Commentaries

Review of Medical Reports on Pedophilia

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The present report is a review of all 554 papers published on Medline on pedophilia. The first discussion is the history of the disorder from ancient Greece to the present time, especially the influence of the liberal country of the Netherlands, the North American Man-Boy Love Association, and the sexual crisis in the Catholic Church. One important question is the relationship between homosexual pedophilia and adult homosexuality. Evidence for and against this relationship is presented. Next discussed are the characteristics of the victim and the long lasting serious effects of sexual abuse. Laboratory correlations are included, especially phallometric tests in order to objectively measure the physical

responses to sexual stimuli. Electrophysiological and radiographic tests are also mentioned, including electroencephalography, computed tomography, magnetic resonance imaging, and positron emission tomography scans. An important section is the characterization of pedophiles with emphasis on their frequent previous sexual abuse, their past, their present, and their anticipated future. The final topic is treatment of this disorder with surgery, medication, behavioral therapy and the combination of medication and behavioral therapy.

Keywords: pedophilia; homosexuality; sexual abuse; behavioral therapy; drug therapy; child abuse

History of Pedophilia

Introduction

When I discuss pedophilia with medical colleagues or friends, the dominant feeling is one of great discomfort with this topic. The same general point was made in 1982 by Jones, who added that the medical community must pay some attention to this disorder. Most everyone seems to feel a natural repulsion, mainly because most adults are disgusted to imagine someone forcing a sexual act on a small child. A chronological approach is followed in this review to demonstrate how reports and attitudes have changed over time.

Pedophilia refers to a sexual act involving an adult and a prepubertal child, and homosexuality refers to a sexual act involving a postpubertal individual of the same sex. The broader term of paraphilia refers to a disorder of sexual identity development with

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3 characteristics: (1) long-standing, highly arousing erotic preoccupation; (2) pressure to act on the erotic fantasies; and (3) sexual dysfunction with a partner during sexual behavior.²

Early History

The history goes back at least to ancient Greece, where homosexuality conformed to the pederastic model and the warrior/hero felt justified in taking sexual advantage of young males.³ Much later, in the middle ages, monarchs like Henry VIII of England in 1533 passed laws making sodomy illegal,4 and as late as 1967, the act was then decriminalized. In the mid-1970s, political leftists were concerned with 3 approaches: (1) sexual liberation with the attempt to place homosexual love on par with heterosexual, (2) civil rights of homosexuals without a challenge for the supremacy of heterosexual love, and (3) the Stalinistic view that homosexuality was a form of "bourgeois decadence" that was alien to the working class.5 When the American Psychiatric Association in 1984 removed homosexuality as a mental disorder, some liberals wanted all paraphilias (sexual deviations)

also to be removed, claiming that classes of sexual disorders were merely codification of social mores.⁶ In the same year, there was an outcry that with the attempts to normalize behavior like pedophilia, there were "staggering numbers of cases of sexual abuse." In summary, the history ranges from ancient Greece through the middle age to modern times, with forces trying to establish these acts as crimes and other forces trying to normalize this behavior.

Influences of the Netherlands

In the 1980s, the Netherlands began to play a major role in the history of pedophilia. The famous philosopher Erasmus had been known in the early 16th century for his broadmindedness,⁸ and William of Orange, considered by some the "father" of the Netherlands, had considerable influence on this country for his emphasis on individual rights.9 For these and similar reasons, many believe that the Netherlands has been and is today the most liberal country in Europe. One of the first articles to demonstrate this attitude was one to abolish the opposition and disgust toward pedophilia. 10 Here, the assumption was that homosexuality was a fully recognized and accepted lifestyle, and pedophilia should also be accepted. By accepting pedophilia, the Dutch Cultural and Recreational Center would be able to broaden the idea of gay identity.10 With these ultraliberal views, there was no surprise that man-boy relationships developed in the Netherlands, 11 based on the concept of a pedagogical Eros.¹² Soon articles were published indicating that that pedophilia was tolerated at arm's length in the Netherlands, as some tried to redefine pedophilia as youth emancipation.¹³ Such tolerance was rooted in Dutch history.^{8,9} Justifications were then forthcoming, such as for a child the main thing is to be wanted, suggesting that such sexual child abuse was a positive experience for the child and that pedophilia was not necessarily sex abuse.¹⁴ Other examples were to give the abuse a new name like "intergenerational intimacy," claiming that a negative outcome was not inevitable.¹⁵ Thus, in the name of sexual freedom, there have been attempts, especially from the liberal Netherlands, to place a positive spin on sexual contacts between an adult and a child.

Spread to United States

In 1990, the Dutch influence spread into man–boy love and the American gay movement, mainly under

the auspices of the North American Man–Boy Love Association (NAMBLA), with some claiming that man–boy love had intersected the gay movement since as early as the 19th century. An additional point was made that the U.S. gay movement had retreated from the original vision of sexual freedom for all in favor of the existing social and political structure. To legitimize or rationalize man–boy sexual relationships, not only NAMBLA but also the Rene Guyon Society and the Childhood Sensuality Circle developed. Also, there were attempts to redefine any possible criminal aspect of pedophilia and to try to escape prosecution by using the insanity defense. Apologists for pedophilia were always available.

There was no surprise that many physicians were troubled by these developments, and some reminded us that medical doctors must report pedophilia.²⁰ Also, the prevalence of sex victimization of children was soon viewed as an intractable national problem. The fear was that the situation would become, like in India, one in which pedophiles often would go free and the victimized child became so depressed and full of guilt that suicide may result.21 Although the gay community tried to maintain that consensual sex with adolescents of 14 years of age qualified as a gay rights issue, the heterosexual community maintains that victims under 14 years of age should never be considered as a gay rights issue.²² Because pedophilia remained controversial and only a few physicians even wanted to discuss it, not to mention to help to legislate against it, terrible abuses continued. The priest scandal of the Catholic Church became very evident in 2002, with thousands of priests indicted, many thousands of victims with their lives forever compromised, and very many millions of dollars paid out as a token compensation to these same victims.²³ Because most of the victims were altar boys more than 14 years of age, most of the perpetrators were homosexuals and not pedophiles, by definition.

Eventually, with such loose legislation against these abuses, horrendous crimes did occur, exemplified by Luis Alfredo Garavito, a homosexual pedophile who killed more than 200 male children, similar to the serial killer, Jurgen Bartsch, also a homosexual pedophile. The penalty given to Garavito was 2600 years in prison, but as an example of ridiculous legislation on this disorder, Garavito could possibly be released in 10 to 20 years in Columbia, South America.²⁴ Of course, there is moral panic in our society about pedophilia,²⁵ and even housing restrictions of 1000 feet for perpetrators to be away from potential

victims have at times not worked, serving occasionally as a stimulus for reoffense.²⁶ The question posed by Di Segni Obiols²⁷ of why 2 consenting adults seem far more persecuted than pedophiles is answered only by increasing penalties against pedophiles. In summary, NAMBLA has spearheaded an attempt to decriminalize child sexual abuse and even to encourage it within the context of a moral panic in our society that often would not wish to deal with what citizens view as a disgusting practice.

Possible Relationship Between Homosexual Pedophilia and Adult Homosexuality

Evidence Against the Relationship

As early as 1977, the medical literature discussed whether male homosexuality and child molestation were associated but concluded that there was likely only a random connection between the two.²⁸ In another report, female children were victimized twice as often as male children, and all perpetrators were said to be heterosexual later as adults. The conclusion was that homosexual pedophilia may be mutually exclusive with adult homosexuality and that among adults, the heterosexual male may be a greater risk to a child than the homosexual male.²⁹ In another study of 269 cases of pedophilia, 82% of the offenders were a heterosexual partner of a close relative of a child and only 2 were homosexual or lesbian. Their conclusion was that the risk of child abuse by a homosexual was only 0% to 3% and, thus, that a child is unlikely to be abused by a gay or lesbian.30

One additional point is that a homosexual experience early in life does not mean a lifetime with that gay orientation. In Papua, New Guinea, the Sambia tribe usually orients boys and adolescents as homosexual and then switches to a heterosexual orientation in adulthood.³¹ One interpretation of this phenomenon is to reiterate the proposed mutual exclusiveness of homosexual pedophilia and adult homosexuality, but here only in the setting of a New Guinea tribe. In 2004, one conclusion from the gay community was that equating pedophilia and homosexuality was worrying and treating homosexuality as a sickness was disgusting.⁴ The main evidence here is a study that concluded that only a 0% to 3% risk is found for a pedophile to later become a homosexual.

