
James E McCarroll*
Zizhong Fan
John H Newby
Robert J Ursano

Center for the Study of Traumatic
Stress and Department of
Psychiatry, Uniformed Services
University of the Health Sciences,
Maryland, USA

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Trends in US Army Child Maltreatment Reports: 1990–2004[†]

We present the victim rates and severity of child maltreatment in US Army families by the sex of the child and parent from 1990–2004. Neglect rates decreased from a high point in 1991 to a low in 2000, but by 2004 the rates had increased to about the 1991 level. During two large-scale deployments of the US Army to the Middle East (1991 and 2002–2004), the rates of neglect increased. Neglect rates were highest for the youngest children and decreased as age increased. Physical abuse rates decreased from 1990–2004, but the decline was slowed during 2001–04. Physical abuse was more severe by male offenders.

Emotional abuse showed wide fluctuations in rates. Emotional abuse rates were similar for boys and girls up to age 11, but the rates for older girls were higher. Sexual abuse had the lowest rates throughout the time of this report, decreasing from about 0.5/1000 to about 0.1/1000. The rates of physical abuse and neglect were generally higher for boys than for girls up to the teenage years when the rates reversed. Male offenders were more likely to maltreat children (even excluding sexual abuse) than were female offenders and offenders of both sexes were more likely to abuse male children. We provide suggestions for practice, prevention and research in child maltreatment. Published in 2008 by John Wiley & Sons, Ltd.

KEY WORDS: child abuse; neglect; maltreatment; military

Family maltreatment is an extremely important issue for the US military services. The US Army Family Advocacy Program (FAP) (Army Regulation 608–18) was formally established in 1976 following the enactment of the Child Abuse Prevention and Treatment Act of 1974, as amended (see 42 U.S.C. 5101 *et seq*; 42 U.S.C. 5116 *et seq*). The objectives of the FAP are to prevent abuse, encourage the reporting of all instances of abuse, ensure prompt assessment and investigation of all abuse cases, protect victims and treat all family members affected by abuse. The army is required to investigate all credible reports of child maltreatment.

A multidisciplinary case review committee (CRC) at the medical treatment facility of each major army installation reviews

* Correspondence to: James E. McCarroll, PhD, 7508 Glenriddle Rd, Bethesda, MD 20817, USA. E-mail: jmccarroll@usuhs.mil

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maltreatment incidents and determines whether the incident is substantiated and becomes a treatment case, or is not substantiated and receives no further official follow-up. A substantiated incident is one that has been fully investigated and the preponderance of available information indicates that abuse occurred. The CRC also coordinates the medical, legal and other forms of intervention. Substantiated incidents are entered into a confidential database, the Army Central Registry (ACR). Child maltreatment may be substantiated as physical, emotional, or sexual maltreatment or neglect. Victims can be substantiated for more than one category of maltreatment, although this is usually not the case. Although some offender data are recorded, the main referent of the ACR is the victim. A limited amount of data on the victim and the offender are recorded in the ACR for each incident. These include the source of case referral, type and severity (mild, moderate, or severe) of maltreatment, demographic characteristics of the victim and offender, substance involvement of victim and offender, location of victim residence (on or off the military installation) and location where the incident occurred (also on or off the military installation).

Previous research documented the number of cases and rates of child maltreatment reported in the US Army from 1975–97 (McCarroll *et al.*, 1999). During that period, minor physical abuse and neglect decreased, while major physical abuse and sexual abuse were basically unchanged. The rates of emotional abuse more than doubled between 1988 and 1997.

Changes were made to the ACR in October 1999. Major and minor physical injuries were combined into one category, physical abuse. The other three types of child maltreatment were retained. Physical abuse, emotional abuse and neglect were coded by severity: mild, moderate, or severe. (Sexual abuse was coded severe only.) ACR data collected prior to October 1999 were electronically recoded to include the severity of maltreatment. Maltreatments were coded as mild if the only treatment referral for the family was social services, moderate if the referral included outpatient medical treatment, and severe if the referral included inpatient medical treatment or had been previously coded as major physical injury. The purpose of this paper is to (1) update the trends in child maltreatment in the ACR, (2) present severity data by type of maltreatment, and (3) compare cases of maltreatment by the sex of the victim and the sex of the parent perpetrator.

Methods

The statistical procedures employed in this research were tabulation of numbers of cases and computation of rates of maltreatment based on the at-risk population of military children under 18 years of age.

