Beyond sexual recidivism: A review of the sexual criminal career parameters of adult sex offenders

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Abstract

The current study claims that measures of sexual recidivism provide a distorted view of the criminal activity of adult sex offenders. To address this important limitation, the criminal career perspective is presented and key concepts are defined and described. The study also provides an up-to-date review of the scientific literature on various criminal career parameters of the sexual criminal activity of adult sex offenders. Hence, current empirical knowledge on the prevalence, age of onset, frequency, continuity, versatility, and desistance from sex offending is presented. The findings highlight the complexities of the sexual criminal career of adult sex offenders, and most importantly, its dynamic aspect, both of which are not captured by traditional measures of sexual recidivism. The review also underscores the importance of recognizing that sexual offending develops according to a series of stages, that, if not recognized, may lead to the underestimation of risk for some and over-estimation of risk for others. The review provides a framework to stimulate new areas of research as well as policy-development that is not limited to the identification of the “high-risk” convicted sex offenders.

Keywords: Criminal career, Onset, Sexual recidivism, Sex offenders, Specialization, Versatility

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Interest in the criminal career is far from new and several commentaries and observations about sex offenders' criminal activity have in fact been made for quite some time (e.g., Adler, 1984; Amir, 1971; Radzinowicz, 1957). Most of these commentaries and observations were focused on the same underlying issue, that is, sex offenders' dangerousness. The issue of dangerousness has been addressed by examining sex offenders' likelihood of sexual recidivism using different methodologies. However, early descriptive studies of sex offenders' criminal records were not supported by an organizing conceptual framework which led to the emergence of controversies among researchers about the nature and extent of sex offenders' criminal behavior (e.g., Abel & Rouleau, 1990; Langevin et al., 2004; Marshall, Barbaree, & Eccles, 1991; Webster, Gartner, & Doob, 2006). These controversies certainly did not help to challenge common myths, stereotypes, and false beliefs about sex offenders' criminal behavior which have, in some instances, served as the foundation to develop new criminal justice policies to tackle the problem of sexual violence and abuse (e.g., La Fond, 2005; Quinn, Forsyth, & Mullen-Quinn, 2004). The current review re-introduces the criminal career approach and, in doing so, aims to provide a common organizing framework for policymakers as well as researchers from various disciplines such as psychology, psychiatry, sociology, social work, criminal justice, and criminology. Although there is a long history of criminal career research (e.g., Wolfgang, Figlio, & Sellin, 1972), the seminal publication of “Criminal Careers and Career Criminals” by Blumstein et al. (1986) provided an organizing conceptual framework that has since been adopted primarily in the fields of criminal justice and criminology. This conceptual framework is mainly concerned with the description and explanation of the longitudinal sequence of offending over the life-course. We refer readers to several reviews of the state of empirical knowledge on
criminal careers in the general population of offenders (e.g., Delisi & Piquero, 2011; Piquero, Farrington, & Blumstein, 2003). Nonetheless, while the criminal career approach has been prominent in criminological circles, it would take some time before this conceptual framework would be introduced more explicitly to the field of sexual violence and abuse (Blokland & Lussier, in press; Lussier, LeBlanc, & Proulx, 2005).

Building on the criminal career approach first proposed by Blumstein et al., and the pioneer work of Gebhard, Gagnon, Pomeroy, and Christenson (1965) with sex offenders, this review examines the current state of knowledge regarding the criminal activity of sex offenders. While the criminal career approach should not been seen as a panacea to the problem of sexual violence and abuse, the general aim is to provide a conceptual framework to organize the findings of existing studies, to guide future empirical research, and importantly, to help more clearly conceptualize sex offenders' sexual criminal behavior. More specifically, the three key goals of this review are to: 1) introduce researchers and practitioners in the field of sexual violence and abuse to the criminal career approach; 2) organize the empirical knowledge about the sexual criminal activity of sex offenders using the criminal career approach; and, 3) review the state of empirical knowledge on various dimensions of the sexual criminal careers of sex offenders.