Evidence for the Relationship

Early in the 1980s, there was an attempt by gay groups to separate pedophilia and homosexuality, but in the end similar groups tried to abolish the oppositions to pedophilia and to point out that homosexual identity was "by no means a constant, but a fluid identity." The goal was to broaden the idea of gay identity to include and accept pedophilia, as proposed by the Dutch Cultural and Recreational Center.¹⁰

As an example of a close relationship, in 1986 both pedophilia and adult homosexuality were known to be related to birth order, with both groups tending to include the youngest male among numerous brothers. In 1997, the latter point was confirmed with a more specific finding that pedophiles, both homosexual and bisexual, had a later birth than heterosexual pedophiles. The same finding also applied to homosexual men.³² Still later, another report confirmed the specific finding that homosexual pedophiles usually had more older brothers than heterosexual pedophiles. Additionally, the finding was that "fraternal birth order correlated with homosexuality in pedophilia, just like it does in men attracted to mature partners." The conclusion was that "fraternal birth order may prove the first identified universal factor in homosexual development" and that "factors are similar for homosexuality against a child and homosexuality against adults."33 In 2004, the conclusion from another study was that "fraternal birth order applies to sexual deviant behavior." The conclusion applied specifically to sexual behavior but not to general criminal offenses.34

A later report on this matter concluded that the evidence for fraternal birth order was considered weak, as was intrauterine hormonal exposure, but that evidence for postnatal learning as an explanation for homosexuality was stronger. Comments included: "There seems likely to be causes common to male homosexuality and pedophilia. They may include sexual (or quasi-sexual) experience in childhood or adolescence."35 The last report in this section was from 2005, and it indicated that a great amount of data exist that both male homosexuals and pedophiles have experienced more sexual abuse in childhood than heterosexuals. The supposition was that these are more than correlational and are in fact accurate.36 The main evidence in favor of a relationship between pedophilia and homosexuality is the common cause of fraternal birth order and postnatal learning. Also, an adult male sexually attacking a prepubescent 10-year-old boy would be probably called a pedophile and then 4 years later with the same boy would be called a homosexual, by definition. It seems to be questionable logic to view these 2 conditions as completely unrelated.

Characterization of the Victim

Demographic Variables

In 1975, the data showed that 88% of the victims were female and the mean age of the abused was 10.7 years. One half of the attacks occurred during the summer, between 2 PM and 6 PM, committed by abusers with a mean age of 28 years.³⁷ In 1978, the number of female victims was reported as less at 66%, but still the majority. Much later, in 1995, the victims were found to mainly fall into 2 age groups: <5 years and 6 to 12 years of age.³⁸

Physical and Psychological Harm

Physical problems of the victims have rarely been mentioned, but vaginitis in females has been reported.³⁹ Mental and emotional changes have been emphasized in a number of reports, and serious psychological harm was reported as early as in 1976, especially if the sexual attack was repressed by the victim. 40 Other studies have discussed similar effects on the victim and have emphasized that these effects of abuse are serious and long lasting.⁴¹ Occurrences of emotional abuse in conjunction with multiple events of sexual abuse were "good predictors of later poor mental health and also later interest themselves in committing child sexual abuse."42 Other studies also emphasized that emotional abuse represents an additional risk for developmental problems. 43 The emotional scars from the abuse have had various specific effects on children, such as leading to anorexia nervosa, 44 desensitizing them to touch, and minimizing for them the concept of violence.⁴⁵ All of these latter effects have been expressed in neurophysiological terms. Early sexual abuse is considered to produce a neurodevelopmental abnormality in the temporal areas of the brain that mediate sexual arousal and erotic discrimination, in addition to the frontal areas that mediate cognitive aspects of sexual desire and behavioral inhibition.⁴⁶

The final point in this section deals with the probability that this serious sexual abuse of children

can be sufficiently uncovered by caregivers so that the process of therapy can begin for these unfortunate children. Among 107 abused young boys, not a single boy disclosed his abuse to general practitioners, although persistent somatic and behavioral problems continued for years. Therefore, all possible means must be discovered to identify the victims of these crimes. In summary, the serious emotional disorders from sexual abuse of these children often lead to poor mental health conditions, like anorexia and desensitization. Special efforts by pediatricians are needed to identify these victims.

Laboratory Correlations With Pedophilia

Phallometric Tests

As early as 1989, tests called phallometric tests were run to measure the penile responsiveness in the form of an erection to various sexual stimuli. The sensitivity of the test was found to be 55% and the specificity 95%.47 Three years later, there was discussion of whether penile volume or circumference was more valid, but the final decision was that both gave similar results. 48 In 1993, an attempt was made with these phallometric tests to differentiate between homosexual versus heterosexual pedophilia, and the differences were relatively weak.⁴⁹ Two years later, the test was usually called phalloplethysmography,⁵⁰ and at that time more specific results were reported about the differences between those who preved on female versus male victims. With female victims, the perpetrators were like control groups, but with the male victims the pedophiles had a significantly greater response to child stimuli, like nakedness. The sensitivity was 42% for perpetrators with males, and the specificity was 92%.⁵¹ During the same year, homicidal versus nonhomicidal molesters were compared and no differences were found for age or intelligence quotient (IQ). However, differences were seen between the 2 groups with the phallometric index.⁵² More recently, in 2003, penile tumescence was found to be more predictive than psychosexual assessment for detecting pedophiles.⁵³ Finally, the latest (2004) data have shown that the scale for pedophile interest correlates with phallus changes and that these correlational data have more predictive value than uncorrelated phallus data.⁵³ Thus, the phallometric test can often identify individuals who have specific responses to child sexual stimuli.

Chemical Tests

In 1989, hyperprolactinemia was reported in child molesters as an example that pedophilia may represent an endocrine disorder,⁵⁴ confirmed 3 years later in 1992.⁵⁵

Electrophysiological Tests

In 1994, the electrical response called the contingent negative variation (CNV) was studied for possible usefulness to identify pedophiles. This is an event-related potential that measures a long-lasting negative potential recorded from the middle of the scalp when the subject expects an event to occur. Although homosexuals showed a larger CNV than heterosexuals, no differences were found between the responses to stimuli showing male versus female children. During the next year (1995), no difference was seen between child and adult stimuli for pedophiles, but, as expected, a larger CNV was seen from normal heterosexual controls when viewing adult than child stimuli. Thus, the CNV likely has no definite role in identifying or confirming pedophiles.

Radiographic Tests

Positron emission tomography has been used to try to determine why 2 particular patients developed latelife homosexual pedophilia, a rare phenomenon. The scanner showed a hypometabolism within the right temporal area. The resulting speculation was that anterior temporal lobe disease, right greater than left, can increase sexual interest, and a predisposition toward pedophilia could be unmasked by this hypersexuality from brain disease, resulting in overt pedophilia.⁵⁸ More recently, the functional magnetic resonance imaging of a homosexual pedophile during the viewing of young boys in their underwear showed activation of the right orbital frontal cortex.⁵⁹ Although these latter diagnostic studies are helpful, others with appropriate controls are needed before definitive conclusions can be drawn.

On the other hand, a corroborative study, published later, was that a pedophile was discovered to have an orbitofrontal tumor and after its removal the pedophilia was resolved.⁶⁰ This type of case and other similar cases led to the hypothesis that "striatothalamic cortical processing is involved in pedophilic urges. A possible deficit in cognition may be mediated by striato-thalamic areas in association with the

frontal cortex and also with a deficit in prefrontal and motor processing."⁶¹ Thus, radiographic tests would lead to a conclusion that the right temporal and orbitofrontal areas may be especially involved in pedophilia.

Temperature Tests

One report indicated that a higher body temperature can be found in pedophiles in response to metachlorophenylpeperazine. Also, compared with controls, pedophiles had an increased sensation of dizziness, restlessness, and a strange type of hunger, representing a serotonergic disturbance or hyperresponsivity. 62

Characterization of the Pedophile

Demographic Variables

The mean age of pedophiles was 28 years in a survey reported in 1975,37 and in a group of 40 female abusers in 1987 the mean age was a similar 26 years⁶³; they were usually economically poor, poorly educated, retarded, and psychotic (50%) and were also often chemically dependent (>50%).63 In 1995, the emphasis on pedophiles was again on low IQ and poor education, and the number of previous offenses was influenced by a younger age of the victims and a low educational level of the perpetrator. 64 A higher prevalence of left-handedness was reported in 2001, not likely related to any increased educational difficulty.65 More recently, in 2005, lefthandedness was again found to be much more frequent than the rates in pervasive developmental disorders, like autism.66

As for the sex preference of the victims, the ratio of girls to boys was 11:1 among (male) pedophiles in contrast to 20:1 among (male) adults committing sex crimes like rape. Thus, homosexual attraction was greater in pedophiles than in other adults involved with sexual crimes with nearly a 2:1 difference.⁶⁷ The latter sex preference of pedophiles precedes the age preference, so relatively early the pedophile shows a tendency for contact more with boys than does the rapist.⁶⁸ In 1998, the sex preference was 75% for young girls and an overlapping 50% for boys.⁶⁹ An exclusive interest in boys has been found especially in pedophiles with mothers of older age and an interest in girls mainly in intellectually deficit perpetrators.⁷⁰

One other characteristic was that pedophiles had more head injuries before 13 years of age (compared with controls), correlated with neuropsychological phenomena, attention problems, and also left-handedness. Head injuries after 13 years were associated more with drug abuse and promiscuity. In 2004, another study confirmed an increased prevalence for cognitive problems, mainly of immediate and delayed memory, a low IQ, and again left-handedness. The general conclusion was that pedophilia was linked to early neurodevelopmental perturbations, mainfesting itself often in the mid-20s from left-handed individuals who had a head injury before 13 years of age.

