Myths and misconceptions about sex offenders.

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INTRODUCTION

Individuals who commit sex crimes present problems for everyone who deals with or is affected by them. Among those who commit such crimes, some are caught, some are convicted, and some are eventually sent to mental health care providers. Although many are never caught and never get help, a growing number seek help through such avenues as: self-help groups like Sex and Love Addicts Anonymous; chat-rooms on the internet; reading books and watching afternoon talk shows; or presenting with vague or unusual complaints (e.g., "Doc, I think I like sex too much"). They are, by definition, criminal and they are always in hiding, despised even by other criminals. They are the subject of increasing media attention which is at once salacious, superficially probing, and almost universally condemning. Victims of sex crimes have become increasingly vocal and have lobbied for the attention of politicians who, in turn, have become convinced that sex crimes are a new epidemic which cries out for corrective legislative countermeasures.

With so many powerful interest groups converging on the issue of sex offenders and what to do with them, it is important that the scientific community be sure of what it is saying. It is important that mental health experts make clear how much of what they are saying is opinion and how much is known scientifically. When a statement is communicated as a fact, it is important that the reasons for believing it and the limitations of evidence supporting the "fact" be stated. The topic of treatment of sex offenders is a "hot potato" that, if not handled correctly, will damage the reputation of the mental health field. Unfortunately, this is among the most complex, controversial, and political topics faced by mental health care professionals. There seems to be something about sex that makes even scientists stop thinking logically. For example, penile plethysmography or phallometry is an experimental procedure used to measure sexual arousal patterns. Virtually every expert who has written about phallometry has cautioned that it is insufficiently sensitive or specific to be used to determine the guilt or innocence of a person accused of a sex crime. A simple mathematical example will indicate the problem. Without knowing the figure, let's assume that 5% of the male population is pedophilic. Assume also that phallometry is 95% accurate (i.e., will correctly identify a pedophile 95% of the time and correctly identify a non-pedophile 95% of the time). Under such circumstances, in a random phallometric testing of the male population, there would be a 50% chance that a man who tested positive was not a pedophile, and hence would be misidentified. [NOTE: of every 100 men tested, 4.75 of the 5 pedophiles would test

positive and 4.75 of the 95 non-pedophiles would test positive.] This somewhat counter-intuitive mathematical fact (Savant, 1996) is rarely heard by the courts. Admittedly, the men who find themselves in circumstances where such phallometric testing is done are not a random sample of the population. Nevertheless, courts frequently allow admission of evidence from phallometric testing without an explanation of its limitations.

Similarly, statements that are poorly supported by the scientific literature are made daily about the nature of sex offenders, even by experts. The purpose of this paper is to alert those who deal with sexual offences and sex offenders to some common assumptions that are poorly supported by scientific evidence.

METHOD

Several currently popular statements about sex offenders are reviewed. For the purpose of this paper, no attempt is made to exhaustively review the literature. Rather, flaws in currently cited literature and/or unacknowledged gaps in the scientific evidence concerning sex offenders are highlighted. Recent studies conducted by the first author are used to show how important it is to question everything about the knowledge base on sex offenders, since even intuitively obvious "facts" often turn out to reflect more about what we want to believe than about what is true.

Each of the following sections begins with a statement about sex offenders which is then held up to the light of published evidence. No attempt has been made to marshal all the evidence that has been adduced in support of the statement; instead, we will present relevant evidence which challenges the statement. In doing so, we will criticize several studies although it should be clear that we neither intend nor imply any criticism of the authors. No study is perfect, and in the rapidly evolving field of assessment and treatment of sex offenders, methodologic shortcomings should be expected. Research in this area should be supported, but also challenged to defend current theories against contradictory evidence. To the extent that a valid theory has broad generalizability, good predictive power, and has been rigorously tested, the statements we challenge here do not meet some or all of those standards. Our argument is not that they will not eventually do so, but that they presently lack sufficient scientific support and, indeed, face notable contradiction. This is an issue today because tentative hypotheses emerging from empirical research now move rapidly into the public domain where they may, through repetition, solidify as unverified truths.

MYTHS AND MISCONCEPTIONS

1. SEX OFFENDERS ARE ALL SOCIALLY DEPRIVED MEN. Virtually all published studies of sex offenders involve samples derived from men convicted of sex crimes. In order to fall into this population, an individual must proceed through a series of steps which are summarized in Table 1. At each of these stages, individuals from higher socioeconomic backgrounds are more likely to be excluded, and therefore not fall into the study sample. As a result, the data on which experts form opinions tend to be based on

samples biased toward the less financially privileged, less intelligent, and more socially isolated. Not surprisingly, convicted sex offenders show many similarities to men convicted of other crimes. However, some evidence suggests that the true population of men with deviant sexual interests is quite different. In a recent biography, a former president of American University in Washington, D.C., admitted engaging in repeated unsolicited obscene phone calls in which he attempted to engage women in conversations about the sexual torture of children (Barendzen & Palmer, 1993). Although Dr. Barendzen showed extraordinary courage in publicly exposing his conduct, it is notable that he was ultimately given a diagnosis of post traumatic stress disorder, and would therefore not be picked up in a routine clinical sample of sex offenders. An individual must:

Table 1 Necessary steps to be identified as a sex offender by authorities

An individual must
1. come to the attention of the authorities
2. be designated as a suspect
3. be caught be
4. convicted
5. be sentenced

Theories about sex offenders based on clinical findings have identified a high incidence of dyslexia, social maladjustment, childhood deprivation, impulsivity, personality disorders, or co-morbid psychiatric disorders including alcoholism and substance-abuse. However, such studies often fall to control for the fact that the sample is biased.