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'Ninety per cent of child maltreatment perpetrators were parents'

Chi-square tests were used to test the significance of differences between the sex of the offender and the severity of maltreatment.

Data from the ACR of child and spouse abuse were tabulated by victim, offender, sex of both child and parent, and type and severity of maltreatment by year¹. Our analyses of offenders include only parents of maltreated children. Yearly victim rates per thousand of child maltreatment in substantiated cases were computed by dividing the number of victims under the age of 18 by the number of children of army parents (at least one parent was an active duty army service member) and multiplied by 1000. Thus, the rate is based on the number of victims per year divided by the at-risk population of children of army parents. Population data were obtained from the Family Data Base (US Army Community and Family Support Center).

Results

Ninety per cent of child maltreatment perpetrators were parents: 56% of parental perpetrators were male and 44% were female. These figures are contrasted with the US national data for 2003 in which 79.7% of perpetrators were parents (58.2% were females and 41.8% were males). The average age of the offenders was 29.0 years. Male offenders (mean age = 29.7 years) were older than female offenders (mean age = 28.2 years). The ages of male and female offenders by the age group of the child are provided in Table 1. As would be expected, the age of the offender increased with the age of the child.

The data presented here indicate that each child victim usually has only one case per year and one type of maltreatment per case per year. Between 1990 and 2004, there were 47,473 child maltreatment victims, 50,327 cases of child maltreatment and 54,341 total

Table 1. Offender ages by child age group

Age group	Female		Male	
	offenders	offenders	offenders	Total
< 1 year	23.8 (n = 1,977)	24.3 (n = 2,489)	24.1 (n = 4,466)	
1–2 years	24.8 (n = 4,325)	25.6 (n = 4,821)	25.2 (n = 9,147)	
3–5 years	26.8 (n = 5,555)	27.6 (n = 6,079)	27.2 (n = 11,635)	
6–8 years	29.2 (n = 4,519)	30.2 (n = 5,055)	29.7 (n = 9,575)	
9–11 years	31.5 (n = 2,745)	32.5 (n = 3,580)	32.1 (n = 6,325)	
12–14 years	34.2 (n = 1,786)	34.9 (n = 3,236)	34.7 (n = 5,023)	
15–17 years	35.9 (n = 946)	36.8 (n = 2,151)	36.6 (n = 3,098)	

¹The analysis for this paper was generated using SAS software Version 9.1 for Windows XP Copyright © 2002–2003 SAS Institute Inc. SAS and all SAS Institute Inc. products or service names are registered trademarks or trademarks of SAS Institute Inc., Cary, NC, USA.

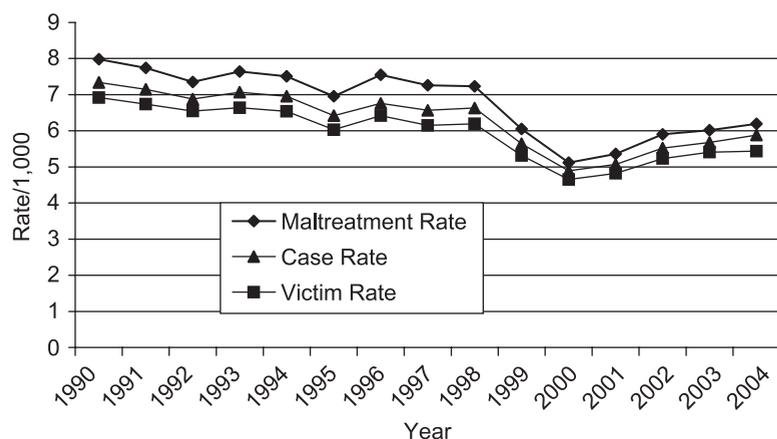


Figure 1. Victim, case and maltreatment rates of army children.

maltreatments of the child victims. For the five-year period, 91% had one case, 8% had two cases and 1% had three cases. We examined three types of reports of maltreatment per thousand children: victims, cases and maltreatments (Figure 1). The victim is the child. The victim rate is the rate per thousand of child victims under age 18 abused in one year. The case per victim rate is the rate of the number of times a case (regardless of the number of maltreatments involved in the case) is substantiated for a child per year. The maltreatment rate is the rate of one or more of four types of maltreatment (physical, sexual, emotional, or neglect) that can occur alone or in combination with each other. Thus, there can be more than one case per victim and multiple maltreatments in a single case.