Their Past

Previous abuse as child. As early as 1975 and 1979, evidence was presented that abusers were often victims of abuse themselves. 73,74 In 1988, a similar point was made that previous homosexual contact heightens the risk for sexual abuse by the same person. 41 Seven years later another study made the same point, which was found in 42% of pedophiles, but added the interesting finding that the perpetrators choose an age-specific victim in accordance with their own age at victimization.⁷⁵ The clergy as pedophiles often had similar trauma in early life.76 An added point was made in a study that 35% of male abusers had previously been abused, but among 96 females sampled, 43% had been victims but only 1 had later become a perpetrator.⁷⁷ The previous abuse leading later to abuse of a child was viewed as an expression of a comorbid psychiatric disorder, associated often with substance abuse.⁷⁸ When pedophiles and healthy males were compared, 60% of the former and only 4% of the latter had been abused as a child.⁷⁹ In the obverse situation, only 26 victims of abuse (among 224) later became abusers, especially if the abuse was by a female with intrafamily violence and cruelty to animals. Thus, most victims of sexual abuse do not become later abusers, but with other factors, previous abuse increases the risk of pedophilia. 80 The prior discussion of the abused later becoming abusers led one group of authors to emphasize that pedophilia tends to be found in families of pedophiles.81 Not only do the abused tend to become abusers as adults, but they also often commit sexual offenses as a child, found in 26% of pedophiles.82

A 1995 study reported that in their group, every pedophile had been sexually abused but the immediate stimulus for abusing others was not frank child pornography but (surprisingly) soft core heterosexually oriented pornography.⁸³ During that year, 1 report emphasized that the molested becomes the molester, comparing clerics and nonclerics. The clerics tended to demonstrate sex conflictedness, whereas the nonclerics showed more sociopathy and mental disorders.⁸⁴

Drug abuse. A report in 1976 pointed out that there was a clear association between alcoholism and pedophilia and that 49% had been drinking near the time of the attack, 34% heavily (10 or more beers). Alcoholism rate was 52%, with a lower rate if a male child had been the victim, compared with a female victim. ⁸⁵ In the same year, another report emphasized that the most common secondary diagnosis with pedophilia was alcoholism and drug abuse, ⁸⁶ and another paper correlated alcoholism and other paraphilias. ⁸⁷ On the other hand, only 5% of previous convictions were found to be related to multiple paraphilias, whereas 86% were nonsexual offenses, suggesting a general theory of crime among pedophiles. ⁸⁸

Family life. The previous point was clearly made that many of the pedophiles were abused within their own families. In one study, 85% were abused by relatives or acquaintances. ⁸⁹ One report emphasized that pedophiles had often seen physical violence in their parents and did not seem to want cuddling as an infant. In a 1987 report of 40 female abusers, 63 children were involved, three-fourths in an incestuous situation, and more than 90% were mothers to at least 1 victim. Most common was group sex and next was fondling, more often (two-thirds of the time) with females. One half had retardation and/or psychosis, and the majority had chemical dependency. ⁶³

Another report emphasized that pedophiles saw their parents as emotionally rejecting them but at the same time trying to exert great control over them while discouraging any self-development. The same general conclusion was drawn by other investigators who associated pedophilia with earlier separation from their parents. The emotional abuse in such a family was a good predictor of poor mental health and later child abuse. Thus, this section has emphasized the dysfunctional aspect of most

families of child abusers, especially abuse within the family and early separation from the parents.

Their Present

Physical changes. Computed tomographic scans of pedophiles show that their skulls tend to be thinner and less dense with lower regional cerebral blood flow, compared with controls.⁹³

The electroencephalogram has shown increased amounts of normal alpha power and abnormal slow activity on the frontal areas at the time when the pedophiles are with their child partners. In addition, evidence showed a reduced coherence (similar waveforms from 2 areas that are in phase with each other) within and between the hemispheres. During verbal processing, there was altered hemispheric functioning on the dominant hemisphere and disruption of relationships between the left and right frontal areas.94 Chemically, evidence showed an increased concentration of plasma catecholamines, epinephrine, thereby demonstrating increased activity of the sympathoadrenal system.⁹⁵ Neurophysiological changes would be anticipated when a head injury severe enough for unconsciousness to occur. Pedophiles with such an injury tended to have decreased intellectual and educational levels if the accident had been before 6 years of age, but not if between 6 and 12 years, so that neurodevelopmental perturbations would result. 96 Thus, physical changes would place an emphasis on the frontal areas of the brain.

Comparison with other conditions. Pedophiles are usually different in a number of ways from violent criminals, especially because violence is relatively uncommon in pedophilia, although the influence of the abuse can be strong and long lasting. In contrast to the rapist, the pedophile was described as weaker and less muscular with more body fat. He smaller number of rapists over 40 years of age relative to pedophiles "mitigates the incidence of recidivism in rapists, but not in pedophiles." In other words, with older age the frequency of rapes diminishes but not the frequency of child sexual abuse. Other investigators have claimed that rapists resemble pedophiles in many ways. 100

In another study, homicidal pedophiles were compared with those involved with incest. The homicidal

men were more often removed from their homes during childhood and were more violent, aggressive, and psychopathic, also committing more nonsexual offenses. They showed a higher level of phallometric responses to pediatric stimuli and were more aroused when their assaults were depicted. Finally, they were more often psychotic, with antisocial personalities and sexual sadism. In 75%, there were 3 or more sexual diagnoses versus only 6% in those committing only incest. Although pedophiles interact with their victims on a child's level, the incestuous men prefer to elevate their victims to an adult status.

In another study comparing incest with pedophilia, subjects in the incest group were initially less likely to commit new violent or sexual offenses but had phallometric preferences for a child and a recidivism rate of 22% involving violence within 5 years. ¹⁰² One conclusion was that pedophiles had a severe and pervasive personality impairment. ¹⁰³ In 2006, another study concluded that personality disorders and pedophilia share a common structure. ¹⁰⁴ In contrast to criminals in general, whose factors are external, unstable, and controllable, pedophiles have factors that are internal, stable, and uncontrollable. ¹⁰⁵ Compared with violent criminals or rapists, pedophiles tend not to be as violent.

Psychological characteristics of pedophiles. Various characteristics have been ascribed to pedophiles. These include that pedophiles tend to be guilt ridden and try to inhibit their aggression¹⁰⁶ and have the greatest affective and thought disturbance of all sexual offenders.¹⁰⁷ The older adults tend to have a diminished educational level with a low IQ and passive dependent behavior.¹⁰⁸ Their negative mood is said to be related to their "deviant sexual fantasies,"¹⁰⁹ and they often deny their own hostility as a means of trying to minimize their own psychopathy.¹¹⁰ As another example of their sociopathy, 50% of pedophiles claim to have no bad feelings about their abuse of children.¹¹¹ Their arousal was often greater toward a male than a female child.¹¹²

Some groups suggest that there are 2 different groups of abusers: (1) those who are fixated, who molest males, and who come from broken homes but without alcohol abuse; and (2) those who are regressed, who molest females, and who come from intact homes. However, these perpetrators are often viewed before their crimes as normal men and are skilled at planning their abnormal behavior. 114

Also, females are not often viewed as pedophiles by their male victims, but depending on the definition, the prevalence of such behavior is as high as 60%.¹¹⁵ Another characteristic of homosexual pedophiles is that they prefer to interact with their children on a child's level, whereas the heterosexual pedophile is motivated by sexual gratification.¹¹⁶ Pedophiles can intellectually understand moral issues, but, given their personality orientation, they ignore interpersonal social values.¹¹⁷ In general, child abusers have a fragile body image, and those who abuse boys have a weaker ego than those who abuse girls.¹¹⁸ The victim of child abuse is powerless and feels betrayed by the adult abuser, resulting in the emasculation of the development of sexual identity.