There is no question that many sex offenders have a variety of co-morbid problems. However, it is a mistake to blame all the problems that occur in the treatment of sex offenders on the sexual deviation they exhibit. Over the years, a climate of therapeutic nihilism has developed to the point where it is more likely that effective treatments will be discarded than that ineffective treatments will be adopted. Therefore, treatments of paraphilic disorders which appear to have failed should not be discarded before failure due to other factors, such as criminality, have been excluded.

2. SEX OFFENDERS ARE THE RESULT OF CHILDHOOD ABUSE. Dr. Barendzen (described above) attributed his criminal sexual behaviour to his own experience of having been sexually abused as a child. This explanation of the reason normal people become sex offenders has been cited so frequently that it has become an axiom that seems to require no further support in some circles. It is based on surprisingly little objective evidence. In fact, the onus has now incorrectly shifted to researchers to prove that sex abuse does not lead to a predisposition to become a sex offender. Since it is always impossible to prove a negative, this "fact" is unlikely to be revised soon. What is the evidence to support it?

Most papers reference one seminal article on the topic which firmly established the

"abuse to abuser" hypothesis (and its variants listed below) in the literature (Groth, 1979). The abstract for this paper indicates that

348 men were studied who had been

convicted of sexual assault [...] There

appeared to be a higher incidence of

sexual victimization in the background

of offenders as compared to non-offenders,

and in many cases their

sexual assaults appear to replicate their

own victimization (p. 10).

This conclusion has been repeated like a mantra in numerous review articles since then.

However, closer examination of this study reveals that the study sample of sex offenders consisted of "interviews [...] and/or study of their criminal records" (p. 11). The control group consisted of 62 male law enforcement officers who were administered an "anonymous questionnaire in regard to sexual trauma experienced during their development" (p. 11). In the sex offender groups, there were 170 men who assaulted adults and 178 men who assaulted children. Twenty-nine percent of rapists were designated as having had "sexual trauma [...] which was emotionally upsetting or disturbing to the subject" (p. 11). Thirty-one percent of child sex abusers were so designated, compared to 3% of police officers.

Although a comparison of the sex offender group to the control group is inappropriate due to the differences in data collection, it is conceded that sex offenders in this study do appear to have a high rate of sexual trauma. That is, until the types of sexual trauma are reviewed. Six percent of the "trauma" involved "a sex-stress situation where the anxiety resulted from family reaction to the discovery of the subject's involvement in sexual activity" (p. 13). Examples given included punishment for masturbation. Three percent witnessed "upsetting sexual activities, usually on the part of their parents" (such as catching them having sex) (p. 13). Eight percent "suffered some sexual injury or physiological handicap" (p. 13). One example cited included a man who had been in a motorcycle accident and was fitted with a penile prosthesis due to erectile dysfunction. Most experts in the field today would not consider these to be equivalent to the type of childhood sexual assault normally considered in "abuse to abuser" scenarios.

If these cases are subtracted, the overall incidence of sexual assault falls from 30% to 13%. Further, "sexual trauma" by a same-aged or younger "assailant" occurred in 30% of

the "traumatized" rapists and 16% of the "traumatized child molesters". No statistical analyses were conducted in this study.

From the data presented, it would appear that sex offenders have a similar or lower incidence of sexual assault by adults than the general population. Not surprisingly, on-duty police officers also appear to report lower rates of sexual trauma than the general population. This frequently cited paper, in spite of its methodologic flaws, therefore supports the exact opposite hypothesis, that is, that abuse does not predict a predisposition to becoming a sex offender. Unfortunately, this fact has not been communicated to many victims of sex crimes (particularly men) who worry that they will inevitably become like their assailants.

Given the unconvincing nature of the Groth (1979) study, a more recent study was conducted involving 100 men referred to a Forensic Psychiatry outpatient service because of concerns about their sexual activities with children (Fedoroff & Pinkus, 1996). Twenty percent reported a past history of sexual abuse. The sample was divided into abused (n=20) and non-abused (n=80) groups. Three variations of the "abuse to abuser" hypothesis (originally proposed in the Groth paper) were tested.

The first is that the age of past sexual abuse predicts the age of victim. No difference was found between the mean age of victims in either group (8.6 +/- 4.6 years vs. 8.6 +/- 3.7 years respectively). In the abused group, there was no significant difference between age of the offender's abuse and victim age (paired t=-11.8, df=39, p=0.0001), there was no correlation between these same variables ([r.sup.2]=0.018), and only one abused offender had a victim within one year of the age of his own victimization.

