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Katrina R. Miller
none

Gabriel A. Martin

Pamela Rimmer

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Etiological Histories of 35 Deaf and Hard-of-Hearing Residential School Students with Delinquent Behaviors

Katrina R. Miller, Gabriel A. Martin & Pamela Rimmer

Abstract

This paper reviews the etiological histories of deaf and hard-of-hearing juveniles with delinquent behaviors. The etiologies of hearing loss and incidence of secondary or multiple disabilities in students with delinquent behaviors is examined through a review of existing school records for thirty-five (35) students born between the years of 1939-1986. Case studies, percentages, IQ scores, and reading grade level scores are used to provide a description of the neurological and behavioral issues of deaf and hard-of-hearing residential school youth who have experienced criminal legal problems. The purpose is to improve awareness among educators and juvenile justice professionals of some potential effects of multiple disabilities on delinquency in signing deaf and hard-of-hearing youth.

Introduction

An estimated fifty to ninety percent of youthful offenders are believed to have one or more physical disability (Garfinkel, Jordan, & Kragthorpe, 1997). The most commonly identified psychological disturbances in juvenile delinquents are conduct disorder, depression, attention deficit hyperactivity disorder (ADHD or ADD), learning disabilities, post-traumatic stress disorder (PTSD or PTSS), mental retardation, and autism. In an eleven year study conducted at a New York juvenile facility, medical problems were diagnosed in 46.0 percent of adolescents (Farrow, 1998).

About 30 percent of deaf and hard-of-hearing children have one or more disability in addition to deafness (Moore, 1996). Unidentified hearing loss in juvenile delinquents raises a corresponding issue within the juvenile justice system, as two-fifths of juvenile corrections facilities do not provide audiological screenings upon admission (Farrow, 1998).

Studies of adult correctional facilities indicate an overrepresentation of inmates with hearing loss, with an estimated thirty percent of inmate populations experiencing this disability (Jensema, 1990; Vernon, 1995; Zingeser, 1999). In one juvenile offender population of 1600, the incidence of hearing loss was four to five times higher than that of the general adolescent population (Jensema & Friedman, 1988b; as cited by Vernon, Raifman & Greenberg, 1999).

Although 30 percent of the juvenile corrections population has speech, language, and hearing problems, treatment for these conditions is not viewed as an essential service by the corrections system (Zingeser, 1999).

In the deaf and hard-of-hearing adult offender populations, a correlation between violent behavior and poor education, learning disabilities, and brain damage exists (Vernon, Raifman & Greenberg, 1999). Within the deaf adult offender population experiencing an identified hearing loss, 37.3 percent were incarcerated for sex offenses not including prostitution, 15.7 percent were jailed for assaults, 7.8 percent were convicted of homicide, and the remaining 39.2 percent had committed non-violent crimes (Klaber & Falek, 1963; as cited by Vernon, Raifman & Greenberg, 1999). There are no current statistics available to compare the crimes of deaf and hard-of-hearing juvenile delinquents to those of deaf adults or those of juvenile delinquents in the general population. This is because the population of deaf youth and adult offenders with hearing loss are not audiologically screened by the criminal justice system. However, risk indicators for delinquency in disabled youth have been identified as childhood abuse, a prior history of violence, substance abuse, impaired mental status, low socioeconomic status, and membership in high risk communities (Glick & Sturgeon, 1999). The purpose of this study is to describe the etiological and behavioral histories of 35 deaf juveniles with delinquent behaviors.

Methodology

This is a convenience sample in which participants were selected based on their delinquent behaviors. Because the documentation of delinquency was not centralized or computerized at the school, a larger, random sample of the population was not possible. In order to complete this study, available student archives at a residential school for the deaf and hard of hearing were reviewed. Interviews were conducted with the school psychologist, who has served at the facility over the past 18 years. The psychologist and guidance staff provided a list of 35 past and present students who are known to have entered either the juvenile or adult justice system during or following their attendance at the school.

Specific information about student delinquency, such as the date, type of offense, and adjudication of the case was not recorded in the majority of student records. Student sex, IQ score, reading grade level, etiology of hearing loss, neurological disability, and corollary health, social, and mental health information was collected. In a few cases, this

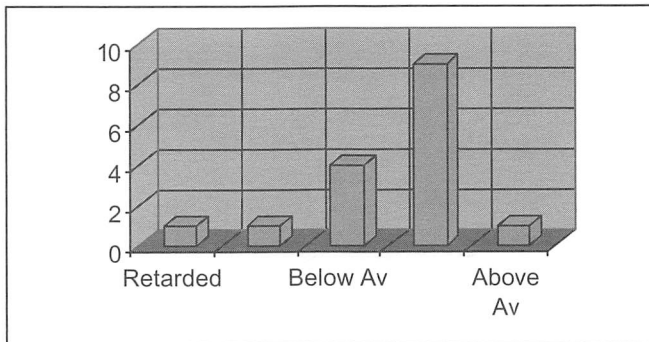
information was not available because older records had been purged in accordance with school policy.

