Introduction

Many public and private agencies collect data on child maltreatment occurring throughout the United States. Countless scientific studies find a conclusive link between the maltreatment of children and many long-lasting medical, emotional, psychological, and behavioral disorders (Clearly, 2007). Such abuse and neglect are powerful predictors of adult failure on several social and economic dimensions (Heckman, 2006). This brief will document the economic costs associated with child abuse and neglect for the state of Nevada using data from a variety of sources. The hope is to shed light on the extent of the problem—so it may be reduced, if not prevented, for the immediate sake of all maltreated children and their families, while improving the social and economic welfare of Nevada.

Child Maltreatment and Adverse Outcomes

Each year, about 1 million children nationwide are confirmed victims of child maltreatment (Child Trends, 2005). Four types of maltreatment are recognized: physical abuse, sexual abuse, neglect, and emotional maltreatment (Child Trends, 2005). Factors such as the child’s characteristics, the relationship of the child to the perpetrator, the perpetrator’s characteristics, and access to a caregiver influence the effects of child maltreatment (English, 1998). Many research studies and agency reports consistently report negative outcomes from abuse and neglect for many children (Child Trends, 2005). Considering in 2007 there were 15,685 reports of child abuse and neglect in Nevada (CANS, 2008), it is important to analyze child maltreatment’s nature to understand the consequences it presents for Nevada’s children and population.

Children suffering from maltreatment are more likely to experience adverse health, cognitive, educational, social, and behavioral outcomes throughout their life (English, 1998; Heckman, 2006). Adverse health outcomes include transmission of a sexually transmitted disease (STD) to children, neuromotor handicaps, heightened levels of depression and hopelessness, low self-esteem, and stress disorders that surface later in adult life (English, 1998). Adverse cognitive and educational outcomes include language deficits, reduced cognitive functioning, and attention deficit disorder—all which contribute to performing poorly in school, having low standardized test scores, and possible retention in the same grade (English, 1996). Adverse social and behavioral outcomes include antisocial and aggressive behavior,
emotional instability, lack of problem-solving skills, inability to cope with new or stressful situations, teenage pregnancy, substance abuse, and increased risk for getting in trouble with the law (English, 1996).

**Explanation of Social and Economic Costs to Nevada Society**

Such adverse consequences not only create social and economic costs for victims and their families, but also for other individuals and businesses in Nevada. They are also strong predictors of adult failures, considering many social and economic factors (Heckman, 2006). Abused and neglected children are more likely to suffer from depression, alcoholism, drug abuse, and severe obesity (Clearly, 2007). They are also more likely to require special education in school and to become juvenile delinquents or adult criminals (Fromm, 2001). These consequences impose a cost on society and are part of the economic cost of child abuse and neglect in Nevada.

To better understand the impact of child maltreatment, the associated economic costs can be broken down into two categories. This brief models two similar publications that report the nationwide costs of child abuse and neglect (Fromm, 2001; Wang and Holton, 2007). The first category is direct costs: costs associated with the immediate needs of children who are abused or neglected. The second category is indirect costs: costs associated with the long-term and secondary effects of child abuse and neglect. All estimated costs are presented in 2007 dollars.

**Presentation of Findings**

Using data from a variety of sources, the total estimated annual direct costs of abuse and neglect in Nevada is $155,801,807 (see Table 1) and indirect costs are $484,880,412 (see Table 2). The total estimated annual cost is $640,682,219 in 2007 dollars (see Table 2). The cost per household is $649.32 (see Table 3).

This conservative figure is derived from methods, which are similar to Wang and Holton’s (2007) methodology for calculating national estimates. The figure is conservative because first, the survey includes only children who meet the Nevada state statute definition of child abuse or neglect. Second, only the costs related to the victims are included. Other costs associated with child abuse and neglect, such as the costs of intervention, treatment services, or legal costs for the perpetrator or other members of the victim’s family, are not quantified (Wang and Holton, 2007). Third, there are many more categories that could be included to update and enhance these findings. Due to difficulties in data collection and availability, they are not included in this brief. Examples of these categories include: (1) many child victims require medical examinations or outpatient treatment for injuries not serious enough to require hospitalization; (2) maltreated children are at a greater risk of engaging in substance abuse and require alcohol- and drug-treatment services; (3) youths with histories of child abuse and neglect are more prone to engaging in risky sexual behavior that could result in an STD or a teenage pregnancy; (4) costs associated with abused youths have greater welfare dependency; and (5) loss of productivity to society is associated with other factors, such as reduced cognitive abilities (Heckman, 2007; Wang and Holton, 2007). Thus, lacking all costs related to child abuse and neglect the annual cost for Nevada is a conservative estimate, suggesting the costs are likely to be much higher.
Table 1: Total Annual Cost of Child Abuse and Neglect in Nevada, Direct Costs