The second variation of the theory is that the type of sexual offence experienced by the offender as a child is predictive of the type of offence he will commit. This association was not supported, but this may have been because of lack of statistical power.

The third variation of the theory is that men who assault boys are more likely to have been assaulted as boys by other men. No significant differences were found between assaulted and non-assaulted offenders in terms of the percentage of male, female, or victims of both sexes (assaulted: 25% vs. non-assaulted: 34%; assaulted: 65% vs. non-assaulted: 63%; assaulted: 10% vs. non-assaulted: 4%, respectively). In short, this study offers no evidence to support the abuse to abuser hypothesis (Fedoroff & Pinkus, 1996).

Hanson and Slater's (1988) meta-analysis of 18 studies involving a total of 1,717 offenders allowed them to test the abuse to abuser hypothesis. They concluded that, "the relationship between childhood sexual victimization and sexually abusing children as an adult does not appear to be specific [...]" (p. 486). This is an understatement at best. For example, one study widely cited as supporting the abuse to abuser hypothesis (Burgess, Hatman et al., 1987) in fact found "a link between childhood sexual abuse and later drug abuse, juvenile delinquency, and criminal behavior" (p. 1431). There was no suggestion of a direct relationship between having been sexually abused and subsequent sexual

offending. Although the study consisted of only 17 young people who had experienced prolonged sexual abuse and 13 school mates who had (presumably) not been abused, the authors suggested that better outcomes resulted in subjects who "came from more stable and non-blaming families [...]" (p. 1434). Therefore, this study is more directly related to the way in which families react to their child's having been sexually abused than it is to the effect of sexual abuse itself This criticism or caution could apply to most of the cited studies in the literature which purportedly support the abuse to abuser hypothesis.

Another further obvious difficulty with the abuse to abuser hypothesis is the fact that females are more likely to be sexually abused than males, but are much less likely to be convicted of sex crimes of any type.

Given the poor scientific evidence for the abuse to abuser hypothesis, the question arises as to why it has achieved such prominence? There are at least two possibilities. First, it has face validity. Alcoholics often come from alcoholic families, physically aggressive people often come from physically aggressive families, and criminals often come from criminal families. Nevertheless, a direct relationship between these family experiences and subsequent behaviour is far from proven, and there is no justification to presume that the same relationship would hold in the case of sex offending.

Second, clinicians often hear from sex offenders that they were sexually abused. The problem is that clinicians often forget the cases in which sex offenders deny past sexual assault. Even in the original Groth (1979) paper, the majority (60%) of sex offenders was found not to have experienced past sexual trauma. Further, the mean age of recalled child abuse, as well as the mean age of victims in the Fedoroff and Pinkus (1996) paper, was age eight. This may be because children at that age are in fact more likely to be abused (they have started school, are less likely to be under adult supervision, and may be the oldest children attractive to most pedophiles since they will soon begin puberty).

However, another possibility is that since 8 is the midpoint between 0 and 16 (until recently, the legal age of consent), the mean age of abuse in surveys of child abuse might tend toward the median, assuming a random age distribution of victims. In either case, clinicians might be expected to be more likely to remember sex offenders who happen to recall being abused at the same age as their victims were abused.

Third, sex offenders are a difficult group with which to empathize. Believing that an offender is himself a victim of a similar crime makes it easier to explain the behaviour. The data suggest that in the majority of cases, this is a trap. Support for this possibility comes from sex offenders themselves. In the Fedoroff and Pinkus (1996) study, only 5% of the men who reported being sexually abused denied pedophilic sexual arousal compared to 38% of the men who were not sexually assaulted themselves ([chi square]=7.9, df=1, p=0.005). Since a much higher percentage of those who denied showed pedophilic arousal on phallometric testing, it would appear that sex offenders themselves believe the abuse to abuser hypothesis (or at least think their therapists believe it). In other words, the offenders who are trying to "fake normal" think they are more likely to be believed that they are not pedophilic if they deny having been sexually

assaulted themselves.

3. SEX OFFENDERS SHOULDN'T MASTURBATE. This is an opinion which is so deeply entrenched in the thinking of policy makers that it is rarely even articulated. It has a long history dating back at least to Richard von Krafft-Ebing. This eminent forensic psychiatrist and researcher conducted a survey of incarcerated sex offenders and found that virtually every one either admitted to masturbating or had been observed by staff doing so. He concluded that masturbation was the cause of sexual deviation. In spite of considerable condemnation of this view, it has somehow persisted. One major sex offender treatment program, in existence for over 10 years, and responsible for literally hundreds of sex offenders, had a policy of discouraging any discussion of masturbation during group therapy for sex offenders based on the view that it might "overly excite" vulnerable individuals (personal communication). Most sex offender programs have no policy about how to deal with masturbation.

