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Gender effects in bullying: Results from a national sample

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ABSTRACT

This study presents gender effects in sociodemographics and psychiatric correlates of bullying in the United States. Data were drawn from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), a nationally representative sample of U.S. adults. Face-to-face interviews of more than 43,000 adults were conducted during the 2001–2002 period. The present study compared 2460 respondents who ever bullied with 39,501 respondents who did not, stratified by gender. The prevalence of this behavior in the U.S. was significantly higher in men (8.5%) than in women (4.2%). Multivariate logistic regression analyses indicated strong associations in both genders with numerous psychiatric and addictive disorders with significant gender effects. Following adjustments for socio-demographic characteristics and other antisocial behaviors, women who ever bullied were significantly more likely to have any lifetime externalizing, including conduct disorder, as well as any lifetime internalizing spectrum disorder compared to men with such behavior. Bullying in women may be a symptom of a broader syndrome than in men, including more prevalent impairment of impulse control and more frequent affective disorders.

1. Introduction

Bullying is a pattern of aggression in which the behavior is intended to harm, intimidate or disturb (Boulton and Underwood, 1992), occurs repeatedly over time (Olweus, 1978), and involves an imbalance of power, with a more powerful person or group attacking a less powerful one (Salmivalli et al., 1999). Bullying often begins in childhood, affecting approximately 30% of youth in the U.S. (Nansel et al., 2001). This behavior can take many forms, including verbal (e.g., name-calling), physical (e.g., hitting), or psychological bullying (e.g., rumors, social exclusion) (Nansel et al., 2001). Longitudinal studies highlight emotional consequences for youth who are bullied (Bond et al., 2001). Victims of bullying report higher levels of insecurity (Glew et al., 2008), lower self-esteem (Glew et al., 2008), higher rates of loneliness (Eslea et al., 2003), anxiety, depression and suicidal ideations (Kaltiala-Heino et al., 1999; Bond et al., 2001; Sourander et al., 2007). They are also more likely to have academic problems (Glew et al., 2008), adverse physical health symptoms, and to report lower levels of social adjustment when compared to the general population (Rigby, 2003). With growing concern about the detrimental consequences of bullying, recent studies have focused on characterizing bullies themselves to further strengthen prevention efforts.

One national study found that 19.3% of youth in the U.S. reported bullying others (Nansel et al., 2001). Bullying is more frequent among boys than girls (Luukkonen et al., 2010). Approximately every fifth boy has bullied at school, whereas this behavior occurs only once in every ten girls. Bullying behavior during childhood is associated with conduct disorder and hyperactivity attention deficit disorder and oppositional defiant disorder (Kumpulainen et al., 1999, 2001). In addition, youth who bully others are more likely to present paranoid, histrionic and passive–aggressive personality traits (Coolidge et al., 2004), as well as depression (Kaltiala-Heino et al., 1999) and suicide attempts (Klomek et al., 2010). Bullying typically begins in childhood or adolescence (Carney and Merrell, 2001), but this behavior can persist into adulthood as a continuing pattern of antisocial behavior (Kim et al., 2011; Renda et al., 2011), with long-term social and psychological consequences (Sourander et al., 2007; White and Loeber, 2008). These findings support that bullying behavior in childhood or adolescence is prevalent and associated with numerous externalizing as well as internalizing spectrum

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disorders, rejecting the widespread idea that school bullying is a natural part of growing up. In addition, this behavior may be influenced by different non-exclusive environmental factors, including peer norms and media messages that can promote the idea that bullying is "no big deal", school's culture and family dynamics (how family members relate to one another) (Horne et al., 2000), as well as possible biological factors (Compton et al., 2007; Hasin et al., 2007).

Studies investigating characteristics of bullies as adults are limited. A recent study examined the prevalence and correlates of bully perpetrating in the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) (Vaughn et al., 2010). Six percent of U.S. adults reported having ever bullied others. Bullying was associated with numerous lifetime psychiatric comorbidities, including bipolar disorder, alcohol and marijuana use disorders, nicotine dependence, conduct disorder, antisocial, paranoid and histrionic personality disorders, suggesting that bullies are severely antisocial with important psychiatric impairments.

Furthermore, several studies suggest gender differences in psychiatric correlates of bullying. Female bullying was associated with regular daily smoking, severe substance use disorders, including nicotine dependence, cannabis and other hard drugs use disorders (Luukkonen et al., 2009, 2010), suicidal ideation (Van der Wal et al., 2003; Kim et al., 2005; Luukkonen et al., 2009), and suicidal behaviors (Kim et al., 2009). Male bullying was associated with regular daily smoking (Luukkonen et al., 2010), suicidal ideation (Van der Wal et al., 2003) as well as alcohol abuse (Luukkonen et al., 2010; Kim et al., 2011), and antisocial personality disorder (Sourander et al., 2007; Renda et al., 2011). On the contrary, other studies did not report increased risk of suicidal behavior (Luukkonen et al., 2009) or suicidal ideations (Kim et al., 2005; Luukkonen et al., 2009) in males.