In 1990 (prior to the Persian Gulf War of 1990–91), the overall child abuse rate per 1000 children was 6.92. The victim rate decreased, albeit unevenly, hitting a low point of 4.65/1000 in 2000, a 33% decrease from 1990. The rate then increased from 4.65/1000 in 2000 to 5.44/1000 in 2004, a 17% increase.

Victim Rate by Type of Maltreatment

Neglect rates showed an overall decline of 28% from a high point of 3.61/1000 in 1991 to a low of 2.61/1000 in 2000. However, by 2004 the rate of neglect increased to about the same level as in 1991. The rates of physical abuse and sexual abuse both decreased from 1990 through 2004 (Figure 2). The physical abuse rate decreased by 65% from 1990 (the highest victim rate for physical abuse) to 2004. Sexual abuse decreased by about 72% from 1993 (the highest annual rate during the period from 1990 to 2004) to 2004. Emotional abuse showed the widest fluctuations in rates. The rate more than doubled between 1990 and 1998, from 0.66/1000 to 1.43/1000. After 1998, the rate remained below 1.0/1000 reaching 0.93/

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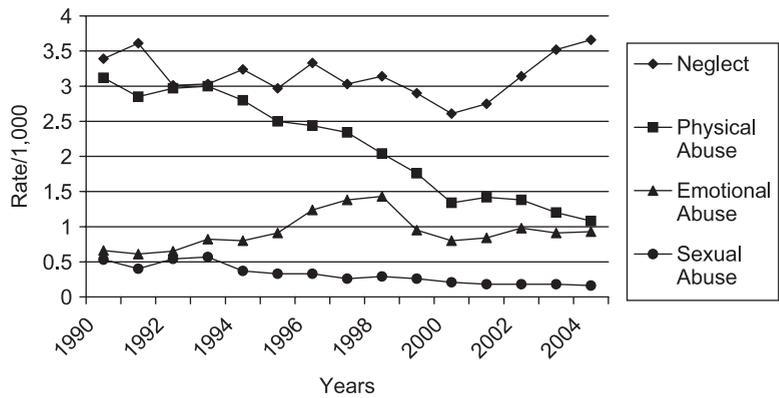


Figure 2. Army rates of child victim maltreatment by year and type.

1000 in 2004. Overall, emotional abuse rates between 1990 and 2004 increased about 41%. Fluctuations in the rates of emotional abuse in the US Army have been described in an earlier publication (Jellen *et al.*, 2001).

Victim Rates by Sex of Child

When sexual abuse was excluded, the victim rate by sex for all types of maltreatment except sexual abuse was higher for boys than for girls for all years (Figure 3). The rate for boys decreased by 27% from 1990 to 2004, 18% for girls from 1991 to 2004. When sexual abuse was included, the highest victim rate for girls was 7.04/1000 in 1990 (Figure 4). The rate for girls decreased to its lowest point in 2000, 4.55/1000, a 35% decrease from 1990. The highest victim rate for boys was in 1990, 6.80/1000. This rate decreased by 30% to its lowest point in 2000, 4.76/1000. The rates for both boys and girls increased from 2000–04. The rate for girls increased by 22%,

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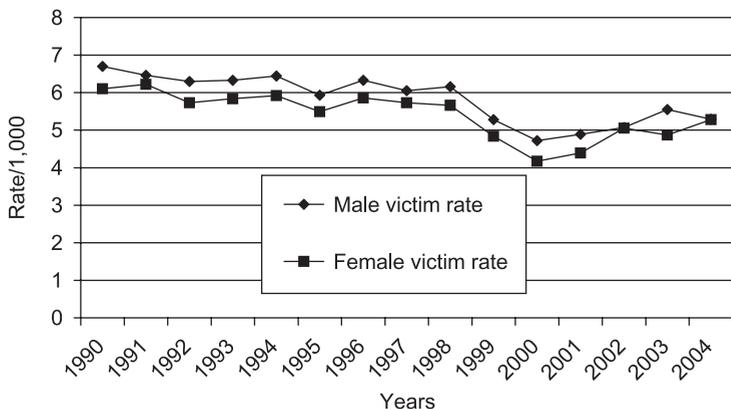


Figure 3. Male and female victim rates (excluding sexual abuse).