In order to address this gap in the literature, a study was proposed to systematically investigate whether or not masturbation is a good idea for sex offenders. The design of the study was a three way crossover protocol in which participants, for a period of one month, would be asked to either a) masturbate at their usual frequency; b) cease masturbation for a period; or c) masturbate at twice their usual frequency. The human subjects ethical review body objected to condition c) on the basis of the belief that encouraging sex offenders to masturbate more frequently was unethical due to the possibility that they might "lose control" and re-offend. As a result, a study involving only conditions a) and b) was conducted (Brown, Traverso et al., 1996).

Of 20 outpatient pedophiles, three withdrew from the study because they felt that not masturbating increased their risks of re-offending. A further four men reported an increased interest in pedophilic activities during the 30 day period of abstention from masturbation. Fifteen of the 17 men who completed the study (88%) felt it was helpful to masturbate. No patients withdrew from the study because of the requirement that they not change their frequency of masturbation.

The results of this, while preliminary, suggest that the ethics committee had actually recommended dropping the wrong arm of the study since, at least in the case of sex offenders, abstinence from masturbation appears to be more dangerous than continuing to masturbate at their habitual frequency. Fortunately, since it is clearly important to determine whether or not sex offenders are more dangerous when they masturbate more than they would normally, a second study including all three conditions has now been approved and is currently being conducted.

Why do policy makers worry about sex offenders' masturbating? Likely because of the prevalent belief that thinking about deviant sexual activities precedes acting on them (see George & Marlatt, 1989). Presumably, if a sex offender is masturbating, he is thinking about sex and, according to this line of reasoning, will be more likely to act on his thoughts and ultimately re-offend.

There are several reasons why this theory may be false. The most obvious is that fantasy is not reality. In normal individuals, fantasy is often a substitute for reality and this is a basic premise of relapse prevention therapies and their variants (e.g., Pithers & Cummings, 1995). A second important problem with this line of reasoning is that masturbation, carried to the point of orgasm, usually has the effect of decreasing sexual interest (see Section 7 below for further discussion of this point). Finally, sex offenders may become sex offenders precisely because they are unable to masturbate to orgasm or engage in non-criminal sexual activities to the point of satiation.

Support for this latter hypothesis comes from an unusual source: a recent study of paraphilic activities in patients with Huntington's disease (Fedoroff, Peyser et al., 1994). Huntington's disease (HD) is an autosomal-dominant neurodegenerative disorder affecting the basal ganglia of the brain (primarily the head of the caudate) that is associated with a high reported incidence of unusual sexual behaviours. Symptoms of HD usually occur in middle-age. In this study, 39 HD patients and 32 of their partners were interviewed concerning their sexual interests and activities. Nineteen percent of the men with HD The results of this study, while preliminary, suggest had paraphilic disorders (most of which emerged after the onset of their HD). The only sexual dysfunction significantly more common among HD males compared to non-HD males was inhibited orgasm (HD males: 56% Non-HD males: 0%; [chi square]=9.3, df=1, p=0.002). Of greater interest was the finding that in men with HD, the age of onset of inhibited orgasm was significantly correlated with the age of onset of HD ([r.sup.2]=0.94, df=13, p[is less than]0.01). In addition, significantly more men who had both inhibited orgasm and increased sexual interest also had paraphilias (3/6 men with paraphilias vs. 1/31 men without paraphilias; [chi square]=11.4, df=1, p=0.0007) (Fedoroff et al., 1994).

These findings suggest that men who are unable to reach orgasm (at least due to the neurologic sequelae of HD) are more likely to exhibit paraphilic behaviours. Although this study is insufficient to prove a cause and effect relationship, the fact that HD symptoms and inhibited orgasm were correlated, and the fact that paraphilic disorders usually present before middle age, suggest that the association between inhibited orgasm and novel paraphilic symptoms is more than a chance occurrence.

Interestingly, a subsequent study involving another genetic disease of the basal ganglia, Tourette's syndrome, yielded a similar relationship between inhibited orgasm and paraphilic disorders (Fedoroff, Weeks et al., 1997). While this evidence is derived from patients with neurologic disease, it suggests an interesting hypothesis: that some paraphilic sexual activity results not from an over-active sex drive, but rather from an inability to discharge the drive through non-criminal activities (such as masturbation).

If an expert in eating disorders were to review the literature on sexual deviation, the result would likely be incredulity. It would be the equivalent of scientists' studying eating disorders but never looking at what their patients ate when they went home. Nonetheless, in the field of paraphilic sexual disorders, the literature on masturbation (aside from the now totally discredited papers suggesting that masturbation is the cause of virtually all evils) is sparse. At present, what scientific literature that exists suggests that masturbation

is as healthy for sex offenders as it is for the general population.

4. SEX OFFENDERS HAVE TOO MUCH TESTOSTERONE. Testosterone and it's metabolites have a long and hallowed history as the primary "sex hormones" that influence libido (e.g., Money, 1965). Based on the theory that testosterone is the "fuel" that drives sexual behaviour, anti-androgens have long been used in the treatment of sex offenders (Money, 1970). Early success led to further support for the hypothesis that the source of sex offenders' problems was due, in large part, to an excess of testosterone (Berlin & Meinecke, 1981). However, the data suggest that testosterone can not be the entire answer.