The literature supports the necessity to better delineate the epidemiology of bullying stratified by gender. Gender effects in bullying may reflect sociocultural and biological factors and could indicate different strategies in the treatment and prevention of male and female bullies. Although prior studies suggest that bullies may have psychiatric and addictive disorders as adults with significant gender differences, limited empirical research has focused on this relationship. Therefore, the aim of the present study was to provide information on national prevalence estimates and sociodemographic characteristics of bullying stratified by gender in a nationally representative sample of U.S. adults, by using data from the NESARC. Particularly, we wanted (i) to compare men and women who ever bullied to participants without such behavior with respect to sociodemographic variables and convergent relations of other antisocial behaviors, and (ii) to investigate gender differences in the lifetime prevalence of externalizing and internalizing spectrum disorders associated with bullying.

2. Method

2.1. Sample

The 2001–2002 NESARC is a nationally representative sample of 43,093 non-institutionalized U.S. residents aged 18 years and older, conducted by the U.S. Census Bureau under the direction of the National Institute on Alcoholism and Alcohol Abuse, as described elsewhere (Grant et al., 1995). The overall survey response rate was 81%. Data were weighted at the individual and household levels to adjust for oversampling and non-response on demographic variables (age, race/ethnicity, sex, region, and place of residence). Data were also adjusted to be representative of the U.S. adult population as assessed during 2000. The research protocol, including informed consent procedures, received full ethical review and approval from the U.S. Census Bureau and the Office of Management and Budget.

2.2. Diagnostic assessment

2.2.1. Sociodemographic characteristics

Sociodemographic characteristics included sex, age, race/ethnicity, nativity, marital status, education, urbanicity and household income.

2.2.2. Bullying

Bullying was assessed with an item embedded in the antisocial personality disorder section. All NESARC participants were asked the following question: "In your entire life, did you ever have a time when you bullied or pushed people around or tried to make them afraid of you?" Participants who answered affirmatively were defined as having ever bullied. Although the reliability of this individual item is unknown, the test–retest reliability for the antisocial personality disorder diagnosis was adequate ($r=0.69$) (Grant et al., 2003). The internal consistency reliability for the entire antisocial personality disorder criterion set was good ($\alpha=0.86$) (Blanco et al., 2008).

2.2.3. Psychiatric diagnoses

All psychiatric diagnoses, including alcohol abuse/dependence, drug use disorders (abuse/dependence on cannabis, amphetamine, hallucinogen, cocaine, heroin, opioid, sedative, tranquilizer and inhalant), nicotine dependence, mood disorders (major depressive disorder, bipolar disorder and dysthymia), anxiety disorders (panic disorder, social phobia disorder, specific phobia disorder and generalized anxiety disorder), antisocial personality disorder, and pathological gambling disorder, were made according to the DSM-IV criteria with the Alcohol Use Disorder and Associated Disabilities Interview Schedule—DSM-IV version (AUDADIS-IV) (Grant et al., 1995; Hasin et al., 1997). Conduct disorder diagnosis was assessed following the DSM-IV rules, after the exclusion of bullying as a diagnostic criterion for conduct disorder. All lifetime mood and anxiety diagnoses were primary or independent, e.g. general medical condition or substance-induced disorders were ruled out. Family history of antisocial behavior based on any first or second-degrees relatives' history of antisocial behavior and suicide attempt were also included.

2.3. Statistical analyses

We divided the sample into two subgroups according to the lifetime presence of a bullying behavior. Distributions of sociodemographic and clinical correlates of bullying were compared using the chi-square test. Odds ratios and confidence intervals were estimated through logistic regression. Multivariate logistic regression analyses were conducted to assess convergent relations of bullying to other antisocial behaviors, and to compare lifetime psychiatric comorbidities by gender among bullies compared to non-bullies. To ensure that the observed gender differences between bullying and lifetime comorbid psychiatric disorders in the general population were not due to sociodemographic correlates or other antisocial behaviors, we adjusted for these variables. When mentioned, a statistical weight was employed to ensure that the data were representative of the population. To examine the interaction between gender and antisocial behaviors, as well as that between gender and psychiatric comorbidities, odds ratio and confidence intervals of the interaction term were estimated through logistic regression. Statistical significance was evaluated using a two-sided design with alpha set at 0.05. Due to the cross-sectional nature of the study, adjusted odds ratios were used as measures of association without implying any causal association.

3. Results

3.1. Prevalence and sociodemographic correlates (Table 1)

Table 1 provides comparisons of participants who ever bullied to those who never did across sociodemographic characteristics, stratified by gender. The overall lifetime prevalence rates of respondents who ever bullied in the U.S. population were 8.5% in men and 4.2% in women. The odds of bullying were significantly higher in men than in women (odds ratio=1.94, 95% CI=1.78–2.11). In both genders, Asian/Native Hawaiian/Pacific Islander Americans had lower odds of bullying than Whites. Being U.S.-born, in the youngest group of age (18–29 yr), having a high school level of education, being divorced/separated or widowed and living in the West region of the U.S. increased the risk of bullying in both genders. Men and women having some college or higher education were significantly less likely to ever bully others. In addition, bullying was significantly more common in