The Problem of Sexual Recidivism

Sexual recidivism has been conceptualized as the key outcome measure to describe sex offenders' criminal behavior for quite some time. There is a long tradition of empirical research on sexual recidivism among sex offenders, and this measure of reoffending has been applied in a variety of contexts examining the impact of penal and legal measures, investigating the efficacy of sex offender treatment programs, and creating risk assessment protocols, to name a few. Typically, studies along these lines have been conducted prospectively and longitudinally examining offenders' criminal behavior in a given period of time following release. These studies
have examined the proportion of sex offenders having committed a new sex crime during a given follow-up period, using indicators such as a new arrest or a new conviction. More and more sophisticated techniques have also been gradually introduced to examine the rate of re-offending such as survival methods (e.g., Soothill & Gibbens, 1978) and actuarial prediction models (Quinsey, Rice, & Harris, 1995). However, while empirical techniques have evolved, the outcome measure has remained the same; a new arrest or a new conviction for a sex crime, while controlling for time at risk of reoffending. The innovation of using survival techniques to account for right-censoring of data was important as research was suggesting that with longer follow-up periods, more sex offenders were arrested (or convicted) again for a new sex crime. However, these results were often interpreted as indicating that sex offenders remained at-risk of sexual offending for long time periods. While a considerable amount of knowledge has been accumulated from these recidivism studies, some of the most fundamental questions about the criminal behavior of sex offenders have remained unanswered. To illustrate, Hanson and Morton-Bourgon (2005) reported that as of January, 2003, there were more than 100 recidivism studies on sex offenders' recidivism. This is more a decade ago and the number of studies has grown considerably since. Comparatively speaking, a recent review of the onset of sex offending in adult offenders by Lussier and Mathesius (2012) included less than 15 empirical studies on the issue. In effect, concerns over sex offenders' dangerousness and related policy responses to it have overshadowed the importance of research examining key etiological issues related to the onset and development of their criminal behavior. For example, the vast amount of research findings stemming from sexual recidivism studies do not provide insight to several critical questions such as:

1) At what age does sex offending typically start?

2) Does persistence in sexual offending vary according to patterns of onset?
3) Does the frequency and rate of sex offending remain stable overtime and across arrests?

4) Is the frequency and rate of sexual offending stable across different stages of the criminal career?

5) Are some sex offenders more prolific than others in terms of their volume of offending (e.g., number of victims and number of sex crime events)?

6) Are some sex offenders more skilled at avoiding detection?

7) Are sex offenders committing the same type of crime and offending against the same victim type across offenses?

8) Is there an increase or decrease in the seriousness (e.g., level of intrusiveness and level of violence) of sex offending over time?

9) At what age do sex offenders typically desist?

10) Is desistance a process that takes place over time or it is best understood as an event?

11) Do sex offenders become more specialized or diversified in the way they operate and commit their offense over time?

12) Are there distinct patterns of sex offending and how many offending trajectories best describe the criminal behavior of sex offenders' over time?

In effect, the virtually exclusive focus on the likelihood of sexual recidivism has substantially diverted researchers' attention away from the basic description and understanding of the development of sex offenders' criminal activity over time (see Lussier & Davies, 2011).

Sexual recidivism as a criminal career indicator provides a limited description of the nature and extent of offending (e.g., Furby, Weinrott, & Blackshaw, 1989). In addition, because observed sexual recidivism rates are generally low, it is common practice among researchers to collapse all forms of sex crimes under an umbrella term — i.e., sexual recidivism. If sexual recidivism refers to a new charge or a new conviction for a new sex crime, it does not provide
information about several key aspects of offending such as: the type of sex crime committed; the characteristics of victim; the number of times the offender offended against each victim(s); the level of violence used in each crime event; the type of sexual behaviors manifested; the time period elapsed between the first and the last event; whether the offending behavior changed between the first and the last event; and, whether the offender had desisted from sex offending before being apprehended, for example. In other words, the gap between unknown offending patterns and “a new charge” for a sex crime leaves us with minimal information about the sexual criminal activity of sex offenders. When considering some of these ‘unknowns’ and their relevance, it is unclear how risk assessors using research on sexual recidivism can make accurate predictions about the future offending behavior of an individual. Crucial information is lost when relying only on official indicators of offending, such as a charge or a conviction, and this may substantially distort the current state of knowledge pertaining to sex offenders. This point was illustrated in an empirical study by Lussier, Bouchard, and Beauregard (2011). One conviction for a sex crime may include individuals having committed a sex crime against one victim on a single occasion, but it may also include individuals having offended against the same victim on several hundreds of occasions, or, it may include individuals having offended against multiple victims on multiple occasions. These researchers demonstrated that the most active sex offenders, defined as those with the highest number of victims and the highest number of sexual crime events showed the lowest detection rate. Their ability to avoid detection for much longer periods (up to 40 years) was observed by their greater likelihood of not having a criminal history for a sex crime. In fact, the most successful sex offenders were also showing a lower-risk profile for sexual recidivism on static scales that rely on official criminal career indicators. These findings raise concerns about who is described as the sexual recidivist and the “dangerous offender” using traditional indicators out of the context of the over-arching criminal career approach.
For criminal career researchers, the importance of analyzing the longitudinal sequence of offending stems from the recognition that an offending career is best conceptualized as a series of stages. More specifically, criminal career researchers have argued that the longitudinal sequence of offending includes a beginning (i.e., onset), a quantitative and qualitative course of development (i.e., offending rate, volume of offending, aggravation, crime-switching, specialization), and a desistance stage (i.e., the slowing down of criminal activity and eventual termination of offending). Breaking down offending into these different stages helps to better describe, understand, explain, and contextualize offenders' criminal activity at a particular point in time. To illustrate, criminal career researchers have raised the possibility that the factors responsible for someone initiating criminal activities might be distinct from those explaining its persistence or escalation. This approach stands in stark contrast from the recidivism perspective that is only concerned with the probability of recidivism, or the proportion of offenders who will reoffend after their prison release. By design, the recidivism approach adopts a static perspective to the criminal activity of offenders. This static approach suggests that the likelihood of offending remains the same irrespective of whether the offender is starting their criminal activity, whether their criminal activity is escalating, or whether it is slowing down over time.

