calculated per 100,000 individuals in the population.

Instrumental Support

There are multiple measures of instrumental social support included in the analysis.

Per Person in Poverty TANF/MOE Spending

This measure was constructed by taking the combined TANF/MOE dollars (State Maintenance-of-Effort [MOE] Expenditures) spent by state on basic assistance, child care, and transportation and dividing it by the number of people in the state who live below the poverty line. This measure is an attempt to estimate TANF spending per each person eligible to receive it. However, it is important to note that TANF eligibility is not limited solely to income, and to the author's knowledge there is no source that provides an exact number of the welfare eligible population. Therefore, the number used in the denominator is an attempt to measure the welfare eligible population.

Earned Income Tax Credit (EITC)

Recent studies have shown that the EITC is an important source of social support for families in which at least one person is working. The EITC can play a significant role in lifting working poor families out of poverty, and in allowing single

parents to enter the workforce (Kim, 2001; Noonan, Smith, & Corcoran, 2007; Philips, 2001). Therefore, two measures of the EITC are included in this analysis. One measure of the EITC is calculated by taking the average EITC payment amount for each state. An alternative measure of the EITC considers state-level EITC programs, rather than the federal program. The second EITC measure included in this analysis is the percentage of the federal EITC incentive offered on a state level.

Supplemental Nutrition Assistance Program (SNAP)

The Food Stamp Program, which was renamed SNAP in 2008, is one of the most extensive governmental social support programs in the United States. SNAP benefits in this analysis are measured using the percentage of people receiving benefits of all of those who are eligible.

Health Insurance

Research shows that for families that live in poverty, health insurance is an important source of instrumental support (Edin & Lein, 1997; Seccombe, 2007). While health insurance may not be used as frequently as other forms of assistance, lack of health insurance can have a significant and immediate impact on family finances, in the form of debt. Therefore, access to health insurance is an important indicator of instrumental support. Health insurance is measured as the percentage of people in the population who do not have it.

Charitable Donations

This is an indicator which attempts to measure non-governmental instrumental support on the state level. The indicator is the average charitable contribution per tax return as a percentage of the adjusted gross income.

Expressive Support

Expressive support is difficult to measure on the state level as it is largely the product of individual interactions between people, and state-level indicators attempt to capture these interactions with the use of structural indicators. Included in this analysis are measures of those professions which attempt to improve or enable expressive support, as well as

structural variables which are used as proxy measures of expressive support.

Social workers and psychologists per capita. The raw number of social workers and psychologists in each state for every year were divided by the population of that state, creating a measure of per capita social workers and psychologists. While this measure is certainly not an indicator of access to these services, it is meant to serve as a proxy for the availability of this type of expressive support.

Other expressive support variables. Other structural variables that are theorized to affect or indicate levels of expressive support on the state level are included in the analysis. These include the teenage birth rate and percent of children who live in single parent families. Teenage pregnancy creates strain within families, and is also related to fewer resources and a lack of emotional support, both for the parents and for the children. This indicator reflects the rate of births for the female population aged 15-19, and is presented per 100,000 females aged 15-19 in the population. Research has shown that single parent families have less time to spend with family and fewer resources available to provide support to family members. This can create stress and conflict within families, as well as lead to a lack of positive interactions between parents and children. This indicator represents the percentage of all children who currently live in single parent families.

While these variables may be indicative of levels of expressive support, they also likely capture other concepts such as supervision and control. Therefore, any results that show relationships between these variables and crime are not necessarily indicative of a relationship between expressive support and crime. These variables will be treated as controls in the analyses, but may also indicate levels of expressive support.

Control Variables

Other control variables included in the state-level analysis are median household income, percent of people living in poverty, and percent of the population that is unemployed. All three of these variables are indicators of poverty, and have been shown to be related with crime rates on the macro level.

Additionally, as many of the indicators of social support on this level specifically target those individuals who live in or near poverty, controlling for the overall poverty rate is an attempt to distinguish between the effect of poverty on crime, and the effect of social support on crime net of poverty effects.

Analysis

All models were run using fixed-effects regression analysis. Fixed-effects modeling allows researchers to control for all stable characteristics of the units of analysis, and thus better determine causality (Allison, 2005). Fixed-effects modeling works by having each case serve as its own control by making comparisons within individual units and then averaging those differences across all units in the sample (Allison, 2005). The main benefit of using fixed-effects is the elimination of a large source of bias in the form of stable unmeasured characteristics. The drawback is that fixed-effects modeling cannot control for unobserved variation that changes over time, and also that the relationship between the unmeasured characteristics and dependent variable is not known (Allison, 2005).