<table>
<thead>
<tr>
<th>Direct Cost</th>
<th>Rationale</th>
<th>Estimated Annual Cost (in 2007 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalization</td>
<td>5,703 maltreated children in Nevada that suffered serious injuries in 2007. Assume that 50% of seriously injured victims require hospitalization. The average cost of treating one hospitalized victim of abuse and neglect was $19,266 in 1999. Calculations: 5,703 x 0.50 x 19,266 = $54,936,999</td>
<td>$66,702,856</td>
</tr>
<tr>
<td>Mental Health-Care System</td>
<td>25% to 50% of child maltreatment victims need some form of mental-health treatment. For a conservative estimate, 25% is used. Mental-health care cost per victim by type of maltreatment is: physical abuse ($2,700); sexual abuse ($5,800); emotional abuse ($2,700); and educational neglect ($910). Cross-referenced against Nevada Division of Child and Family Services (DCFS) statistics on number of each incident occurring in 2002. Calculations: Physical abuse- 880 x 0.25 x 2,700 = 594,000; sexual abuse-244 x 0.25 x 5,800 = 353,800; emotional abuse- 123 x 0.25 x 2,700 = 83,025; educational neglect- 178 x 0.25 x 910 = 40,495; Total = $1,071,320</td>
<td>$1,403,836</td>
</tr>
<tr>
<td>Child Welfare Services System</td>
<td>The Urban Institute conducted a survey estimating the child welfare expenditures associated with child abuse and neglect by state and local public child welfare agencies and reported Nevada’s to be $79,271,463 in 2004.</td>
<td>$87,650,457</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>The National Institute of Justice estimated the following costs of police services for each of the following interventions in 1993: physical abuse ($20), sexual abuse ($56), emotional abuse ($20), and educational neglect ($2). Cross-referenced against Nevada DCFS statistics on number of each incident occurring in 2002. Calculations: (880 x 20) + (244 x 56) + (123 x 20) + (178 x 2) = $34,080</td>
<td>$44,658</td>
</tr>
<tr>
<td><strong>Total Direct Costs (TDC)</strong></td>
<td></td>
<td><strong>$155,801,807</strong></td>
</tr>
</tbody>
</table>

1 The following table is modeled from the national direct and indirect costs of child abuse and neglect in the United States tables presented in the September 2007 Child Abuse America economic impact study (Wang, 2007).
2 Without being able to find a suitable number specific to Nevada, a ratio was created based on the total number of maltreated children who suffered serious injury in 1993 (according to NIS-3) and dividing by the total number of maltreated children in 1993 (according to NIS-3 Harm Standard because it is the most stringent measure). Using that ratio and multiplying it by the number of reports of neglected and abused children in Nevada in 2007 (courtesy of CANS report), an estimate of the number of maltreated children who were seriously injured in Nevada was approximated.
Table 2: Total Annual Cost of Child Abuse and Neglect in Nevada,\(^1\) Indirect Costs