Many clinicians and clinical researchers have struggled with the idea that offender's risk is static over time. This is apparent by the introduction of dynamic risk factors or factors associated with changes in the risk of reoffending. It is also apparent by the plethora of recent studies on the role of age, aging and sexual recidivism in the past decade (e.g., Barbaree, Langton, & Blanchard, 2007; Doren, 2006; Lussier & Healey, 2009). These two lines of work, however, have not been integrated into a conceptual model of sex offending. In fact, while these lines of work provide information about possible correlates of changes in sex offending over time, they provide little information about the possible age-graded dynamic factors as well as the dynamic aspect of
sex offending over time. For example, are changes in intimacy deficits or sexual regulation associated with changes in the offending behavior of sex offenders? Are these two set of factors important for 20 year olds sex offenders as well as for 50 year olds? Put differently, research on dynamic risk factors for sexual recidivism do not provide information pertaining to patterns of activation, course, and desistance from sex offending. If offenders do change over time and offending goes through stages over time, then the study of within-individual changes becomes pivotal to understanding sex offenders and predicting sexual crime. Recidivism studies have combined offenders into samples who are at different stages of their offending, that is, some offenders who potentially just began their offending, some who are at the peak of their offending, and even others who may be at the end of their criminal careers. By combining offenders at different stages of their criminal career, it is unclear whether the base rate of sexual recidivism applies to first-time offenders, escalators, de-escalators, or sex crime specialists. The aggregate base rate of sexual recidivism has been seriously criticized for not taking into account the offenders' age at their release from prison (e.g., Wollert, 2006). From a criminal career perspective, this limitation is only the tip of the iceberg. The iceberg is the sexual criminal career of sex offenders.

The criminal career approach

Arguably, over the past five or six decades, no other type of offender has received more scientific scrutiny than sexual offenders. Researchers from the field of sexual violence and abuse have considered a wide range of factors to describe individuals that have committed sexual crimes, such as family background, victimization experiences, exposure to deviant models, attachment bonds, parental practices, childhood behaviors, psychiatric symptoms, personality traits and disorders, intelligence and cognitive skills, sexual arousal and interests, mood and temperament, cognitive distortions, sexual development and sexual behaviors, coping skills and
coping strategies, and pornography use, to name just a few. One striking observation that can be made is that while sex offenders have been described in so many ways along so many dimensions and factors, comparatively speaking, the very behavior that clinical researchers have aimed to explain, sexual offending, has been largely neglected. This is by no means an oversight, but illustrates the fact that most theoretical models of sex offending are based on the assumption that there is a stable propensity to commit sexual crimes and theoretical models should only be concerned with the description and the explanation of this propensity (e.g., Hall & Hirschman, 1992; Knight & Sims-Knight, 2003; Malamuth, 1998). Taken another way, these models primarily explain the clinical characteristics of sex offenders and to a far lesser extent the actual sexual criminal behavior of these individuals. For example, they do not recognize the importance of distinguishing such aspects as prevalence, age of onset, persistence, frequency, seriousness, and desistence. Critically, this trait-based approach is not well-suited to describe and explain why offenders start or stop offending and whether the same factors explain both. Some theoretical models distinguish certain offending stages but have been limited to only a few aspects of the sexual criminal career, such as onset and persistence (e.g., Laws & Marshall, 1990; Marshall & Barbaree, 1990). Therefore, the criminal career approach provides a framework to think about how sexual offending starts, develops over time and stops, and, whether such distinctions are theoretically, clinically, and/or policy relevant (see Table 1).