As an example of the importance of environment as opposed to genetics, when 4000 siblings were checked, one abused and one not, only the abused suffered the psychopathic symptoms characteristic of pedophiles. 119 Some of those symptoms are denial, refutation, minimization of behavior, and depersonalization of their offenses.¹²⁰ Other attitudes include viewing children as sexual beings who have no control over their own sexuality and deserve sexual entitlement.¹²¹ The pedophile with more convictions had been involved with boys who were younger victims, and the offense took place usually without intoxication compared with nonpedophile crimes. 122 Thus, pedophiles tend to appear normal but are often guilt ridden, having negative moods and a fragile body image, ignoring social values, and denying their behavior.

General characteristics. A number of investigators have generally characterized the pedophile, and these characterizations from 1996 until the present will be presented, especially to see if there may be a changing description. In 1996, compared with criminals without a sexual offense, the pedophile was viewed as more anxious and helpless with painful introspection and with a distorted view of others, having primary dependency needs and a diminished feeling of self-worth. He was chronically hostile, with a narcissistic personality disorder, much like an antisocial personality. 123 Slightly later, the description was that nearly all (95%) had 2 or more paraphilias, many (82%) had mood disorders—including a bipolar diagnosis (55%) and also substance abuse (50%), impulse control disorder (55%), attention deficit hyperactivity disorder (71%)—and nearly all (94%) had a conduct disorder. 124 During the same year (1999), other investigators reported that nearly all pedophiles (93%) met criteria for an axis I disorder other than pedophilia. Mood disorder was found in 67%, anxiety in 64%, substance abuse in 60%, other paraphilias in 53%, and a sexual dysfunction diagnosis other than pedophilia in 24%. The main difference in the latter 2 studies was the prevalence in other paraphilias (95% vs 53%).

Still later the description was that pedophiles had more characterological anger, likely stemming from their general inadequacy, cognitive rigidity, and "introversive inability to gratify their needs." 126 In 2002, the description was that these perpetrators had an impaired interpersonal function, reduced assertiveness, increased passive-aggressiveness, impaired selfconcept, increased sociopathy, and a propensity for cognitive distortion.¹²⁷ In 2005, the general comments were that most men were middle-aged with elevated professional positions, one third were married, one third had never had sex with a woman, but 40% had children. Because only 3% had a criminal record, one conclusion from this group was that deviant sexual fantasies are widespread among men not usually regarded as offenders. ¹²⁸ An excellent example of men not usually viewed as criminals are the clerics who are pedophiles, and they have also been characterized. Compared with noncleric pedophiles, the clerics tends to be older and highly educated, the majority (71%) suffering from homosexual pedophilia as measured phallometrically. The clerics less often had antisocial personality disorders, had more endocrine disorders, and had a long delay before charges were brought against them. They tended to use force and more often were in the offense posture. 129 In summary, pedophiles tend to have a myriad of psychiatric problems, are often anxious with a distorted view of others, have a narcissistic personality disorder, and often have substance abuse and an aggressive sociopathy.

Their Future

University students. One way to judge the possible future for potential perpetrators is to survey the attitudes and tendencies of individuals before they commit any pedophilic crimes. Some surveys have been conducted with university students before any sexual crimes were committed. In one such study, 21% of students admitted a sexual attraction to small children. In addition, 9% admitted to sexual fantasies,

5% admitted to masturbating with fantasies, and 7% admitted a likelihood of pedophilic sexual relations if they could be undetected. Those with the latter admission tended to have had early sexual experiences, had masturbated with pornography, had had frequent sex partners, and had sexual conflicts. ¹³⁰ In a later survey, university students who were attracted to children were characterized as having low self-esteem, greater sexual conflicts, more sexual impulses, and more problems attracting the appropriate sex partners. ¹³¹ In summary, up to 7% of university students claim they would engage in sexual relations with a child if they were certain not to get caught.

Prediction of another sexual offense. The prediction of a new sexual offense based on the present crime was attempted by one group, 132 who found a higher risk if a stranger was the victim and also if the victim was only an acquaintance but not a relative. Other data from a 6.3-year follow-up study showed that 31% had a new sexual offense, 43% had a violent or sexual offense, and the majority (58%) had some type of criminal offense. If the new offense was the same as the previous conviction, then the perpetrator was more often in jail, often diagnosed as a personality disorder and usually never having married. 133 Another study 134 reached one of the same conclusions, namely that if a new sex offense was the same as the older one, the pedophile most likely would offend still again. In 21/2 years, 17% offended again. Thus, these studies show that 17% to 31% of pedophiles soon will offend sexually again, but the majority will commit some type of crime.

Treatment of the Pedophile

Surgery

The earliest report for the treatment of sexual delinquents (in 1975) was a surgical operation, in particular a unilateral hypothalamotomy (6 cases). Five years later, in 1980, the report was that brain surgery was not yet based on sufficient knowledge so the method of choice was orchidectomy, removal of the testicles. During the next year, surgical castration was evaluated, with claims that the procedure strongly decreased sexual thoughts and frequency of coitus, especially when performed in men 46 to 59 years of age. However, 31% still could engage in sexual intercourse so it was not considered a reliable

treatment for sex offenders.¹³⁷ No further reports about surgery for pedophiles are found after 1981 on the Internet's Medline.

Chemical Drugs

Medroxyprogesterone acetate. The second recommendation mentioned for pedophilia (1978) was medroxyprogesterone. When administered for 2 months, the effect was a decrease in sexual fantasies and a decrease in the anxieties from them. 138 In 1983, the effect was reported as a decrease in testosterone, in libido, and also in the number of offenses with few side effects, but no change in sexual orientation. 139 Three years later, the effect was summarized as helpful in many ways. 140 In 1990, the claim was repeated as producing a decrease in testosterone. 141 Much later, in 2001, antiandrogenic progesterone was repeated as having a significant effect on sex drive, if side effects could be tolerated. A similar effect was mentioned for antiandrogen luteinizing hormones. 142 However, another report emphasized the increased dropout rate, because the patients often refused to be compliant. 143 As early as 1984, the conclusion was reached that pedophilia was a manifestation of hypothalamic-pituitary-gonadal dysfunction, because luteinizing hormones could be effective. 144

Cyproterone acetate. The next antiandrogen medication mentioned (in 1987) was cyproterone acetate, investigated because behavior programs by themselves had not been effective. This drug had varying types of effects. 145 In 1991, a report indicated that cyproterone could be successful, but up to 5 years were needed for treatment. 146 During the same year, a case was mentioned with surprisingly favorable results after 16 years of follow-up. 147 In 1992, one reason for the effectiveness of cyproterone acetate was indicated as a decrease in testosterone, also revealed by a decrease in penile tumescence in phallometric responses.¹⁴⁸ Another report in 1992 emphasized that only few effects could be found, but they were long acting. 149 In the same year, both cyproterone and medroxyprogesterone were reported to decease all sexual problems by decreasing the testosterone levels, but only the minority of pedophiles were likely to accept the libido-reducing drugs. 150 In 1993, one group concluded that there was no convincing evidence for success from drug treatment.¹⁵¹ However, in the same year a more positive report was published of a decrease in recidivism, 152 and in 1995 a decrease in sex drive was claimed.¹⁵³ Not until nearly 10 years later, in 2003, did another report find beneficial effects of cyproterone (and also luteinizing hormones).¹⁵⁴ The last report found was in 2004, stating that cyproterone would be needed for criminals with severe paraphilic behavior.¹⁵⁵

Triptorelin. The next drug (in 1993) was a gonadotrophin hormone–releasing agonist called triptorelin, which decreased fantasies. Five years later, details were provided for its effect. A decrease in abnormal sexual behavior was reported, likely related to a testosterone level that fell in one patient from 545 to 23 ng/dL after 42 months. Side effects included erection failure, hot flashes, and a decreased bone density. 156

Leuprolide acetate. The next drug reported (in 2001) was another gonadotropin-releasing hormone, called leuprolide, which in 1 year was viewed as very promising.¹⁵⁷ The last report appeared in 2004, relating that 4 patients were much improved and 2 were moderately improved.¹⁵⁸ One other paper warned that at least 4 years of treatment were needed, and if treatment was stopped, the cessation should be gradual, rather than abrupt. One example was given for a satisfactory effect for 7 years, but with abrupt stopping of the drug a relapse occurred in 8 to 10 weeks.