Few experiments have ever attempted to test this hypothesis directly, and most of the applicable experiments involve tests of medications which oppose testosterone (anti-androgens). Unfortunately, the data are not particularly helpful to the hypothesis. For example, in the only double blind study of medroxyprogesterone acetate in sex offenders (Hucker & Langevin, 1988), the single significant change over time was a decrease in the frequency of sexual fantasies (it should be noted that both the placebo group and Provera group [medroxyprogesterone acetate] showed a decrease in frequency of fantasies over time). However, there was no statistically significant difference between the two groups in terms of frequency of masturbation, frequency of intercourse, number or frequency of orgasms, number or quality of erections, or ejaculate volume. In short, the only non-dangerous sexual characteristic (i.e., fantasies) was the only one affected by Provera in this study.

An efficient method of reducing testosterone is surgical castration. Studies of sex offenders who "voluntarily" underwent castration surgery have indeed reported extremely low rates of re-offending (2% in follow-up periods as long as 30 years) (Sturup 1968; Sturup 1972). However, questions have been raised about the methodology of these studies (e.g., Heim & Hursch, 1979). Regardless of the validity of the studies, the fact that some castrated males did re-offend raises questions about the premise that high testosterone is necessary for the commission of sexual offences.

The extreme nature of treatment by castration raises further problems in interpretation, since presumably anyone who volunteers for castration must be unusually highly motivated to please authorities and probably not a typical sex offender. Interestingly, in another study of 39 released sex offenders who are reported to have agreed voluntarily to castration, male sexual capacity was not extinguished soon after castration (Heim & Hursch, 1979). In fact, 31% reported continued ability to engage in sexual intercourse. This fact appears to have escaped the notice of legislators in the United States who have recently passed a castration law for sex offenders (B.A., 1996).

There are two other problems with the hypothesis that sex offenders suffer from too much testosterone. The first is that no study has ever shown sex offenders to have a higher amount of testosterone than an appropriate control group. In fact, one study found the reverse, that sex offenders on average had lower than normal testosterone levels (Dwyer, 1988).

The second major problem is that paraphilic arousal patterns have been reported to change in response to medications with no known effect on testosterone. The first such report was the case of a transvestite who had no motivation to lie about the efficacy of treatment. According to this man (and his wife), while taking buspirone (a medication with primary action on serotonergic autoreceptors), he was able to function sexually for the first time in his life with no fetishistic stimuli or fantasies. When he stopped the medication, his dependence on the activity or fantasy of wearing female clothing returned (Fedoroff, 1988). Since then, there have been numerous reports of successful treatment of the full range of paraphilic disorders with a variety of selective serotonergic reuptake inhibiters (SSRIs) (see Greenberg & Bradford, 1997; Fedoroff, 1994).

The hypothesis that sex offenders are the victims of raging hormones will be difficult to dispel in spite of the lack of evidence to support it. Although definitive controlled studies of anti-androgens in the treatment of sex offenders have yet to be done, there are data to suggest that they are helpful (see next section for further discussion). However, the hypothesis that high testosterone, or its derivatives, is the cause of all sexual deviation should be abandoned or, new data permitting, radically modified. A new finding that demonstrates testosterone receptor super-sensitivity in sex offenders might fit this category.

5. SEX OFFENDERS CAN'T BE CURED. Probably the most deeply entrenched belief about sex offenders is that they are "incurable". Older studies cite relapse rates as high as 48% (Soothill & Gibbens, 1978). Theories about the cause of paraphilic disorders, such as Money's lovemap theory, postulate that sexual interests are "imprinted" in the brain in the same way as language (Money, 1986). Men with paraphilias are men with vandalized lovemaps analogous to aphasic men with strokes (Money, 1989). Most therapists who treat sex offenders make a point of telling them early on that their condition is "incurable". Imagine if speech therapists began their interventions with stroke patients by telling them that although they are expected never to have trouble speaking again, everyone knows that their condition is permanent, and even if it looks like they have relearned how to speak, we will all really know that their disability is permanent. Would it be surprising if treatment outcomes were dismal? Furthermore, what would happen if every time a patient died from pneumonia (as happens every day in every city), the newspapers reported it and there were a public inquest (as is the case in many situations in which a patient in treatment for a sex offence relapses)? Would physicians begin telling their patients that pneumonia is "incurable" even though the majority of patients respond favourably to antibiotics?

What is the evidence that sex offenders are incurable? There has been only one published survey of treatment programs that suggested that treatment is ineffective (Furby, Weinrott et al., 1989), although the authors of this review paper cautioned that they had included treatment methods which are now considered obsolete. In contrast, a more recent paper found that nine out of ten studies reviewing 87 programs showed treatment was effective (McGrath [1994] cited in Schwartz & Cellini, 1995). It should be noted that rates of relapse are highly dependent on what "relapse" means. For example, in one study

(Fedoroff, Wisner-Carlson et al., 1992), "relapse" was defined as

[...] any inappropriate sexual behavior

whether or not it was the type for

which the subject originally sought

treatment. Use of force, threats [...]

subjective distress, legal charges or

confirmation of reported relapses were

not required to satisfy the criteria for

relapse (p. 112).