<table>
<thead>
<tr>
<th>Indirect Cost</th>
<th>Rationale</th>
<th>Estimated Annual Cost (in 2007 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Education</td>
<td>15,685 children in Nevada experienced some form of maltreatment in 2007; 22% of maltreated children have learning disorders requiring special education.(^1) The additional expenditure attributable to special education services for students with disabilities was $5,918 per pupil in 2000.(^1) Calculations: 15,685 x 0.22 x 5,918 = $20,421,242.6</td>
<td>$24,388,682</td>
</tr>
<tr>
<td>Mental Health-Care System</td>
<td>15,685 children in Nevada experienced some form of maltreatment in 2007; 30% of maltreated children suffer chronic health problems. Assumed that the additional health-care costs attributable to childhood maltreatment are $117 (using Wang’s [2000]) rationale for estimating additional health-care costs).(^5) Calculations: 15,685 x 0.30 x 117 = $550,543.5</td>
<td>$680,973</td>
</tr>
<tr>
<td>Juvenile Delinquency</td>
<td>15,685 children in Nevada experienced some form of maltreatment in 2007; 27% of children who are abused or neglected become delinquents, compared to 17% of children in the general population,(^6) for a difference of 10%. The annual cost of caring for a juvenile offender in a residential facility was $30,450 in 1989.(^7) Calculation: 15,685 x 0.10 x 30,450 = $47,760,825</td>
<td>$67,421,569</td>
</tr>
<tr>
<td>Adult Criminal Justice System</td>
<td>The direct expenditure for operating Nevada’s criminal justice system (police protection, judicial and legal services, and corrections) was $397,172,000 in 2005.(^8) According to the National Institute of Justice, 13% of all violence can be linked to earlier child maltreatment.(^9) Calculation: 397,172,000 x 0.13 = $51,632,360</td>
<td>$55,256,435</td>
</tr>
<tr>
<td>Lost Productivity to Society</td>
<td>The median annual earnings for a full-time worker was $33,634 in 2006.(^10) Assume that only children who suffer serious injuries due to maltreatment (5,703) experience losses in potential lifetime earnings and that such impairments are limited to 5% of the child’s total potential earnings.(^11) The average length of participation in the labor force is 39.1 for males and 29.3 for women; the overall average of 34 years is used.(^12) Calculation: 33,634 x 5,703 x 0.05 x 34 = $326,084,993.4</td>
<td>$337,132,753</td>
</tr>
<tr>
<td>Total Indirect Costs (TIC)</td>
<td>Calculation: $484,880,412 (TDC) + $155,801,807 (TIC) = $640,682,219</td>
<td>$640,682,219</td>
</tr>
</tbody>
</table>

\(^1\) The following table is modeled from the national direct and indirect costs of child abuse and neglect in the United States tables presented in the September 2007 Child Abuse America economic impact study (Wang, 2007).

\(^2\) CANS (Child Abuse and Neglect Statistics) report, Nevada Department of Health and Human Services data used for Nevada Kids Count: date from 1-1-2007 through 12-31-07 estimated the amount of child maltreatment cases in Nevada. Furnished by the Center for Business and Economic Research at the University of Nevada, Las Vegas, 2008.


\(^11\) Without being able to find a suitable number specific to Nevada, I created a ratio based on the total number of maltreated children who suffered serious injury in 1993 (according to NIS-3) and divided it by the total number of maltreated children in 1993 (according to NIS-3 Harm Standard because it is the most stringent measure). Using that ratio, I multiplied it by the number of reports of neglected and abused children in Nevada in 2007 (courtesy of CANS report) to come up with an estimate of the number of maltreated children who are seriously injured in Nevada.

Implications and Conclusions

Considering Nevada’s estimated annual cost, it is vital to consider options that can be exercised to reduce the substantial economic and social costs associated with child abuse and neglect. A basic economic efficiency argument can be considered, where one accounts for the estimated annual economic impact of child abuse and compares it to the costs and benefits of preventive measures. Reducing the amount of maltreated children promotes schooling; raises both the quality of the work force and the productivity of schools; and reduces crime, teenage pregnancy, and welfare dependency (Heckman, 2006)—all factors that can mitigate the negative economic and social costs associated with Nevada child abuse and neglect. Many child abuse prevention cost-benefit studies show that preventive measures, such as a child abuse prevention program, are very effective in economic terms (Heckman, 2006).

The information in this brief can be used to advocate child abuse policy issues and to measure the effectiveness of different prevention programs. An example of this is an application of Wang and Holton’s (2007) national annual estimates. Clearly (2007) advocates the high public return involved with child abuse prevention and treatment. He estimates an investment rate of return for child abuse prevention programs to be 30% or more within ten years. Heckman (2006) similarly argues that prevention and intervention programs have high benefit-cost ratios and rates of return. The Federal Reserve Bank of Minneapolis concluded that if a child abuse and neglect prevention program is properly managed and funded, it can yield a return far exceeding the returns on most public or private investments (Rolnick and Grunewald, 2003). These are only a few examples of measures that can be considered to reduce the economic impact of child abuse and neglect.