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What Do We Know About the Sexual Criminal Career of Sex Offenders?

*Prevalence of sex offending.* Victimization surveys are helpful to estimate the broad scope of sexual victimization incidents in a given place during a specified time frame. These surveys, however, are far less helpful in estimating the actual prevalence of sexual offending behavior. The prevalence of offending is understood here as the proportion of a given population
committing the behavior during a specific time frame. In other words, victimization surveys are not helpful to estimate the size of the population of sexual offenders for at least five key reasons. First, while these surveys are helpful to obtain information about the prevalence of sexual victimization, they are less suited to the estimation of the perpetration rate in a given population. This is because victimization surveys do not take into account the impact of individuals offending against multiple victims and the fact that a small group of offenders are responsible for a high proportion of crimes (e.g., Abel & Rouleau, 1990; Lussier et al., 2011). Second, victimization surveys typically do not control for multiple victimization incidents by different offenders. Third, they also typically will not include individuals who are not registered citizens in the respective country, such as tourists and visitors that may be sexually victimized during their stay. Fourth, individuals who are more difficult to reach within the population of a given country (e.g., individuals with no fixed address, no phone access, and hospitalized or incarcerated individuals), and often not included in such large scale surveys, potentially also represent those who are in fact at an elevated risk of sexual victimization. Fifth, the (long) recall period typically used in these surveys simply does not allow for the estimation of the population of sexual offenders in a given time period.

More generally, there are inherent difficulties in establishing even the prevalence of sexual victimization, let alone perpetration, due in part to the operational definitions employed in studies of the behavior being measured. The behaviors included in some surveys are vague and/or not defined which may lead to various interpretations by those surveyed, or by researchers. For example, prior to the redesign of the large scale American National Crime Survey (NCS) in 1993, no explicit definition of ‘rape’ was provided to respondents; this determination was left to the interviewer based on the response to screening question regarding assaults. In other surveys (including the revised National Crime Victimization Survey), rape refers to sexual intercourse
subsequent to the use of force or physical violence, but studies showed variations in the lower boundary age included in the definition (sexual victimization since age 14, 16, or 18) (e.g., Koss, 1993). Yet others have used the broader concept of sexual assault which refers to being pressured or forced to have sexual contact (e.g., Sorensen, Stein, Siegel, Golding, & Burnam, 1987). Importantly, these various operational definitions lead to different prevalence rates. For example, in an oft-cited study based on a large sample of college women, Koss, Gidycz, and Wisniewski (1987) reported that the prevalence of sexual victimization since age 14 was 53% (unwanted sexual contacts; sexual coercion, attempted rape, rape), however, this number dropped to 15% when considering rape alone. While this compartmentalization is desirable to address specific policy and research questions, it severely limits the possibility of estimating the size of the offender population as the same individuals may be involved in different types of crime. This point has been demonstrated empirically in several studies examining the crime switching patterns of sexual aggressors (e.g., Lussier, Leclerc, Healey, & Proulx, 2008).

The scientific literature on the prevalence of sexual offending has come a long way since Brownmiller (1975) claimed that rape was a “conscious process of intimidation by which all men keep all women in a state of fear” (emphasis added). Self-report studies have been typically conducted with highly selective groups of young men, typically male undergraduate university students. Malamuth (e.g., Malamuth, 1981, 1989) surveyed a group of undergraduate university male students about their likelihood of committing a series of behaviors if they could get away with them without any negative consequences. In total, 74% said they would not rape under any circumstances, thus suggesting that 26% were at least open to idea under certain conditions. Among this sample however, only about 2% of all the men surveyed by Malamuth (see also Greendlinger & Byrne, 1987) said they would “very likely” rape someone under such circumstances. While this study did not measure the percentage of men who actually raped
someone, it did highlight the fact that one out of four men may contemplate the idea if given the opportunity to do so. These findings further called researchers' attention to the issue of sexual assault perpetrated by college men. In the Koss et al. (1987) study, 25% of college men surveyed reported having engaged in at least one form of behavior defined as sexual aggression (which included a broad range of deceptive, coercive, and aggressive behaviors such as unwanted sexual contacts, pressuring someone into sex, sexual coercion such as the use of threats, rape and attempted rape). When narrowing down the definition to sexual coercion (i.e., sexual intercourse subsequent to pressure, threats, or misuse of authority), that prevalence dropped to 7%, while it was found that 4% of behaviors met the legal definition of rape. Similar findings have been reported elsewhere (e.g., Greendlinger & Byrne, 1987; Senn, Desmarais, Verbeg, & Wood, 2000). On the one hand, this is clearly an underestimation of the true prevalence of rape and sexual coercion as minimization and social desirability probably influence men's reporting of such behaviors. On the other hand, there is also the potential for male respondents to over-report the use of less forceful (i.e., deceptive and coercive) tactics if 'behaviorally specific’ questions are interpreted out of context. It is difficult, however, to determine the extent and importance of minimization of more severe forms of sexual aggression, and over-reporting of deception and coercion using available techniques and information.