As an example, if an unconfirmed, anonymous telephone call had been received about a pedophile walking past a school yard, it was counted as a "relapse". With such a broad definition of relapse, the recidivism rate for sex offenders followed for 5 or more years was 37%. However, the relapse rate for sex offenders treated with group therapy and medroxyprogesterone was 15%. More recent reviews of sex offender programs provide even more optimistic treatment outcomes [Schwartz & Cellini, 1995).

Perhaps the most interesting trend in the research literature comes from a recent meta-analysis of 12 treatment studies involving 1,313 sex offenders: 19% of treated sex offenders relapsed, compared to 27% of untreated sex offenders (Hall, 1995). Even more interesting is the finding that cognitive-behavioural (p[is less than].0005) and hormonal treatments (p[is less than].00005) were significantly more effective than behavioural treatments, but not significantly different from each other. It would appear from the literature that not only are the majority of sex offenders treatable, but there is more than one way to treat them effectively.

The question of whether the prevention of relapse is the same as a cure is debatable. However, it should be noted that for psychological conditions, the belief of the therapist that the condition is curable is one of the most robust predictors of whether the condition will be (Frank, 1974). The assertion of incurability is thus counterproductive for therapists, for offenders in treatment, and for those attempting to develop and safely evaluate better methods of intervention. Given the heterogeneity among sex offenders, the evidence of relapse prevention cited above, and the likelihood that the majority of men incarcerated for sex offences will be released, the assertion of incurability should also be considered not only unproven, but also potentially dangerous.

6. SEX OFFENDERS ALWAYS LIE TO STAY OUT OF TREATMENT. Virtually all the treatment studies reviewed above make a point about how untrustworthy sex

offenders are (interestingly, usually it is stated in terms of sex offenders rather than in terms of criminals). Frequently cited in support of this view is a study in which sex offenders admitted on an anonymous questionnaire to many more sexual crimes than they had been caught for (Abel & Becker, 1987). What many overlook is the fact that all the participants in this survey were sex offenders enrolled in a program which valued self-disclosure of sex crimes. Indeed, acknowledgment that they had a sex problem was seen as an index of "recovery" and as a justification for permitting their continued enrolment in the program.

While there is no question that sex offenders often lie about their sexual activities and minimize their responsibility, this is hardly unique to sex offenders. Furthermore, there is evidence that sex offenders sometimes lie to get into treatment. In one study (Fedoroff, Hanson et al., 1992), 20% of patients in an inpatient sex offender ward were found to have imitated or exaggerated paraphilic symptoms that they did not have.

While sex offenders may lie, it is important to consider why they lie. It is most likely that sex offenders attempt to present themselves to treatment providers in a way which will minimize adverse consequences and maximize benefits. For example, in the Hucker et al. (1988) double-blind treatment study of Provera cited earlier, only 18 out of 100 cases entered the study and only 11 completed the three month protocol. One interpretation of these numbers is that sex offenders (in this case pedophiles) are basically unmotivated to change their behaviours, and are therefore "incurable". However, in a more recent study of treatment compliance (Fedoroff, 1995), 100 paraphilic men were offered a choice of treatments. Forty-one reported no current paraphilic symptoms and were therefore not offered pharmacotherapy. Of the remaining 59 patients, 12% chose psychotherapy alone, and 86% chose treatment with an SSRI. Only one patient chose treatment with an anti-androgen (he had entered therapy already on this medication). In this series, there were no relapses and no dropouts.

It would appear that sex offenders will choose therapy if, in their judgment, the benefits outweigh the risks. Anti-androgens are used with the aim of eliminating all sexual interest and carry extreme side-effects, including possible death from cardiovascular complications. In contrast, SSRIs have a comparatively safe side-effect profile, and many patients treated with these medications report continued, and in some cases enhanced, ability to have non-paraphilic sexual relations (for reviews, see Fedoroff & Fedoroff, 1992; Fedoroff, 1994).

Sex offenders clearly start off with a bad reputation. They frequently lie about their sexual behaviours, and therapists who claims never to have been deceived by a sex offender are probably deceiving themselves. However, to label all sex offenders as compulsive liars without considering the context in which the deception occurred is disingenuous. Rather than simply assume that sex offenders lie, it would seem that the onus is on researchers to discover ways to make lying less likely. Offering alternative, safer treatment options with more optimistic outcomes would appear to be a good initial approach.

7. SEX OFFENDERS ARE SEX MANIACS. Sex drive is a powerful determinant of sexual behaviour. In the past, it has been viewed as one of the most important causes of all non-reflexive behaviours. However, it is only one of many biological drives. Modern theorists have classified these drives as the cause of so-called "motivated behaviors" (Stellar, 1954). The most well studied motivated behaviours are: eating, drinking, sleeping, sexual intercourse, and child care (nurturing). The defining characteristics of motivated behaviors are summarized in Table 2. As an example, the drive to sleep becomes stronger the longer a person is deprived of sleep. With increased sleep deprivation, triggering environmental cues, such as lying on a bed and turning out the lights become increasingly salient, thus making it harder and harder to resist falling asleep. With sufficient sleep deprivation, the drive to sleep becomes so irresistible that it overcomes even behaviours necessary to stay alive (e.g., falling asleep while driving). However, once sleep has occurred, the previous irresistible stimuli become an annoyance and are replaced by new, more salient cues such as the drive to eat. Furthermore, in the case of humans, the drive to sleep is modified by social factors (e.g., people avoid going to sleep in places where they are vulnerable).