Results

Fixed Effects Regression for Property Crime

The results for property crime are displayed in Table 1. Model 1 displays the relationship between property crime and the instrumental support variables only. The analysis shows that the average EITC payment has a significant negative relationship with property crime (b = -2.14). Other significant relationships are observed between property crime and the percent of the eligible population receiving food stamps (b = 7.46), and the percent of the population without health insurance (b = 17.73). While the relationship between property crime and the percent of the population without health insurance is in the expected direction, the relationship between property crime and the percent of the population receiving food stamps is in a positive direction, which runs counter to the overarching hypothesis. The measure of the state EITC and both measures of welfare spending do not show a significant relationship with property crime.

Table 1. Fixed Effects Regression on Property Crime (N = 495)

	Model 1 Coefficients (SE)	Model 2 Coefficients (SE)	Model 3 Coefficients (SE)
Instrumental Support			
Average EITC Payment	-2.14** (.10)	-1.95** (.16)	-1.38** (.24)
State EITC (as percent of federal)	-2.72 (3.49)	-2.07 (3.43)	-1.01 (3.32)
Percent Receiving Food Stamps	7.46** (1.83)	5.27** (1.87)	4.33* (1.82)
Informational Support Spending Per Person in Poverty	-.31 (.28)	-.37 (.28)	-.00 (.27)
Instrumental Support Spending Per Person in Poverty	-.15 (.13)	-.17 (.13)	-.02 (.13)
Percent Without Health Insurance	17.73** (6.81)	9.78 (6.92)	-3.65 (6.93)
Expressive Support			
Psychologists Per Capita	.	-2.83# (1.62)	-1.14 (1.59)
Social Workers Per Capita	.	1.20** (.29)	1.28** (.28)
Charitable Donations as Percent of AGI	.	-25.62 (98.43)	-81.53 (102.8)
Control Variables			
Median Income	.	.	-.02** (.01)
Percent in Poverty	.	.	27.1** (9.97)
Percent Unemployed	.	.	43.65** (17.31)
Teenage Birthrate	.	.	.09 (.06)
Percent of Children in Single Parent Families	.	.	17.69# (9.83)

Note: * Indicates significance at the .05 level for a two-tailed test; **Indicates significance at the .01 level for a two tailed test; # Indicates significance at the .05 level for a 1-tailed test.

Model 2 includes the expressive support variables, displaying the relationship between property crime and all of the support variables. The measure of charity is not significantly related to property crime. Psychologists per capita is negatively related to property crime (b = -2.83). The measure of social

workers per capita shows a significant positive relationship with property crime.

Model 3 introduces the control variables to the model. The federal average EITC payment, food stamp receipt and social workers per capita retain their significance, but only the federal EITC is in the expected negative direction (b = -1.38). Social workers per capita and food stamp receipt are also significantly related to property crime, although the direction is positive (b = 1.28, and b = 4.33, respectively). The control variables median income, percent of the population in poverty, percent of the population unemployed, and single parent families are all significantly related to property crime in the expected direction.

Fixed-Effects Regression for Violent Crime

The data for these models are displayed in Table 2. The models are run in the same manner as above, with model 1 displaying the relationship between the instrumental support variables and violent crime, model 2 adding in the expressive support measures, and model 3 introducing the control variables.

In general, the fixed effects results for violent crime follow the same patterns as those models on property crime. In the final model, average EITC payment (b = -.08), percent of the eligible population receiving food stamps (b = 1.04), and social workers per capita (b = .08) are significantly related to violent crime. Only the average EITC payment is in the expected negative direction, while percent receiving food stamps and social workers per capita show a positive relationship. The only control variable with a significant relationship to violent crime was the teenage birthrate, with a significant positive relationship. Other control variables did not have a significant relationship with violent crime.

Fixed-Effects Models with Robust Standard Errors

Preliminary testing indicated that the above models had residuals that were correlated. The models were re-run using the robust standard error option. With this option, the coefficients from the previous models remain the same, but the standard errors are inflated to reduce the risk of type 1 error.