Results

Of the 35 participants, twenty-eight (80.0%) of the participants were male and seven (20.0%) were female. Participants were between the ages of 12 and 21 at the time of documentation of delinquent behaviors. The incidence of multiple disabilities in the sample was at 42.8 percent. Listed as having the incidents of violent and aggressive behavior were 42.8 percent of the sample. While it is not possible to fully assess the social, language, and communication levels of the sample participants without conducting psychological interviews, inferences can be made by examination of the school records. It seems reasonable to assume that students with multiple neurological disabilities, which represent over forty percent of this sample, would be likely to experience difficulty with language learning, processing, and production.

It was possible to obtain IQ scores for only 16 participants in the sample. The available IQ scores for these 16 ranged from 54 to 124, with a mean score of 91. This distribution of scores is in accordance with the general population, as the majority of scores (87.5%) fell between 70 and 130 (Figure 1).

Figure 1. *IQ Scores (n=16)*

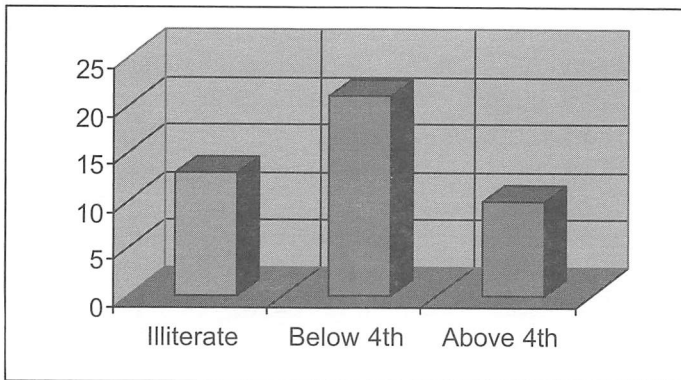


The mean reading grade level for the 31 students for which scores were available was 3.9, although the mode, or most frequently occurring score, was at the second grade level and made up 29.0 percent of the sample participants. Sixty-eight percent (67.7%) of those in the sample demonstrated reading ability below the fourth grade level, while

41.9 percent of the sample was functionally illiterate (grade 2.9 or below; Figure 2).

The majority of these reading grade level scores reflect testing which took place during a student's final two years of high school (11th and 12th grades), although a few students were removed from school by the juvenile justice system prior to entering high school. Records indicate that almost all of the students in the sample were tested using either the SAT (Stanford Achievement Test) or the SAT-HI (an SAT version normed to deaf and hard-of-hearing students). While these scores cannot address the issue of language competence in American Sign Language (ASL), they do indicate a dramatically low capacity for comprehending the plethora of legal documents and treatment materials that are typically disseminated by the juvenile justice and corrections systems in written English.

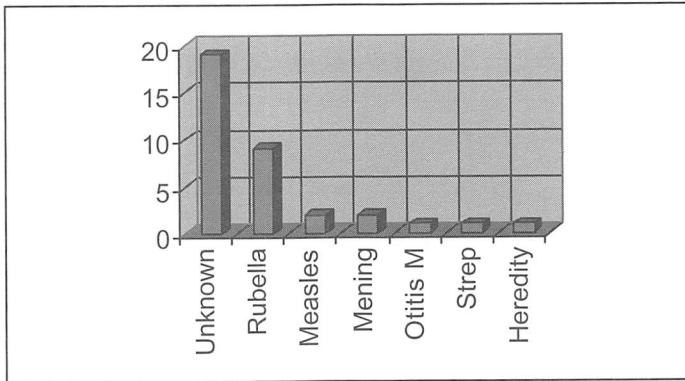
Figure 2. *Reading Grade Levels (n=31)*



Just over fifty percent (54.2%) of this sample did not have an etiology or cause of hearing loss available on record. There were 9 cases (25.7% of the sample) of individuals deafened by rubella (Figure 3). This is consistent with the high number of study participants who were born during the 1960s, as a result of the rubella epidemic that infected one out of ten pregnant women between 1963 and 1965, and which caused a large number of children to be born with hearing loss (Moores, 1996; Vernon, Grieve & Shaver, 1980; Vernon & Hicks, 1980). It is likely that rubella was the cause of most of the unknown etiology cases in the 1964-1965 cohort, because in 30 percent of pregnant women it is possible to sustain the infection without noticeable symptoms (Vernon,

1969; Vernon, Grieve & Shaver, 1980; Vernon & Hicks, 1980). Other causes of hearing loss in this sample are recorded as measles, meningitis, otitis media, strep infection, and heredity.