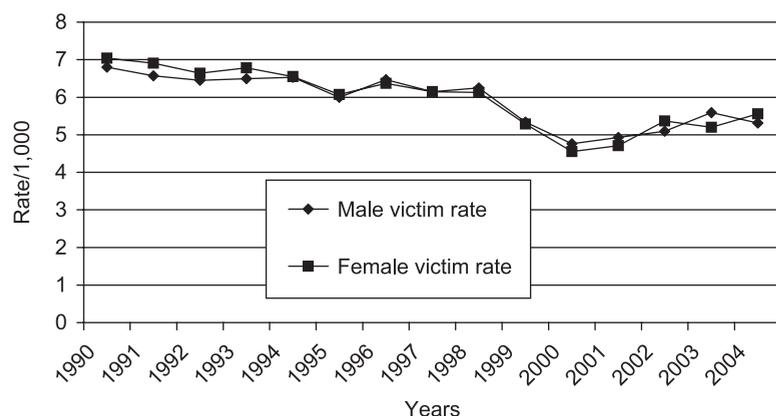


Figure 4. Male and female victim rates (including sexual abuse).

from 4.55/1000 in 2000 to 5.56/1000 in 2004. For boys, the increase was 12% from 2000 (4.76/1000) to 2004 (5.31/1000). The overall decrease in sexual abuse rates from 1990 to 2004 was similar for boys (22%) and girls (21%).

Victim Rates by Type of Maltreatment, Sex and Age of Child

Physical Abuse

Physical abuse rates were approximately the same by year for male and female children under 2 years of age. However, beginning with the 3–5 year age group and continuing through the 9–11 year age group, boys had higher rates than girls. For children ages 3–5, the average rate difference between boys and girls was 0.54/1000; for ages 6–8, 0.65/1000; and for ages 9–11, 0.48/1000. For the 12–14 and 15–17 year olds, girls had higher rates of physical abuse than boys. The mean difference for the 12–14 year olds was 0.97/1000 and it was 1.59/1000 for the 15–17 year old children.

Neglect

Children under one year of age had the highest rates of neglect (Figure 5). Each higher age group had a lower neglect rate with almost no overlap between age groups. Beginning with the 1–2 year old children and continuing through the 9–11 year old group, the rates for boys were an average of 0.6/1000 higher than the rates for girls. Similar to the results for physical abuse, the pattern was reversed for the 12–14 and 15–17 year old children with the girls showing higher rates than the boys. This difference in rates, however, was larger than the differences in rates seen for the younger children: 0.94/1000 for the ages 12–14 years and 1.64/1000 for the 15–17 year old children.

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‘Older girls had the highest rates of sexual abuse’

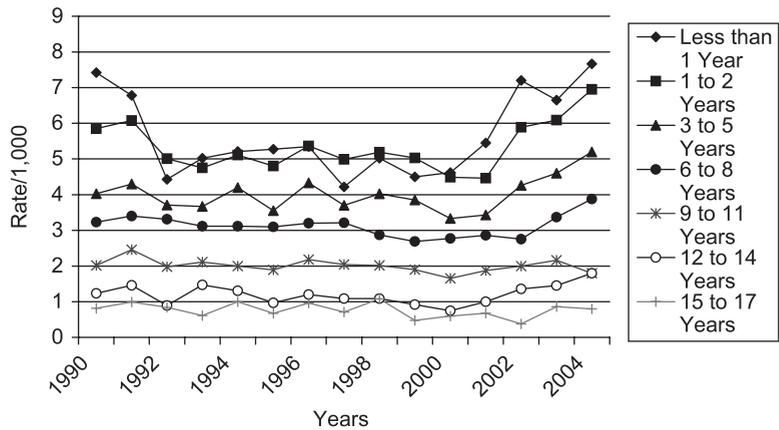


Figure 5. Rates of child neglect by age group and year.

Emotional Abuse

There were essentially no differences between the rates of emotional abuse for boys and girls up to age 11. However, for the 12–14 and the 15–17 year old age groups, the rates for girls were higher than the rates for boys. The mean rate difference between the girls and boys was 0.38/1000 for 12–14 year olds and 0.39/1000 for the 15–17 year old children.