Table 2 Defining characteristics of motivated behaviours

1. The drive becomes stronger with deprivation of the driven activity.
2. The drive is "fuelled" by both environmental and internal (physiologic) stimuli.
3. The "salience" of the triggering stimuli becomes greater with deprivation of the driven activity.
4. The drive decreases once the driven activity has been completed.
5. Completion of the driven activity decreases the salience of the triggering stimuli.
6. Observed behavior is the result of competing drives, modified by the environment, and in the case of humans, by personal, social, and cultural expectations.

As a general rule, the stronger the drive, the more powerful the drive to stop the activity once it has been completed (e.g., the irresistible urge to inhale oxygen is coupled with an equally powerful urge to exhale). It is of interest that pathologic conditions in which a drive cannot be resisted usually involve a situation in which the driven activity is unable to trigger the opposing drive. For example, polydypsia (excessive consumption of liquids) in diabetics results not from lack of will power or an excessive drive to drink, but rather from the fact that drinking is not sufficient to correct blood hyperosmolality which is caused by hyperglycemia secondary to insufficient insulin.

Viewed from this perspective, sexual drives turn out to be much less powerful than might be expected given their prominence in theories of human behaviour. In fact, unlike the drive to sleep which becomes increasingly powerful until it is irresistible, the drive to engage in sexual activity quickly plateaus and then decreases dramatically with

increasing deprivation from sexual activity. With the exception of some individuals with brain damage, all humans are capable of extraordinary control of their sexual urges. In addition, consummated sexual activity (particularly for males) is extremely satiating. Few men are capable of multiple orgasms.

As was suggested earlier in the cases of paraphilias or unconventional sexual activities which emerged in the company of inhibited orgasm in Huntington's disease and Tourette's syndrome patients, the evidence suggests that sex offenders may be more likely to suffer from an inability to have sex. If this hypothesis is correct, it would suggest a radical change in treatment strategy. Rather than attempt to "shut down" sexual interest with anti-androgens, successful therapeutic approaches would focus on making it possible for sex offenders to engage in non-criminal sexual activities which are as satiating as they are for the general population.

8. PUBLIC NOTIFICATION OF SEX OFFENDER RELEASE PROTECTS THE COMMUNITY. North America has recently seen the proclamation into law of various statutes requiring that the public be informed when incarcerated sex offenders are released back in to the community (for review see Walsh, 1997). The idea is that if the whereabouts of sex offenders are known, they will have greater difficulty in carrying out their sex crimes. Unfortunately, the data about the way sex offenders act makes this hypothesis most unlikely to be true.

First, the most common form of criminal sexual activity involves incestuous activity between a parent and child. However, the evidence suggests that incestuous activities are often well known to all the children (and often the other parent) long before they come to the attention of authorities. In incestuous families, knowing who the perpetrator is does not offer much protection. This is why most children's aid societies are, understandably, reluctant to return convicted incest offenders back to their families.

Second, sex offenders as a group are masters of deception. The first author interviewed one sex offender who reported that he had used newspaper reports of his release (including an old newspaper photograph of his face) as the pretext by which he entered into conversations about sex with new victims. Many sex offenders have histories of using demonstrations of "good touches" and "bad touches" to enter into sexually inappropriate activities with children. One of the most notorious sadistic pedophile murderers of all time, John Wayne Gacey, worked in disguise as a clown.

Third, sex offenders as a group tend to have difficulty establishing lasting relationships, and following conviction, have trouble obtaining stable employment. As a result, they have fewer ties to their community and tend to be transient. Current laws about offender notification make it more likely that sex offenders will move. While this may be reassuring to the community which enforces reporting laws, it paradoxically increases the likelihood that an offender who is not known to local authorities will move into the community. This trend will presumably increase as more and more communities enact public reporting laws.

Fourth, mandatory public notification of sex offender release makes it more difficult for sex offenders to seek treatment (they experience great pressure from their neighbours to move, often out of the catchment area of their treating facility). This is important, not only because it may lead to the disruption of on-going treatment, but also because it is presumably more effective to ensure that sex offenders can access treatment easily than it is to invoke reporting laws that, at best, may make it easier to catch someone in the process of committing another offence.

Finally, informing communities about sex offenders who have been lawfully released may have the effect of convincing sociopathic sex offenders that it is the community's responsibility, rather than their own, to monitor their behaviours. This is extremely dangerous since sociopathic sex offenders have the highest relapse rates and generally commit the most violent crimes. Mandatory public notification of offender release, paradoxically, will likely have the greatest effect on the subgroup of offenders least likely to re-offend, namely incest offenders.