Combination of Medication and Behavioral Therapy

In 1999, the combination of an antiandrogenic drug and psychotherapy was introduced, but an interesting problem developed. At times, there was a social stigma against mental health professionals who treated pedophiles, because they were considered by some as supporters of illegal sexual acts rather than professionals treating a psychiatric disorder. ¹⁵⁹ In 2000, this combination of therapies was reported as highly effective in pedophiles, ¹⁶⁰ and in 2005 the conclusion was that it decreased urges and fantasies. ¹⁶¹

Behavioral Therapy Alone

A report published in 1990 recommended counseling the pedophile and was based, of course, on the notion that the emotional, erotic, and sexual attraction to young boys should not be legitimized or modified. Four years later, the conclusion was that the comprehensive relapse program resulted in less of a risk of reoffending, but if there was a high level of sexual arousal, the patient was more likely to reoffend. In 2001, such cognitive therapy was a costly

matter but the economic benefits were considered worth it if successful. ¹⁶⁴ The controversial results are indicated in another study, which showed a decrease in reoffending in 1 year, but in another part of the study, no benefit was found for group therapy, and the reported even suggested potential harm in 10 years. ¹⁶⁵ In 2002, the conclusion of one group was that pedophilia was extremely difficult to treat. ¹⁶⁶

In 2005, the conclusion was that group therapy was successful, ¹⁶⁷ but in 2006, another report found that cognitive therapy was suboptimal. Another group emphasized some of the reasons why the success is so variable, namely that the patient must admit guilt and accept personal responsibility before a successful outcome could be anticipated. ¹⁶⁸ Other reasons for apparent failure include the media being blamed for slanting the failure of these therapies ¹⁶⁹ and the belief that humor should always be included in the therapy but often was not. ¹⁷⁰

Other Drug Therapy

Risperidone. In 1996, this drug was used with fluoxetine, but no clear results have been published.¹⁷¹

Sertraline. In 2002 sertraline was introduced, but effects are unclear at this time. 172

Anticonvulsants: carbamazepine and clonazepam. These drugs were used in 2002 without any conclusions.¹⁷³

Masturbation Therapy

As early as 1983, prolonged masturbation (for 1 hour) while verbalizing deviant fantasies was attempted, called satiation therapy.¹⁷⁴ In 1992, this type of therapy was reported to result in decreased deviant arousal.¹⁷⁵ In 1996, the final report was that there was no help from such masturbation therapy.¹⁷⁶

The summary of this therapy section is that antiandrogenic medication, like medroxyprogesterone, cyproterone, triptorelin, and leuprolide, could be effective and was even more effective when combined with behavorial therapy. Masturbation and behavioral therapy alone were not as effective for the pedophile.

Conclusion

Pedophilia is a topic that causes many physicians to feel uncomfortable, especially because there are forces that attempt to normalize this repulsive behavior. One controversial aspect is the possible relationship

between homosexual pedophilia and adult homosexuality. However, there is no controversy about the great psychological harm done to the victims of these crimes. The proper identification of a pedophile can often be determined by phallometric tests, whereas electrophysiological and radiographic procedures may also be helpful in the future. The characterization of the typical pedophile is a male around 26 years of age, often with poor education, left-handed, and at times having sustained a head injury before 13 years of age. They themselves have often been the victims of sexual abuse, they may be alcoholic, and they may have come from a dysfunctional family with an early separation from their parents. Compared with other criminals whose factors are external, unstable and controllable, the pedophile has factors that are internal, stable, and uncontrollable. Pedophiles usually have a distorted view of others and a narcissistic personality disorder, often with substance abuse and aggressive personality. One unfortunate fact is that 7% of university students admit that they would likely have sexual relations with a child if they knew that they would not get caught. Behavioral therapy, neurosurgery, and excessive masturbation have not been effective, but 4 different antiandrogenic medications have been helpful if the pedophile agrees to take these drugs. One last point for all pediatricians is that the great majority of children will not usually volunteer that they have been victims, and great effort is necessary for the practicing pediatrician to uncover this terrible sexual abuse. Clues may be a sudden change in mood and behavior on the part of the child.

References

- 1. Jones JG. Sexual abuse of children. Current concepts. *Am J Dis Child.* 1982;136:142-146.
- 2. Levine SB, Risen CB, Althof SE. Essay on the diagnosis and nature of paraphilia. *J Sex Marital Ther*. 1990;16: 89-102.
- 3. Ungaretti JR. Pederasty, heroism, and the family in classical Greece. *J Homosex.* 1978;3:291-300.
- 4. Boynton P. More on treating homosexuality as a sickness: publication of bigoted letter is worrying. *BMJ*. 2004; 328:1261.
- 5. Thorstad D. Homosexuality and the American left: the impact of Stonewall. *J Homosex*. 1995;29:319-349.
- 6. Suppe F. Classifying sexual disorders: the Diagnostic and Statistical Manual of the American Psychiatric Association. *J Homosex*. 1984;9:9-28.

- 7. Hunter RS, Kilstrom N, Loda F. Sexually abused children: identifying masked presentations in a medical setting. *Child Abuse Negl.* 1985;9:17-25.
- 8. Huizinga J. Erasmus and the Age of Reformation. New York, NY: Sterling; 2002
- Robb NA. William of Orange: Personal Portrait the Later Years, 1674-1702. New York, NY: St. Martin's Press; 1966.
- 10. Sandfort T. Pedophilia and the gay movement. *J Homosex*. 1986;13:89-110.
- 11. Bauserman R. Objectivity and ideology: criticism of Theo Sandfort's research on man-boy sexual relations. *J Homosex.* 1990;20:297-312.
- 12. Maasen T. Man-boy friendships on trial: on the shift in the discourse on boy love in the early twentieth century. *J Homosex.* 1990;20:47-70.
- 13. Schuijer J. Tolerance at arm's length: the Dutch experience. *J Homosex*. 1990;20:199-229.
- 14. Li CK. "The main thing is being wanted": some case studies on adult sexual experiences with children. *J Homosex*. 1990;20:129-143.
- 15. Jones GP. The study of intergenerational intimacy in North America: beyond politics and pedophilia. *J Homosex.* 1990;20:275-295.
- 16. Thorstad D. Man/boy love and the American gay movement. *J Homosex*. 1990;20:251-274.
- 17. deYoung M. The indignant page: techniques of neutralization in the publications of pedophile organizations. *Child Abuse Negl.* 1988;12:583-591.
- Miller RD, Stava LJ, Miller RK. The insanity defense for sex offenders: jury decisions after repeal of Wisconsin's Sex Crimes Law. *Hosp Community Psychiatry*. 1988;39: 186-189.
- Leo J. Apologists for pedophilia. US News World Rep. 2002;132:53.
- 20. Fuller AK. Child molestation and pedophilia. An overview for the physician. *JAMA*. 1989;261:602-606.
- 21. Gangrade KD, Sooryamoorthy R, Renjini D. Child rape: facets of a heinous crime. *Soc Change*. 1995;25:161-176.
- 22. Graupner H. Love versus abuse: cross-generational sexual relations of minors: a gay rights issue? *J Homosex*. 1999;37:23-56.
- 23. Tieman J. Priest scandal hits hospitals: as pedophilia reports grow, church officials suspend at least six hospital chaplains in an effort to address alleged sexual abuse. *Mod Healthc*. 2002;32:6-7.
- 24. Benecke M, Rodriguez y Rowinski M. Luis Alfredo Garavito Cubillos: criminal and legal aspects of serial homicide with over 200 victims. *Arch Kriminol*. 2002;210:83-94.
- 25. McCartan K. "Here There Be Monsters": the public's perception of paedophiles with particular reference to Belfast and Leicester. *Med Sci Law*. 2004;44:327-342.
- 26. Levenson JS, Cotter LP. The impact of sex offender residence restrictions: 1,000 feet from danger or one step from absurd? *Int J Offender Ther Comp Criminol*. 2005; 49:168-178.