The estimates from these models are a more conservative estimate of the relationship between social support and crime. Data from these models can be found in Tables 3 (property crime) and 4 (violent crime).

Table 2. Fixed Effects Regression on Violent Crime, N = 495

	Model 1 Coefficients (SE)	Model 2 Coefficients (SE)	Model 3 Coefficients (SE)
Instrumental Support			
Average EITC Payment	-.25** (.02)	-.16** (.03)	-.08# (.04)
State EITC (as percent of federal)	-.73 (.61)	-.75 (.60)	-.48 (.58)
Percent Receiving Food Stamps	1.53** (.32)	1.29** (.33)	1.04** (.32)
Informational Support Spending Per Person in Poverty	.05 (.05)	.05 (.05)	.05 (.05)
Instrumental Support Spending Per Person in Poverty	.01 (.02)	.01 (.02)	-.00 (.02)
Percent Without Health Insurance	3.19** (1.19)	1.94# (1.21)	1.52 (1.21)
Expressive Support			
Psychologists Per Capita	.	-.04 (.28)	-.01 (.28)
Social Workers Per Capita	.	.08# (.05)	.08# (.05)
Charitable Donations as Percent of AGI	.	-67.08** (17.16)	-26.94 (18.0)
Control Variables			
Median Income	.	.	.00 (.00)
Percent in Poverty	.	.	1.08 (1.75)
Percent Unemployed	.	.	2.38 (3.02)
Teenage Birthrate	.	.	.06** (.01)
Percent of Children in Single Parent Families	.	.	2.48 (1.72)

Note: * Indicates significance at the .05 level for a two-tailed test; **Indicates significance at the .01 level for a two tailed test; # Indicates significance at the .05 level for a 1-tailed test.

Table 3. Fixed Effects Regression with Robust Standard Errors on Property Crime, N = 495

	Model 1 Coefficients (SE)	Model 2 Coefficients (SE)	Model 3 Coefficients (SE)
Instrumental Support			
Average EITC Payment	-2.14** (.25)	-1.95** (.28)	-1.38** (.38)
State EITC (as percent of federal)	-2.72 (4.28)	-2.07 (3.77)	-1.01 (3.39)
Percent Receiving Food Stamps	7.46* (3.40)	5.27 (3.42)	4.33 (3.95)
Informational Support Spending Per Person in Poverty	-.31 (.31)	-.37 (.32)	.00 (.35)
Instrumental Support Spending Per Person in Poverty	-.15 (.20)	-.17 (.19)	-.02 (.18)
Percent Without Health Insurance	17.73** (5.47)	9.78 (6.75)	-3.65 (7.48)
Expressive Support			
Psychologists Per Capita	.	-2.83 (2.10)	-1.14 (2.00)
Social Workers Per Capita	.	1.20** (.46)	1.28** (.41)
Charitable Donations as Percent of AGI	.	-25.62 (112.85)	-81.53 (141.68)
Control Variables			
Median Income	.	.	-.02 (.01)
Percent in Poverty	.	.	27.14* (13.58)
Percent Unemployed	.	.	43.65 (30.09)
Teenage Birthrate	.	.	.09 (.10)
Percent of Children in Single Parent Families	.	.	17.69* (8.59)

Note: * Indicates significance at the .05 level for a two-tailed test; **Indicates significance at the .01 level for a two tailed test; # Indicates significance at the .05 level for a 1-tailed test.

In general, the results from the models run with the robust standard errors confirm what was observed in the original models. Results from Table 3 show that the average EITC

Table 4. Fixed Effects Regression with Robust Standard Errors on Violent Crime, N = 495

	Model 1 Coefficients (SE)	Model 2 Coefficients (SE)	Model 3 Coefficients (SE)
Instrumental Support			
Average EITC Payment	-.25** (.04)	-.16** (.05)	-.08 (.06)
State EITC (as percent of federal)	-.73 (.76)	-.75 (.74)	-.48 (.66)
Percent Receiving Food Stamps	1.53** (.54)	1.29* (.53)	1.04* (.51)
Informational Support Spending Per Person in Poverty	.05 (.04)	.05 (.04)	.05 (.04)
Instrumental Support Spending Per Person in Poverty	.01 (.02)	.01 (.02)	-.00 (.02)
Percent Without Health Insurance	3.19** (1.25)	1.94 (1.34)	1.52 (1.31)
Expressive Support			
Psychologists Per Capita	.	-.04 (.32)	-.01 (.29)
Social Workers Per Capita	.	.09 (.07)	.08 (.06)
Charitable Donations as Percent of AGI	.	-67.08** (23.87)	-26.94 (22.55)
Control Variables			
Median Income	.	.	.00 (.00)
Percent in Poverty	.	.	1.08 (2.28)
Percent Unemployed	.	.	2.38 (4.49)
Teenage Birthrate	.	.	.06** (.02)
Percent of Children in Single Parent Families	.	.	2.48* (1.18)