Sexual Abuse

The rates for the girls were always higher than the rates of the boys. Older girls had the highest rates of sexual abuse (Figure 6). The rates for the boys were consistently low, never rising above 0.41/1000. The rates for boys and girls were almost identical up to 2 years old. The rates started to diverge at ages 3–5 years. The rates basically doubled for the girls from ages 6–8 (.43/1000) to 9–11 (.67/1000)

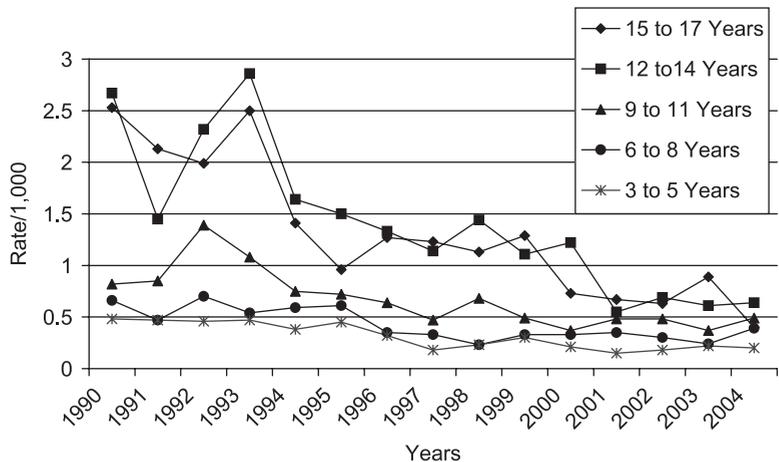


Figure 6. Rates of child sexual abuse by age group and year.

Table 2. Severity of abuse by female and male offenders

Offender	Severity of abuse		
	Mild	Moderate	Severe
All maltreatments*			
Female	61%	31%	7%
Male	59%	32%	9%
Physical abuse**			
Female	50%	39%	10%
Male	49%	38%	13%
Emotional abuse			
Female	68%	27%	5%
Male	68%	26%	6%
Neglect			
Female	65%	28%	6%
Male	65%	28%	7%

* Severe all maltreatments: chi-square = 53.87, $df=2$, $p < 0.0001$. ** Severe physical abuse: chi-square = 21.34, $df=2$, $p < 0.0001$.

to 12–14 (1.41/1000). The rate for the 12–14 year old girls was the highest, 1.41/1000 compared to 1.32/1000 for the 15–17 year old girls.

Severity of Maltreatment

We examined the severity of abuse by the sex of the parent for physical and emotional abuse and neglect (Table 2). Since all sexual abuse is coded severe, it was not included in this analysis. Male parents were more involved in severe cases (9%) than female parents (7%). Mild cases involved more female (61%) than male offenders (59%). Physical abuse by male offenders was classified as severe (13%) more often than that of female offenders (10%), chi-square = 21.50, $df=2$, $p < 0.0001$. The severity of emotional abuse and neglect was not significantly different by sex of offender.

Severity of Maltreatment of Child by Sex of Parent

Looking at all maltreatments (excluding sexual abuse) over this time period, we compared the sex of the parent offender and the sex of the child victim to determine if fathers or mothers were more likely to abuse a same-sex child or an opposite-sex child. Overall, male offenders abused children more than female offenders. Fifty-four per cent of physical and emotional abuse and neglect cases (sexual abuse was excluded) were by men compared to 46% by women.

Offenders of both sexes were more likely to abuse male children, chi-square = 29.88, $df=1$, $p < 0.0001$. Fifty-three per cent of maltreatments by male offenders were against boys; 51% of maltreatments by female offenders were against boys. When we examined the specific types of maltreatment by the sex of the

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parent and the sex of the child, male offenders were more likely to physically abuse male children (55%) than female children (45%) and female offenders were only slightly more likely to physically abuse female children (51.5%) than male children (48.5%), $\chi^2 = 76.08$, $df = 1$, $p < 0.0001$. Ninety-four per cent of sexual abuse offenders were males. As would be expected, 89% of sexual abuse cases were against female children by male offenders, $\chi^2 = 189.68$, $df = 1$, $p < 0.0001$. Female offenders were about equally likely to sexually abuse male (51%) as female (49%) children. Differences between sex of the offender and sex of the victim were not statistically significant for emotional abuse or neglect.

Discussion

During the period 1990–2004, the overall rate of child maltreatment in the US Army has declined, largely due to the decrease in the rate of child physical abuse. The rate of sexual abuse also decreased, but made only a small contribution to the overall rate decrease due to the relatively small numbers of cases. Emotional abuse showed fluctuations that resulted in a small increase from the year 2000 through 2004. The neglect rate, however, increased and reached its highest level in 2004, slightly surpassing the previous high point in 1991. The increase in the neglect rate from 2000 to 2004 was 40%.