- Di Segni Obiols S. Sodomites, homosexuals, gay: from persecution to demedicalization. Vertex. 2006;17:99-104.
- 28. Newton DE. Homosexual behavior and child molestation: a review of the evidence. *Adolescence*. 1978;13:29-43.
- 29. Groth AN, Birnbaum HJ. Adult sexual orientation and attraction to underage persons. *Arch Sex Behav.* 1978;7: 175-181.
- Jenny C, Roesler TA, Poyer KL. Are children at risk for sexual abuse by homosexuals? *Pediatrics*. 1994;94:41-44.
- 31. Baldwin JD, Baldwin JI. The socialization of homosexuality and heterosexuality in a non-Western society. *Arch Sex Behav.* 1989;18:13-29.
- 32. Bogaert AF, Bezeau S, Kuban M, Blanchard R. Pedophilia, sexual orientation, and birth order. *J Abnorm Psychol.* 1997;106:331-335.
- 33. Blanchard R, Barbaree HE, Bogaert AF, et al. Fraternal birth order and sexual orientation in pedophiles. *Arch Sex Behav.* 2000;29:463-478.
- MacCulloch SI, Gray NS, Phillips HK, Taylor J, MacCulloch MJ. Birth order in sex-offending and aggressive-offending men. Arch Sex Behav. 2004;33: 467-474.
- 35. James WH. The cause(s) of the fraternal birth order effect in male homosexuality. *J Biosoc Sci.* 2005;36:51-59.
- 36. James WH. Two hypotheses on the causes of male homosexuality and paedophilia. *J Biosoc Sci.* 2006;38:745-761.
- 37. Jaffe AC, Dynneson L, ten Bensel RW. Sexual abuse of children: an epidemiologic study. *Am J Dis Child.* 1075; 129:689-792.
- 38. Greenberg DM, Bradford J, Curry S. Infantophilia—a new subcategory of pedophilia? A preliminary study. *Bull Am Acad Psychiatry Law.* 1995;23:63-71.
- De Jong AR. Vaginitis due to Gardnerella vaginalis and to Candida albicans in sexual abuse. *Child Abuse Negl.* 1985; 9:27-29.
- 40. Peters JJ. Children who are victims of sexual assault and the psychology of offenders. *Am J Psychother*. 1976;30: 398-421.
- 41. Vander Mey BJ. The sexual victimization of male children: a review of previous research. *Child Abuse Negl.* 1988;12: 61-72.
- 42. Frenken J. Treatment of incest perpetrators: a five-phase model. *Child Abuse Negl.* 1994;18:357-365.
- 43. Lee JK, Jackson HJ, Pattison P, Ward T. Developmental risk factors for sexual offending. *Child Abuse Negl*. 2002;26:73-92.
- 44. Gati A, Teny T, Tury F, Wildmann M. Anorexia nervosa following sexual harassment on the internet: a case report. *Int J Eat Disord*. 2002;31:474-477.
- 45. Conte JR, Wolf S, Smith T. What sexual offenders tell us about prevention strategies. *Child Abuse Negl.* 1989;12: 293-301.
- 46. Cohen LJ, Nikiforov K, Gans S, et al. Heterosexual male perpetrators of childhood sexual abuse: a preliminary neuropsychiatric model. *Psychiatr Q*. 2002;73:313-336.

- 47. Freund K, Blanchard R. Phallometric diagnosis of pedophilia. *J Consult Clin Psychol*. 1989;57:100-105.
- 48. McAnulty RD, Adams HE. Validity and ethics of penile circumference measures of sexual arousal: a reply to McConaghy. *Arch Sex Behav.* 1992;21:177-186.
- 49. Freund K, Kuban M. Deficient erotic gender differentiation in pedophilia: a follow-up. *Arch Sex Behav*. 1993;22: 619-628.
- Tichy P. Phalloplethysmography findings in pedophilia and exhibitionism offenders. Cas Lek Cesk. 1996;135: 521-524.
- 51. Seto MC, Lalumiere ML, Blanchard R. The discriminative validity of a phallometric test for pedophilic interests among adolescent sex offenders against children. *Psychol Assess.* 2000;12:319-327.
- 52. Firestone P, Bradford JM, Greenberg DM, Nunes KL. Differentiation of homicidal child molesters, nonhomicidal child molesters, and nonoffenders by phallometry. *Am J Psychiatry*. 2000;157:1847-1850.
- 53. Seto MC, Harris GT, Rice ME, Barbaree HE. The screening scale for pedophilic interests predicts recidivism among adult sex offenders with child victims. *Arch Sex Behav.* 2004;33:455-466.
- 54. Harrison P, Strangeway P, McCann J, Catalan J. Paedophilia and hyperprolactinaemia. *Br J Psychiatry*. 1989;155:847-848.
- 55. Shostakovich BV, Smirnova LK, Tkachenko AA, Ushakova IM, Kartelishev AV, Nikolaeva TN. A comparative evaluation of the biochemical and psychopathological characteristics in subjects with signs of pedophilia. *Zh Hevropatol Psikhiatr Im S S Korsakova*. 1992;92:83-88.
- Howard RC, Longmore FJ, Mason PA, Martin JL. Contingent negative variation (CNV) and erotic preference in self-declared homosexuals and in child sex offenders. *Biol Psychol.* 1994;38:169-181.
- 57. Howard RC. The neurophysiology of sexual desire with particular reference to paedophilia. *Ann Acad Med Singapore*. 1995;24:724-727.
- 58. Mendez MF, Chow T, Ringman J, Twitchell G, Hinkin CH. Pedophilia and temporal lobe disturbances. *J Neuropsychiatry Clin Neurosci*. 2000;12:71-76.
- Dressing H, Obergriesser T, Tost H, Kaumeier S, Ruff M, Braus DF. Homosexual pedophilia and functional networks—an fMRI case report and literature review. Fortschr Neurol Psychiatr. 2001;691:539-544.
- Burns JM, Swerdlow RH. Right orbitofrontal tumor with pedophilia symptom and constructional apraxia sign. Arch Neurol. 2003;60:437-440.
- 61. Tost H, Vollmert C, Brassen S, Schmitt A, Dressing H, Braus DF. Pedophilia: neuropsychological evidence encouraging a brain network perspective. *Med Hypotheses*. 2004; 63:528-531.
- 62. Maes M, van West D, De Vos N, et al. Lower baseline plasma cortisol and prolactin together with increased body temperature and higher mCPP-induced cortisol

- responses in men with pedophilia. Neuropsychopharmacology. 2001;24:37-46.
- 63. Faller KC. Women who sexually abuse children. *Violence Vict.* 1987;2:263-276.
- Moller A, Bier-Weiss I. The pedophilic offender—an attempt at perpetrator typology. *Psychiatr Prax.* 1995;22: 24-26.
- 65. Bogaert AF. Handedness, criminality, and sexual offending. *Neuropsychologia*. 2001;39:465-469.
- 66. Cantor JM, Klassen PE, Dickey R, et al. Handedness in pedophilia and hebephilia. *Arch Sex Behav.* 2005;34: 447-459.
- 67. Freund K, Watson RJ. The proportions of heterosexual and homosexual pedophiles among sex offenders against children: an exploratory study. *J Sex Marital Ther*. 1992; 18:34-43.
- 68. Freund K, Kuban M. Toward a testable developmental model of pedophilia: the development of erotic age preference. *Child Abuse Negl.* 1993;17:315-324.
- 69. Beier KM. Differential typology and prognosis for dissexual behavior—a follow-up study of previously expert-appraised child molesters. *Int J Legal Med.* 1998;111:133-141.
- 70. Blanchard R, Watson MS, Choy A, et al. Pedophiles: mental retardation, maternal age, and sexual orientation. *Arch Sex Behav.* 1999;28:111-127.
- Blanchard R, Kuban ME, Klassen P, et al. Self-reported head injuries before and after age 13 in pedophilic and nonpedophilic men referred for clinical assessment. *Arch* Sex Behav. 2003;32:573-581.
- 72. Cantor JM, Blanchard R, Christensen BK, et al. Intelligence, memory, and handedness in pedophilia. *Neuropsychology*. 2004;18:3-14.
- 73. Freund K, Langevin R, Wescom T, Zajac Y. Heterosexual interest in homosexual males. *Arch Sex Behav.* 1975;4: 509-518.
- 74. Blumberg ML. Collateral therapy for the abused child and the problem parent. *Am J Psychother*. 1979;33:339-353.
- 75. Greenberg DM, Bradford JM, Curry S. A comparison of sexual victimization in the childhoods of pedophiles and hebephiles. *J Forensic Sci.* 1993;38:432-436.
- Ruzicka MF. Predictor variables of clergy pedophiles. Psychol Rep. 1997;81:589-590.
- Glasser M, Kolvin I, Campbell D, Glasser A, Leitch I, Farrelly S. Cycle of child sexual abuse: links between being a victim and becoming a perpetrator. Br J Psychiatry. 2001;179:482-494.
- 78. Fagan PJ, Wise TN, Schmidt CW Jr, Berlin FS. Pedophilia. *JAMA*. 2002;288:2458-2465.
- Cohen LJ, McGeoch PG, Gans SW, Nikiforov K, Cullen K, Galynker II. Childhood sexual history of 20 male pedophiles vs. 24 male healthy control subjects. *J Nerv Ment Dis*. 2002;190:757-766.
- 80. Salter D, McMillan D, Richards M, et al. Development of sexually abusive behaviour in sexually victimized males: a longitudinal study. *Lancet*. 2003;361:471-476.