It should be noted that these criticisms do not apply to mandatory reporting laws that require treating professionals to inform the appropriate authorities about known on-going or imminent sexual assaults. In these cases, the priority of protecting those in imminent or on-going danger clearly takes precedence and is completely compatible with therapy (it frees the therapist from the ethical dilemma of breaching confidentiality and communicates to the sex offender that illegal sexual activities are not an option).

In contrast, public notification of past sexual offences for which the legislated penalty has been paid communicates the message either that no one believes a cure is possible or that there are special rules for sex offenders that don't apply to the general population. Until conclusive evidence is produced to show that public notification reduces the risk of re-offence for everyone (including children in neighbouring communities), the existing data would suggest that public notification is a risky experiment.

9. SEX OFFENDERS ARE ALL THE SAME. There is a widespread, often unstated view that a sex offender is a sex offender is a sex offender. Again, there is little evidence to support this view. In recent years, there has been a growing body of literature suggesting that the opposite is true. Female sex offenders, previously reported only as bizarre case reports, are now appearing in the literature in ever increasing numbers (Fedoroff & Fishell, in press; Schwartz & Cellini, 1995). Other previously neglected groups include adolescent offenders, geriatric offenders, developmentally handicapped offenders, and members of specific sociocultural groups (Schwartz & Cellini, 1995; Ertz, 1997; Johnson, 1997; Miner & Crimmins, 1997). Just when it appears that the last possible variation of the form in which a sexual offence can be committed has appeared, a new one is "discovered". Recently, a case series of offenders who select sleeping victims was reported (Fedoroff, Brunet et al., 1997). Even in this specific group, at least four distinct motivations were identified, including the first description of sexual assault occurring while the "offender" was documented to be asleep by simultaneous video and EEG recordings.

Placing all sex offenders in one category is as unwise as it is to classify all viruses as identical. Although viruses all share common characteristics, some are benign and some kill. In the same way, although there are only so many ways to commit a sex offence, the motivations for committing sexual offences appear to be unlimited. Research on sex offenders is in its infancy. Many of the conflicting findings in sex offender research, such as the ones noted in this paper, are certainly due to the heterogeneity of study populations. The likelihood that the motivation, and therefore treatment, of an adolescent female sex offender will be the same as that of a geriatric patient with a brain tumour or a developmentally handicapped man with Klinefelter's syndrome or an antisocial criminal with a cocaine addiction is virtually nil. It makes no sense to suspect that the same treatment plan will work for all four individuals, and yet the existing literature often ignores these obvious confounding variables. Researchers and therapists of sex offenders should be vigilant of groups with vested interests. No one accuses cancer researchers or therapists of secretly condoning cancer because they advocate for cancer patients. No one argues that cancer research should be stopped whenever a cancer patient dies. Similarly, mental health professionals who care for sex offenders should refuse to accept personal guilt when a theory about sex offenders proves untenable or when a sex crime is committed. Rather, we should share in the public dismay about how little we know about the cause of sex crimes, advocate for the humane and effective treatment of our patients, and press for more scientific tests of all our assumptions about the nature and prognosis of individuals with paraphilic disorders.

CONCLUSIONS

Several widespread beliefs about sex offenders have been presented, together with a selected review of the literature aimed specifically at testing the hypotheses presented. These views are summarized in Table 3. No claim has been made that all the evidence in support of specific views has been reviewed. Rather, an attempt has been made to highlight weaknesses in the research. The intent is not to be destructive, but rather to encourage researchers to more rigorously test prevailing hypotheses, and the public to question popular assumptions. Whether or not the views expressed in this paper turn out to be adopted by others will, it is hoped, depend on future studies. In the mean time, those who are charged with the responsibility of caring for and treating sex offenders should carefully evaluate whether their current assumptions are in the best interests of their patients/clients and the community. If they are uncertain, they should advocate for data which will help them and the people they care for make informed decisions.

Table 3 "Myths", Problems and Responses to the Nature of Sex Offenders

Statement	Problems(s)
Sex offenders are	Sampling
all socially deprived men	
Sex offenders are the	No evidence
result of childhood abuse	
Sex offenders shouldn't	Contradictory evidence

masturbate
Sex offenders have Contradictory evidence
too much testosterone
Sex offenders Evidence equivocal
can't be cured
Sex offenders always lie No studies of context
to stay out of treatment
Sex offenders No evidence
are sex maniacs
Public notification of No evidence
sex offender release
protects the community
Sex offenders are all the same Untrue
Statement Recommendation(s)
Sex offenders are Adequate control
all socially deprived men
Sex offenders are the Refine hypothesis
result of childhood abuse
Sex offenders shouldn't Test opposing hypothesis
masturbate
Sex offenders have Test opposing hypothesis
too much testosterone
Sex offenders Revise or abandon
can't be cured
Sex offenders always lie Text context
to stay out of treatment
Sex offenders Abandon
are sex maniacs
Public notification of Test before enacting
sex offender release
protects the community
Sex offenders are all the same Dismiss
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