During this same time period, 1990–2004, child physical abuse in the US national society decreased from 3.5/1000 in 1991 (US Department of Health and Human Services, 1995) to 2.1 in 2004 (US Department of Health and Human Services, 2006), a 40% decrease. However, the decrease in the rates in the US Army was greater, from 3.1/1000 in 1990 to 1.0/1000 in 2004, a 65% decrease. Thus, the trend in the US Army mirrors that of the US national figures, but with a more marked decrease in rates. We are unable to identify a reason for this greater decrease in the army other than the fact that the FAP has provided a variety of preventive educational programmes to combat child maltreatment.

The time period of 1990–2004 includes two large-scale deployments of US Army soldiers to wars in the Middle East, 1990–91 and 2001 to the present. During this same time period, the US national data showed little change in neglect rates, 7.6/1000 in 1990 to 7.7/1000 in 2004 (US Department of Health and Human Services, 1995, 2006). It is not possible to say for certain what the effects of the more recent and long-lasting deployments to Iraq and Afghanistan have been on the US Army, but these data suggest their association with the increase in neglect rates in 1991 and from 2000 through 2004 and a possible slowing of the decrease in physical

abuse rates during the same period. These changes require further study to examine the relationship of neglect to operational tempo, and separation and reunion cycles.

It was interesting to note that on the average, each child victim has one case per year involving one maltreatment. This appears to be the opposite of what has been found in the US civil society in which most children are multiply maltreated. Ney *et al.* (1994) found that in less than 5% of their subjects was only one type of maltreatment reported. It may be that the army is under-classifying multiple maltreatments. However, in the army, the substantiation of one type of maltreatment is sufficient to alert the FAP staff to the existence of problems in a family and an intervention can be considered for additional maltreatments, if any. An alternative hypothesis is that child abuse and neglect are less serious in the army than in the civilian sector of US society and that children are, in fact, not the victims of multiple maltreatments. In a previous paper, we found that differences in the army and the US were largely due to the high rates of neglect found in the US civilian sector (McCarroll *et al.*, 2004b) and more physical abuse was classified as severe in the army (McCarroll *et al.*, 2004a).

Males were more likely to maltreat children than females, even when sexual abuse was excluded. This appears to be the opposite of the US national child maltreatment data where 57.8% of offenders were female and 42.2% were male (US Department of Health and Human Services, 2006). One might believe that males would be more likely to be substantiated as perpetrators of child maltreatment in the army. However, this seems unlikely since credible cases are investigated and brought before the CRC for disposition regardless of the sex of the perpetrator.

Importantly, why were male offenders much more likely to physically abuse boys (55%) compared to girls (45%) whereas the percentage of female offenders physically abusing girls (51.5%) was only slightly greater than the percentage who abused boys (48.5%)? Why child physical abuse is more severe when the offender is male is not clear. This may be because men are generally stronger than women and more likely to harm the child. It may also be that men in the army may feel it necessary to take a firm stance with children, particularly with boys. No comparable national data currently exist by which to compare military and civilian male child maltreatment offenders. These findings may be important to incorporate into prevention and treatment efforts to lower both the rate and severity of child physical abuse, particularly of boys. However, the difference between the percentages of abused boys and girls is small.

There are several age-related findings in this study that could be the basis of practice, education and prevention as well as further inquiry. First, why are boys between the ages of 3–11 more

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‘Men are generally stronger than women and more likely to harm the child’

'The most pressing needs appear to be to decrease the rate of neglect'

'What have been the effects of the army's increased support of the military family?'

physically abused than girls and why are girls 12–17 more physically abused than boys? Similarly, why are boys ages 1–11 neglected at a higher rate than girls and why are girls ages 12–17 more neglected than the boys? The only clear pattern for emotional abuse is that of the higher rates for girls ages 12–17. In general, younger boys and older girls tend to be abused and neglected, with the exception of sexual abuse in which the rate of abuse of girls is always higher than the rate of abuse of boys. The most pressing needs appear to be to decrease the rate of neglect, particularly among small children, and to learn more about the circumstances of neglect by the sex and age of the child related to deployments. While deployment is a military phenomenon, these findings may also be pertinent and applicable to persons who are absent from families for regular periods or for special jobs such as long-distance drivers, oil rig workers, firefighters and disaster relief workers.

There are many more implications for the US Army regarding our results than we can answer, but which may be studied. For example, what have been the effects of the army's increased support of the military family on rates of maltreatment? How have changes in US national society and the army influenced each other? What are the contingencies that need change in the army to reduce child neglect during deployments and in other stressful circumstances? These are difficult questions, but their study is likely to produce benefits for society as well as for the military.

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