- 81. Gaffney GR, Lurie SF, Berlin FS. Is there familial transmission of pedophilia? *J Nerv Ment Dis.* 1984;172: 546-548.
- 82. Freund K, Watson R, Dickey R. Does sexual abuse in childhood cause pedophilia: an exploratory study. *Arch Sex Behav.* 1990;19:557-568.
- 83. Howitt D. Pornography and the paedophile: is it criminogenic? *Br J Med Pychol*. 1995;68:15-27.
- 84. Haywood TW, Kravitz HM, Wasyliw OE, Goldberg J, Cavanaugh JL Jr. Cycle of abuse and psychopathology in cleric and noncleric molesters of children and adolescents. *Child Abuse Negl.* 1996;20:1233-1243.
- 85. Rada RT. Alcoholism and the child molester. *Ann NY Acad Sci.* 1876;273:492-496.
- 86. Henn FA, Herjanic M, Vanderpearl RH. Forensic psychiatry: profiles of two types of sex offenders. *Am J Psychiatry*. 1976;133:694-696.
- 87. Allnutt SH, Bradford JM, Greenberg DM, Curry S. Comorbidity of alcoholism and the paraphilias. *J Forensic Sci.* 1996;41:234-239.
- 88. Smallbone SW, Wortley RK. Criminal diversity and paraphilic interests among adult males convicted of sexual offenses against children. *Int J Offender Ther Comp Criminol*. 2004;48:175-188.
- 89. Spencer MJ, Dunklee P. Sexual abuse of boys. *Pediatrics*. 1986;78:133-138.
- 90. Bass BA, Levant MD. Family perception of rapists and pedophiles. *Psychol Rep.* 1992;71:211-214.
- 91. Violato C, Genuis M. Factors which differentiate sexually abused from nonabused males: an exploratory study. *Psychol Rep.* 1993;72:767-770.
- 92. Bagley C, Wood M, Young L. Victim to abuser: mental health and behavioral sequels of child sexual abuse in a community survey of young adult males. *Child Abuse Negl.* 1994;18:683-697.
- 93. Hendricks SE, Fitzpatrick DF, Hartmann K, Quaife MA, Stratbucker RA, Graber B. Brain structure and function in sexual molesters of children and adolescents. *J Clin Psychiatry*. 1988;49:108-112.
- 94. Flor-Henry P, Lang RA, Koles ZJ, Frenzel RR. Quantitative EEG studies of pedophilia. *Int J Psychophysiol*. 1991;10:253-258.
- 95. Maes M, De Vos N, Van Hunsel F, et al. Pedophilia is accompanied by increased plasma concentrations of catecholamines, in particular epinephrine. *Psychiatry Res.* 2001;103:43-49.
- 96. Blanchard R, Christensen BK, Strong SM, et al. Retrospective self-reports of childhood accidents causing unconsciousness in phallometrically diagnosed pedophiles. *Arch Sex Behav.* 2002;31:511-526.
- 97. Brongersma E. Boy-lovers and their influence on boys: distorted research and anecdotal observations. *J Homosex.* 1990;201:145-173.
- 98. Thibaut F, Cordier B, Kuhn JM. Effect of a long-lasting gonadotrophin hormone-releasing hormone agonist in

- six cases of severe male paraphilia. *Acta Psychiatr Scand*. 1993;87:445-450.
- 99. Dickey R, Nussbaum D, Chevolleau K, Davidson H. Age as a differential characteristic of rapists, pedophiles, and sexual sadists. *J Sex Marital Ther*. 2002;28:211-218.
- 100. Eher R, Neuwirth W, Fruehwald S, Frottier P. Sexualization and lifestyle impulsivity: clinically valid discriminators in sexual offenders. *Int J Offender Ther Comp Criminol*. 2003;47:452-467.
- Firestone P, Bradford JM, Greenberg DM, Larose MR. Homicidal sex offenders: psychological, phallometric, and diagnostic features. J Am Acad Psychiatry Law. 1998;26:537-552.
- 102. Rice ME, Harris GT. Men who molest their sexually immature daughters: is a special explanation required? *J Abnorm Psychol*. 2002;111:329-339.
- 103. Cohen LJ, Gans SW, McGeoch PG, et al. Impulsive personality traits in male pedophiles versus healthy controls: is pedophilia an impulsive-aggressive disorder? Compr Psychiatry. 2002;43:127-134.
- 104. Bogaerts S, Vanheule S, Desmet M. Personality disorders and romantic adult attachment: a comparison of secure and insecure attached child molesters. *Int J Offender Ther Comp Criminol.* 2006;50:139-147.
- 105. McKay MM, Chapman JW, Long NR. Casual attributions for criminal offending and sexual arousal: comparison of child sex offenders with other offenders. Br J Clin Psychol. 1996;35:63-75.
- 106. Levin SM, Stava L. Personality characteristics of sex offenders: a review. *Arch Sex Behav.* 1987;16:57-79.
- Kalichman SC. Psychopathology and personality characteristics of criminal sexual offenders as a function of victim age. Arch Sex Behav. 1991;20:187-197.
- Moller A, Bier-Weiss I. Sexual abuse of children (section 176 StGB)—general practice of forensic perpetrator assessment. Gesundheitswesen. 1994;56:47-50.
- McKibben A, Proulx J, Lusignan R. Relationships between conflict, affect and deviant sexual behaviors in rapists and pedophiles. *Behav Res Ther*. 1994;32: 571-575.
- 110. Wasyliw OE, Grossman LS, Haywood TW. Denial of hostility and psychopathology in the evaluation of child molestation. *J Pers Assess*. 1994;63:185-190.
- 111. Elliott M, Browne K, Kilcoyne J. Child sexual abuse prevention: what offenders tell us. *Child Abuse Negl*. 1995;19:579-594.
- 112. Miner MH, West MA, Day DM. Sexual preference for child and aggressive stimuli: comparison of rapists and child molesters using auditory and visual stimuli. *Behav Res Ther.* 1995;33:545-551.
- 113. Johnston FA, Johnston SA. A cognitive approach to validation of the fixated-regressed typology of child molesters. *J Clin Psychol*. 1997;53:361-368.
- 114. Glaser B. Psychiatry and paedophilia: a major public health issue. *Aust N Z J Psychiatry*. 1998;32:162-167.

- 115. McConaghy N. Paedophilia: a review of the evidence. *Aust N Z J Psychiatry*. 1998;32:252-265.
- 116. Wilson RJ. Emotional congruence in sexual offenders against children. *Sex Abuse*. 1999;11:33-47.
- 117. Valliant PM, Gauthier T, Pottier D, Kosmyna R. Moral reasoning, interpersonal skills, and cognition of rapists, child molesters, and incest offenders. *Psychol Rep.* 2000;86:67-75.
- 118. Tardi M, Van Gijseghem H. Do pedophiles have a weaker identify structure compared with nonsexual offenders? *Child Abuse Negl.* 2001;25:1381-1394.
- 119. Sageman S. The rape of boys and the impact of sexually predatory environments: review and case reports. *J Am Acad Psychoanal Dyn Psychiatry*. 2003;31:563-580.
- 120. Wright RC, Schneider S. Mapping child molester treatment progress with the FoSOD: denial and explanations of accountability. Sex Abuse. 2004;16:85-105.
- 121. Mihailides S, Devilly GJ, Ward T. Implicit cognitive distortions and sexual offending. *Sex Abuse*. 2004;16: 333-350.
- 122. Carlstedt A, Innala S, Brimse A, Soderstrom Anckarsater H. Mental disorders and DSM-IV paedophilia in 185 subjects convicted of sexual child abuse. Nord J Psychiatry. 2005;59:534-537.
- 123. Bridges MR, Wilson JS, Gacono CB. A Rorschach investigation of defensiveness, self-perception, interpersonal relations, and affective states in incarcerated pedophiles. *J Pers Assess*. 1998;70:365-385.
- 124. Galli V, McElroy SL, Soutullo CA, et al. The psychiatric diagnoses of twenty-two adolescents who have sexually molested other children. *Compr Psychiatry*. 1999;40:85-88.
- 125. Raymond NC, Coleman E, Ohlerking F, Christenson GA, Miner M. Psychiatric comorbidity in pedophilic sex offenders. Am J Psychiatry. 1999;156:786-788.
- 126. Gacono CB, Meloy JR, Bridges MR. A Rorschach comparison of psychopaths, sexual homicide perpetrators, and nonviolent pedophiles: where angels fear to tread. *J Clin Psychol.* 2000;56:757-777.
- 127. Cohen LJ, McGeoch PG, Watras-Gans S, et al. Personality impairment in male pedophiles. *J Clin Psychiatry*. 2002;63:912-919.
- 128. Frei A, Erenay N, Dittmann V, Graf M. Paedophilia on the Internet—a study of 33 convicted offenders in the Canton of Lucerne. Swiss Med Wkly. 2005;135:488-494.
- 129. Langevin R, Curnoe S, Bain J. A study of clerics who commit sexual offenses: are they different from other sex offenders? *Child Abuse Negl.* 2000;24:535-545.
- 130. Biere J, Runtz M. University males' sexual interest in children: predicting potential indices of "pedophilia" in a nonforensic sample. *Child Abuse Negl.* 1989;13: 65-75.
- 131. Smiljanich K, Briere J. Self-reported sexual interest in children: sex differences and psychosocial correlates in a university sample. *Violence Vict*. 1996;11:39-50.