Figure 3. *Etiologies of Hearing Loss (n=35)*



The environmental risk factors impacting deaf students in this sample were comparable to social problems identified in the disabled delinquent population, with 42.8 percent having a history of violence and 34.2 percent having substance abuse issues (Figure 4). Other factors listed were severe emotional disturbance (SED), child abuse or neglect, sexual abuse, an incarcerated parent (inappropriate role modeling), and gang involvement.

Perhaps the most remarkable feature of this sample is the incidence of disorders which impact an individual's neurological functioning (Figure 5). Students had a secondary disability was at 58.5 percent, with 42.8 percent having multiple disabilities exclusive of the hearing loss. Recorded neurological disorders for this sample are as follows: Congenital Rubella Syndrome, Organic Brain Syndrome, Fetal Alcohol Syndrome/Effect (FAS/FAE), seizure disorder, Attention Deficit Disorder (ADD/ADHD), Microcephaly, Meningocephalitis, and Glycogen Storage Disease.

There are at least 16 different viral illnesses which can cause hearing loss and/or neurological disorders (Vernon & Hicks, 1980). Viral illness was most likely the cause of deafness in 40.0 percent of the study participants, which significantly increases an individual's risk for psychoneurological sequelae. For example, 25.7 percent of participants were identified as sustaining hearing loss due to Congenital Rubella

Syndrome. In 42.0 percent of all people deafened by Congenital Rubella Syndrome, there are psychoneurological sequelae which may include mental retardation, autism, learning disabilities, and/or impulsivity (Chess & Fernandez, 1980). Impulsivity in rubella-deafened individuals is associated with violent and criminal behaviors (Vernon, Grieve, & Shaver, 1980).

Figure 4. *Social & Psychological Health Issues (n=35)*

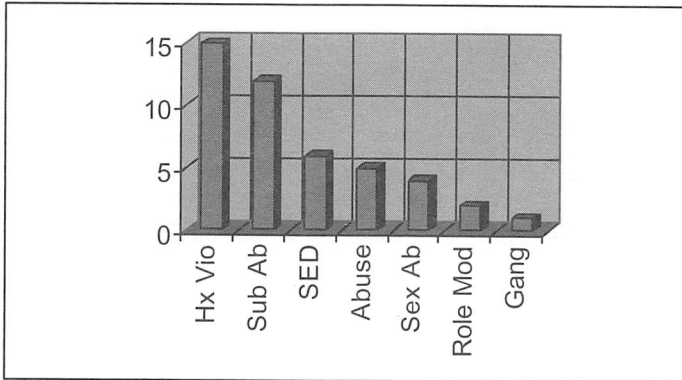
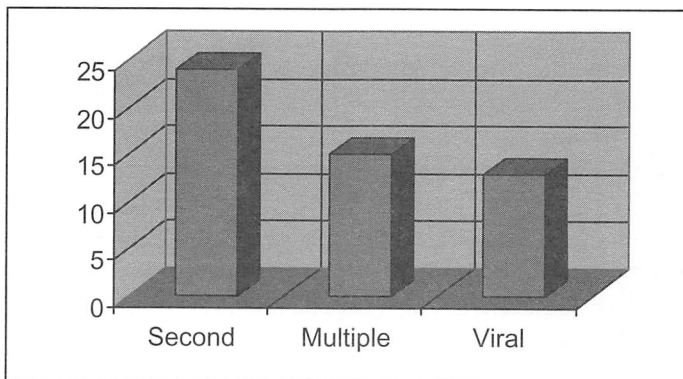


Figure 5. *Disorders Potentially Impacting Neurological Functioning (n=35)*



In order to better understand how viral etiologies and neurological disorders interact in cases of deaf and hard-of-hearing juvenile delinquency, a review of the case of Gilbert, a deaf male with Congenital Rubella Syndrome, may be helpful. Gilbert's physical sequelae resulting from the rubella infection were profound hearing loss and a heart defect. Gilbert's IQ score was 125, indicating above average intelligence and less propensity for psychoneurological sequelae such as impulsivity (Chess & Fernandez, 1980).

As a young boy, Gilbert suffered a traumatic brain injury to his frontal lobe. Gilbert's school records indicate that he experienced seizures, hyperactivity, and explosive behaviors. It is not apparent whether these potentially rubella-related symptoms occurred prior to or following his accident, but the record indicates that following the injury, his IQ dropped dramatically. Gilbert was diagnosed with Organic Brain Syndrome (DSM III) and additional notations were made in his file, such as aberrant sexual behaviors, no capacity to differentiate between right and wrong, and aggression toward other children. During Gilbert's attendance at the school, he was charged with one count of public indecency and one count of second degree burglary. At the time of his graduation he was reading at the 1st grade level. Despite the communication barriers experienced by Gilbert, his criminal behavior is caused not by hearing loss, but is more likely contributed to by the rubella infection and a severe impairment of the executive, or decision-making functions of his brain, following his head injury.