Note: * Indicates significance at the .05 level for a two-tailed test; **Indicates significance at the .01 level for a two tailed test; # Indicates significance at the .05 level for a 1-tailed test.

payment remains significantly related to the property crime rate in all three of the models, as does social workers per capita. Results from the regression for violent crime show that the average EITC payment loses significance in the final model,

while the percent receiving food stamps retained significance in a positive direction.

Discussion

The overarching hypothesis regarding social support and crime is that the relationship is negative. The results from the state-level analysis show some support for this theory, but also some exceptions. Of all of the measures of instrumental social support, only the federal EITC payment was significantly negatively related to crime, although not for violent crime when using robust standard errors. Both qualitative and quantitative research indicates that the EITC is a significant source of support to families who are hovering near the poverty line; additionally, the EITC is one of the few social support programs that expanded during the time period under observation.

It is possible that the EITC is the only program significantly related to crime because it is the most effective federal social support program. Prior research shows that the EITC is instrumental in lifting working-poor families out of poverty and adding to their quality of life, just as a great deal of research shows that TANF, food stamps, and other similar programs are less effective (Seccombe, 2007; Sykes, Kriz, & Edin, 2009). Therefore, it is possible that the EITC is negatively related to crime because it is the program that is most effective in offering instrumental support. These findings may indicate that social support programs that succeed in achieving their primary goal, whatever that goal is, are those programs that will have a potentially significant effect on crime. That is, those programs that are effective in providing the support they are intended to provide will have an unintended (but still beneficial) effect on crime. Prior research supports this general idea, in that the EITC and health insurance are generally considered more effective in providing support than other programs like TANF, but this hypothesis needs to be the subject of future testing.

In order to fully test this idea, it would be necessary to determine an independent measure of effectiveness for a particular program, and then assess whether and how that program is related to crime rates. For example, research could focus on all of the programs that target poverty, and assess the effectiveness of the programs by seeing whether people were

lifted above the poverty line within a certain period of time following the receipt of the support. Then, it would be possible to compare those programs that are effective at providing support with those that are less effective, and analyze their relationship with crime.

Two measures consistently displayed a positive relationship with both measures of crime: the percent of the eligible population receiving food stamps and social workers per capita. The fact that food stamps receipt consistently displayed a positive and generally significant relationship with crime (food stamp receipt was not significantly related to property crime in the model with robust standard errors) is surprising. While it is erroneous to assert that SNAP benefits cause higher crime rates, it is worthwhile to hypothesize about the nature of the relationship.

It is possible that some types of social support, such as SNAP, provide unique opportunities for crime. For example, in the media there has been an increasing amount of attention paid to welfare fraud, in the form of recipients selling SNAP benefits for cash (Rao, 2012). This type of crime would not be possible without being a SNAP recipient. Additionally, Swan et al. (2008) show that welfare recipients often unintentionally commit fraud due to confusion about reporting requirements or because of external constraints to accurate reporting. As these cases are criminalized, they would be reflected in the state level crime rate. While the research of Swan et al. (2008) focused on TANF recipients, it is possible that similar instances are occurring to SNAP recipients, especially as SNAP services a larger population of people. In addition, Edin and Shaefer (2015) note that among those living on less than $2.00 a day, selling SNAP benefits is one way to obtain needed cash, especially in an era when few people are receiving cash benefits from TANF. According to Morin (2013), about 1 in 5 Americans has participated in SNAP, and about 1 in 4 has lived in a household with someone who has participated in the program. The observed relationship deserves to be elaborated in future research.