- 132. Greenberg D, Bradford J, Firestone P, Curry S. Recidivism of child molesters: a study of victim relationship with the perpetrator. *Child Abuse Negl.* 2000;24: 1485-1494.
- 133. Rice ME, Quinsey VL, Harris GT. Sexual recidivism among child molesters released from a maximum security psychiatric institution. *J Consult Clin Psychol*. 1991;59:381-386.
- 134. Seto MC, Eke AW. The criminal histories and later offending of child pornography offenders. *Sex Abuse*. 2005;17:201-210.
- 135. Dieckmann G, Hassler R. Unilateral hypothalamotomy in sexual delinquents. Report on six cases. *Confin Neurol.* 1975;37:177-186.
- 136. Freund K. Therapeutic sex drive reduction. *Acta Psychiatr Scand Suppl.* 1980;287:5-38.
- 137. Heim N. Sexual behavior of castrated sex offenders. *Arch Sex Behav.* 1981;10:11-19.
- 138. Pinta ER. Treatment of obsessive homosexual pedophilic fantasies with medroxyprogesterone acetate. *Biol Psychiatry*. 1978;13:369-373.
- 139. Cordoba OA, Chapel JL. Medroxyprogesterone acetate antiandrogen treatment of hypersexuality in a pedophiliac sex offender. *Am J Psychiatry*. 1983;140:1036-1039.
- 140. Wincze JP, Bansal S, Malamud M. Effects of medroxyprogesterone acetate on subjective arousal, arousal to erotic stimulation, and nocturnal penile tumescence in male sex offenders. Arch Sex Behav. 1986;15:293-305.
- 141. Kiersch TA. Treatment of sex offenders with Depo-Provera. *Bull Am Acad Psychiatry Law.* 1990;18:179-187.
- 142. Knecht T. Pedophilia and its treatment. *Schweiz Rundsch Mex Prax*. 2001;90:1906-1912.
- 143. Vanderschueren DM. Hormone treatment of pedophilia. *Verh K Acad Geneeskd Belg.* 1997;59:371-378.
- 144. Gaffney GR, Berlin FS. Is there hypothalamic-pituitary-gonadal dysfunction in paedophilia? A pilot study. *Br J Psychiatry*. 1984;145:657-660.
- 145. Bradford JM, Pawlak A. Sadistic homosexual pedophilia: treatment with cyproterone acetate: a single case study. *Can J Psychiatry*. 1987;32:22-30.
- 146. Ahrens R. Androcur (cyproterone acetate) in sex offenses—follow-up of psychiatric admissions. *Schweiz Arch Neurol Psychiatr*. 1991;142:171-188.
- 147. Menghini P, Ernst K. Anti-androgen treatment in a retrospective evaluation of 19 sex offenders. *Nervenarzt*. 1991;62:303-307.
- 148. Cooper AJ, Cernovovsky Z. The effects of cyproterone acetate on sleeping and waking penile erections in pedophiles: possible implications for treatment. *Can J Psychiatry*. 1992;37:33-39.
- 149. Dickey R. The management of a case of treatment-resistant paraphilia with a long-acting LHRH agonist. *Can J Psychiatry*. 1992;37:567-569.
- 150. Cooper AJ, Sandhu S, Losztyn S, Cernovsky Z. A doubleblind placebo controlled trial of medroxyprogesterone

- acetate and cyproterone acetate with seven pedophiles. *Can J Psychiatry*. 1992;37:687-693.
- 151. Richer M, Crismon ML. Pharmacotherapy of sexual offenders. *Ann Pharmacother*. 1993;27:316-320.
- 152. Bradford JM, Pawlak A. Effects of cyproterone acetate on sexual arousal patterns of pedophiles. *Arch Sex Behav*. 1993;22:629-641.
- 153. Czeizel E. Chemical castration in homosexual pedophilia. *Orv Hetil.* 1996;137:23-25.
- 154. Briken P, Hill A, Berner W. Pharmacotherapy of paraphilias with long-acting agonists of luteinizing hormone-releasing hormone: a systematic review. *J Clin Psychiatry*. 2003;64:890-897.
- 155. Gerardin P, Thibaut F. Epidemiology and treatment of juvenile sexual offending. *Paediatr Drugs*. 2004;6:79-91.
- 156. Rosler A, Witztum E. Treatment of men with paraphilia with long-acting analogue of gonadotropin-releasing hormone. *N Engl J Med.* 1998;338:416-422.
- 157. Briken P, Nika E, Berner W. Treatment of paraphilia with luteinizing hormone-releasing hormone agonists. *J Sex Marital Ther*. 2001;27:45-55.
- 158. Saleh FM, Niel T, Fishman MJ. Treatment of paraphilia in young adults with leuprolide acetate: a preliminary case report series. *J Forensic Sci.* 2004;49: 1343-1348.
- 159. Repique RJ. Assessment and treatment of persons with pedophilia. *J Psychosoc Nurs Ment Health Serv.* 1999; 37:19-23.
- Rosler A, Witztum E. Pharmacotherapy of paraphilias in the next millennium. *Behav Sci Law*. 2000;18:43-56.
- 161. Schober JM, Kuhn PJ, Kovacs PG, Earle JH, Byrne PM, Fries RA. Leuprolide acetate suppresses pedophilic urges and arousability. *Arch Sex Behav*. 2005;34:691-705.
- van Naerssen A. Man-boy lovers: assessment, counseling, and psychotherapy. J Homosex. 1990;20:175-187.
- 163. Marques J, Nelson C, West MA, Day DM. The relationship between treatment goals and recidivism among child molesters. *Behav Res Ther*. 1994;32:577-588.
- 164. Shanahan M, Donato R. Counting the cost: estimating the economic benefit of pedophile treatment programs. *Child Abuse Negl.* 2001;25:541-555.
- 165. Kenworthy T, Adams CE, Bilby C, Brooks-Gordon B, Fenton M. Psychological interventions for those who have sexually offended or are at risk of offending. Cochrane Database Syst Rev. 2004;(3):1-38.
- 166. Cohen LJ, Galynker II. Clinical features of pedophilia and implications for treatment. *J Psychiatr Pract*. 2002;8:276-289.
- 167. Smith J, Petibon C. Relapse prevention group therapy for paedophiles: French adaptation. *Encephale*. 2005; 31:552-558.
- 168. Barrett M, Wilson RJ, Long C. Measuring motivation to change in sexual offenders from institutional intake to community treatment. *Sex Abuse*. 2003;15:269-283.

- 169. Berlin FS, Malin HM. Media distortion of the public's perception of recidivism and psychiatric rehabilitation. *Am J Psychiatry*. 1999;148:1572-1576.
- 170. Eisenman R. Using humor in psychotherapy with a sex offender. *Psychol Rep.* 1992;71:994.
- 171. Bourgeois JA, Klein M. Risperidone and fluoxetine in the treatment of pedophilia with comorbid dysthymia. *J Clin Psychopharmacol*. 1996;16:257-258.
- 172. Chow EW, Choy AL. Clinical characteristics and treatment response to SSRI in a female pedophile. *Arch Sex Behav.* 2002;31:211-215.
- 173. Varela D, Black DW. Pedophilia treated with carbamazepine and clonazepam. *Am J Psychiatry*. 2002;159: 1245-1246.

- 174. Marshall WL. Satiation therapy: a procedure for reducing deviant sexual arousal. *J Appl Behav Anal*. 1979;12:377-389.
- 175. Johnston P, Hudson SM, Marshall WL. The effects of masturbatory reconditioning with nonfamilial child molesters. *Behav Res Ther.* 1992;30:559-561.
- 176. Brown CM, Traverso G, Fedoroff JP. Masturbation prohibition in sex offenders: a crossover study. *Arch Sex Behav.* 1996;25:397-408.