Although this brief does not advocate a specific remedy to reduce the estimated substantial cost of child abuse and neglect, it should serve as an impetus to act and reduce these costly effects. Reducing child abuse and neglect in Nevada improves the social and economic potential of our future work force, which currently costs the average household about $650 (2007 dollars) annually. Nevadans, which include concerned citizens (who can expect a safer, livelier community), public officials (who can expect their citizens to be more productive and contributing members of society), business leaders (who can expect a better work force), and potential program funders (who can expect high economic, social, and personal returns), must work together to alleviate these social and economic costs.

Table 3: Total Per Capita, Per Capita Personal Income, and Per Household Cost of Child Abuse and Neglect in Nevada

<table>
<thead>
<tr>
<th></th>
<th>Costs Per Capita¹</th>
<th>Cost as Percentage of Per Capita Personal Income ¹</th>
<th>Cost Per Nevada Household ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Direct Cost</td>
<td>$60.73</td>
<td>0.15%</td>
<td>$157.90</td>
</tr>
<tr>
<td>Total Indirect Cost</td>
<td>$189.01</td>
<td>0.467%</td>
<td>$491.42</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$249.74</td>
<td>0.617%</td>
<td>$649.32</td>
</tr>
</tbody>
</table>

¹ The U.S. Census Bureau estimates the 2007 Nevada population to be 2,565,382. This figure was obtained from the U.S. Census Bureau: http://factfinder.census.gov/servlet/SAFFPopulation?_sse=on&_lang=en&_state=04000US32&_cityTown=&_county=&_zip. The U.S. Department of Commerce and the Bureau of Economic Analysis estimate the Nevada per capita personal income to be $40,480. This figure was obtained from http://www.unm.edu/~bber/econ/us-pci.htm.

² This figure is derived from taking the estimated total cost of child abuse and neglect in Nevada and dividing by Nevada’s 2007 population to obtain a per capita cost which is then adjusted by the average number of persons per household, which is approximately 2.6. The average number of persons per household in Nevada was obtained from http://quickfacts.census.gov/qfd/states/32000.html.
Endnotes

1 This publication models two earlier publications documenting the nationwide costs as a result of child abuse and neglect (Fromm, 2001 and Wang and Holton, 2007).

2 Adjustments for inflation were made using the gross domestic product (GDP) implicit price deflator published by the Bureau of Economic Analysis (www.BEA.gov). The GDP implicit price deflator is quarterly data that are seasonally adjusted and indexed to the year 2000. The 2007 dollar estimates were obtained by re-indexing the data to 2007 and multiplying by the corresponding year deflator for the costs that warranted adjustment, and adding that value to the original cost.

3 The methods used for calculation are similar to Wang and Holton’s (2007) and are a) updated with more current information or b) substituted with Nevada-specific information.

4 The Nevada State Statutes define child abuse and neglect under the following revised statutes: §§432B.020, 432B.090, 432B.150; §432B.140; §§432B100, 432B.110; §432B.070. (These are only the main statutes highlighting certain child abuse and neglect laws and do not include every statute regarding child abuse and neglect.) Please refer to the Nevada Revised Statutes index located at http://www.leg.state.nv.us/NRSindex/C. html/NRSCHILDABUSEORNEGLECT for further detail regarding the laws governing child abuse and neglect in Nevada.

5 This figure is derived from taking the estimated total cost of child abuse and neglect in Nevada and dividing by Nevada’s 2007 population to obtain a per capita cost which is then adjusted by the average number of persons per household, which is approximately 2.6.

References

CANS (Child Abuse and Neglect Statistics) report, Nevada Department of Health and Human Services data, used for Nevada Kids Count: data from 1-1-2007 through 12-31-07 and estimates the amount of child maltreatment cases in Nevada. Furnished by the Center for Business and Economic Research at the University of Nevada, Las Vegas, 2008.


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If you need more specific information about the children and youth in your local area, contact Nevada KIDS COUNT, Keith Schwer, PhD, Director CBER or Rennae Daneshvary, PhD, Nevada KIDS COUNT Coordinator, Associate Director of Research and Administration.

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