Congenital Rubella Syndrome is no longer a prevalent for educators as vaccines have been developed which largely prevent the disease. The neurological and behavioral effects of viral illnesses such as Herpes Simplex and Cytomegalovirus are much more likely to be a cause for concern among educators of deaf schoolchildren today (Vernon & Hicks, 1980). However, in rare cases, rubella-deafened individuals can experience the reactivation of the viral infection in adulthood, causing serious disabilities (Vernon & Hess, 1983). This is an issue for social workers and correctional professionals to be aware of, as most rubella-deafened youth have now moved on from the school environment into society at large. Adults with Congenital Rubella Syndrome sequelae may exhibit an organic disability, a behavior disorder, or both (Chess & Fernandez, 1980). Forty-three percent (42.8%) of this sample of youths exhibited defiance, explosivity, hostility, aggression, and/or violence, all of which can present in individuals with brain damage and/or conduct disorder.

The case of Roger, a profoundly deaf male with prelingual hearing loss and no etiology on record, illustrates how conduct disorders can impact deaf youth. Roger was born to a hearing family with a physically abusive father and an emotionally disturbed mother. All of the males in his family were exceedingly violent. For example, there was an incident in which Roger and his brothers became enraged and destroyed prison property during a visitation with their father during one of his periods of incarceration. Members of Roger's immediate family used crank and marijuana, and it is assumed that he was exposed to and participated in these activities as a young child.

As a pre-teen, Roger was removed from his home and placed in a residential school for the deaf. Upon entry Roger demonstrated minimal sign language skills, and a psychological evaluation revealed that he could not or would not respond to simple, iconic gestures. His IQ was tentatively estimated as between 61 and 77, and his reading level was evaluated at grade 1.4. During his brief attendance at the school, Roger amassed 20 serious incident reports for aggression, defiance, sexually explicit behavior, stealing, and destruction of property.

Because of his behavior, Roger was not well liked by his peers in the residential environment. Eventually, with a group of older, hearing friends, Roger stole a vehicle and engaged in a high speed chase from the police, which culminated in a serious accident that permanently disabled another driver. Roger was remanded to a juvenile corrections facility where he responded fairly well to the highly structured daily living routine. Roger's early exposure to a criminal environment and poor role models are contributing factors in his criminal behavior. However, of particular concern in Roger's early development is the lack of exposure to effective communication. As a result, he has constricted expressive and receptive language skills in both ASL and English, which is likely to become a permanent disability. This places him at risk for continued antisocial behaviors and incarceration as an adult.

Discussion

Current trends indicate that juvenile crime is on the decline (Snyder, 1997), yet the population of prison inmates under the age of 18 is increasing due to the development of stricter state laws (Glick & Sturgeon, 1999; Levinson & Greene, 1999; McQueen, 2000). While the schools once played a significant role in the identification and treatment of at-risk and delinquent youth, the management of delinquent behaviors in youth is increasingly being addressed by the juvenile justice system. Whereas the case of Gilbert embodies the interaction of organic and

multiple disabilities as mitigating factors in juvenile delinquency, the case of Roger exemplifies many of the identified environmental risk factors that correlate with juvenile delinquency.

The implication from this study and other case studies is that delinquent behavior in the deaf and hard-of-hearing juvenile population is the result of similar conditions experienced by hearing juveniles. However there are unique concerns regarding communication barriers as a contributing factor. When deaf children are not provided with effective language channels, behavior disorders and emotional disturbances may develop (Zingesser, 1999). Unfortunately, professionals unfamiliar with the unique health, language, and social issues of deaf and hard-of-hearing youth often misdiagnose disorders, or label them as “deaf behavior,” rather than recognizing the communication accessibility issues encompassed therein (Vernon & Daigle-King, 1999).

This study provides useful clues as to the direction in which future research in this area should evolve. Further examination of the effects of delayed exposure to effective language in deaf and hard-of-hearing children, as it impacts delinquency, is strongly recommended. Many of the contributing factors of delinquency in deaf and hard-of-hearing youth are similar in nature to those of the general juvenile population, yet it is imperative that parents and professionals recognize and accommodate the unique language and accompanying social issues of signing deaf and hard-of-hearing youth. Otherwise existing disabilities or disorders may be compounded by the lack of effective communication. As the juvenile justice system moves towards harsher punishments for youthful offenders, and because a disproportionate amount of youth currently in the system have either an identified or unidentified hearing loss, it is crucial that future studies focus on early identification, accurate diagnosis, culturally appropriate intervention, and equal access to treatment.

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Katrina R. Miller
University of Arkansas
4601 W. Markham
Little Rock, AR 72205

Gabriel A. Martin
Lamar University

Pamela Rimmer
Oregon Department of Education