There was also a positive relationship between social workers per capita and crime in the models. Data show that a significant proportion of crime committed in the United States is committed by juveniles, and social workers are often

expected to handle cases of juvenile delinquency. It is plausible that states with more cases of juvenile delinquency would hire more social workers to handle the cases, which would explain why higher crime rates are associated with more social workers per capita. That is, states that have higher crime rates would hire more social workers as a response. As the data in the analysis are yearly, rather than monthly, it is not possible to see whether higher crime rates led to more social workers per capita, rather than vice versa. It is possible that increases in juvenile delinquency led to the hiring of more social workers, and this relationship is obscured when looking at yearly data. It is also possible that changes specifically related to child welfare influenced the number of social workers per capita. This should be explored in future research.

Results concerning expressive support variables were not as clear. As stated earlier, there is an inherent difficulty in measuring expressive support at the state level, as expressive support, by definition, deals with interpersonal interactions. While measures of expressive support were included in the state-level models, it is possible that concepts were not adequately captured with the available measures. The only expressive variable with a clear relationship to crime in almost all of the models was social workers per capita, and this relationship was positive. While the control variables were not always significantly related to the outcome variables, when significant they were always in the expected direction.

As expressive support is incredibly difficult to measure at the macro level, future macro-level research should focus on the supportive nature of programs that target instrumental support. Every social support program was created with a stated goal in mind, and that goal had nothing to do with crime prevention. For example, TANF, food stamps, and the EITC were created with the goal of reducing poverty. Health insurance policy targets the health of the population, and also attempts to lessen financial burdens when an individual needs medical care.

Additionally, it would be worthwhile to investigate the relationship between instrumental support and crime at different levels of analysis. States were originally chosen as the unit of analysis because many instrumental support programs are administered by the states. However, Cullen's (1994) first and

second propositions regard support at the international and community levels. Future research should look at how levels of instrumental support differ by nation-state and how this influences crime rates internationally. This would allow for the use of other criminological theories, such as institutional anomie theory, to explore how levels of social support influence crime with larger units of analysis.

Also, future research should look at support programs at the community level using aspects of social disorganization and collective efficacy theories. This is a project that would best be conducted with qualitative research, starting with a small community. In terms of welfare programs in particular, it seems that something is lost in between the money spent at the state level and the money administered to individuals within a community. It is difficult to ascertain how and where money is spent at the state level, and how much of that money actually makes its way into the hands of the welfare recipients. A qualitative analysis of different support organizations within one community would offer the best chance of ascertaining the ways in which support programs operate at the community, and potentially also the individual, level.

Finally, the relationship between expressive support and crime should be studied in greater detail, especially on the individual level. This type of research is uniquely suited to qualitative methodologies, similar to those that have been used to study women on welfare more generally. Qualitative research offers respondents the opportunity to discuss the expressive support that they receive in their own words, and can elucidate the relationship between support and crime on the individual level.

Overall, this analysis has expanded the existing research on social support and crime by utilizing multiple measures of support. While some of the results supported the assertion that social support reduces crime, some of the results displayed significant results in the opposite direction. This research has pointed to a number of areas of future research to further elucidate the relationship between social support and crime.

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Appendix: State-Level Variables and Their Sources

Variable	Source
State Name	
State FIPS Code	
Instrumental TANF Spending/Number of People in Poverty	CLASP from HHS Data; Current Population Survey
Expressive TANF Spending/Number of People in Poverty	CLASP from HHS Data; Current Population Survey
Violent Crime Rate per 100,000 people	Uniform Crime Reports
Property Crime Rate per 100,000 people	Uniform Crime Reports
Average EITC Payment	Brookings Institute
Percentage of State-level EITC as compared to the Federal	From stateeitc.com, Prepared by the Hatcher Group
Average Charitable Contribution per Tax Return	Prepared by the Urban Institute from IRS Data
Number of Social Workers per Capita	Bureau of Labor Statistics
Number of Psychologists per Capita	Bureau of Labor Statistics
Percentage of People Not Covered by Governmental Health Insurance	Current Population Survey
Median Household Income	U.S. Bureau of the Census
Percent of People Living in Poverty	U.S. Bureau of the Census
Percent of Population Unemployed	Bureau of Labor Statistics
Divorce Rate	Vital Statistics
Teenage Birth Rate	Vital Statistics
Percent of Children Living in Single Parent Families	Calculated by Kids Count Program from Census Data
Percent of Eligible People Receiving Food Stamps	US Department of Agriculture