Research on the prevalence of sex offending perpetration has been primarily focused on sex crimes committed against adult victims. Consequently, few empirical studies have asked men to self-report the perpetration of sexually abusive behaviors against children. The scarcity of research is of interest here considering that sexual abuse victimization rates of children found in epidemiological studies are quite substantial. A meta-analysis based on retrospective studies conducted with college students found that about 17% of men (range: 3–37%) and 28% (range: 8–71%) of women have been sexually abused as a child (Rind, Tromovitch, & Bauserman,
1998). The lower victimization rates found for child sexual abuse compared to those for sexual assault against women is consistent with generally lower interest among adult males for sexual contacts with children. In Malamuth's (1989) study, 91% of men responded that it would be very unlikely that they would commit act of pedophilia if they could get away with it. Similarly, Templeman and Stinnett (1991) found that 5% of their community sample of men reported a sexual interest for children. Briere and Runtz (1989) reported that 9% of their college students have had sexual fantasies involving a child and 7% (of the whole sample) would act on them if they could get away with it. Furthermore, Fromuth, Burkhart, and Jones (1991) found that 3% of their sample of men had a “sexual experience” with a child. However, it is unclear how the term sexual experience was understood by college students. The focus of these self-report studies on young adult males enrolled in a university program also makes it difficult to generalize findings to other subgroups of adult males (e.g., older, less educated), but does point out the pervasive nature of sexual aggression. Note that self-report studies did not ask these men whether they had been caught, arrested or convicted for the behaviors they reported, thus not allowing researchers to estimate the actual risks of apprehension/conviction.

The prevalence of sexual offending has also been examined using official statistics on crime. Several key findings have been highlighted by these studies, especially those based on prospective longitudinal data that allow the examination of prevalence rates across time for the same group of individuals. For example, using the Gluecks' longitudinal arrest data of a sample of adjudicated juvenile delinquents, Cline (1980) reported that the prevalence rate for sex crimes steadily increased from 0.3% in early adolescence (11–15 years old) to 1.6% in late adolescence (16–20 years old), 2.4% in early young adulthood (21–25), and 2.6% in late young adulthood (26–30 years old). These numbers are interesting for various reasons. First, the self-reported retrospective data reported by Koss et al., in a sample of college men (averaging 21 years old),
suggested that self-reported rates were 10 to 15 times higher than those based on arrests. It is also interesting to note that data from Koss et al. underestimate the cumulative prevalence rate, considering that older men were not sampled and Cline's data suggest that either: a) they are offending more; or, b) they are getting caught more often than young adult men. Unfortunately, it is not possible to draw firm conclusions considering that Koss et al. and Cline operationalized sex offenses differently and also sampled different populations. However, interesting comparisons can also be drawn with the findings from the 1945 Philadelphia birth cohort conducted by Wolfgang et al. (1972). They reported that 0.43% of their sample had been arrested for rape in adolescence while 1.44% had been arrested for a sex offense. In spite of the sampling differences, the Wolfgang et al. prevalence data are somewhat in line with those reported by Cline (1980).

Tracy, Wolfgang, and Figlio (1990) conducted a second birth cohort (1958) study in Philadelphia allowing for the examination of cohort/period effects. Hence, for youth born 13 years later than in the original study, the prevalence of being arrested for rape increased to 0.66% (1.5 times higher) while the one for sex offenses dropped to 0.43% (3.4 times lower). The Tracy et al. 1958 arrest data for “rape” is interesting because it allows direct comparison with the Koss et al. data on self-reported “rape” among college men born around 1963–1964. When only considering rape, the self-reported prevalence rate found by Koss et al. is almost 7 times higher than the prevalence of arrests provided by Tracy et al. Importantly, this rate may vary across ethnic groups as both Koss et al. and Tracy et al. reported that non-Whites had higher prevalence rate than Whites in the US.

Only one empirical study has estimated the population of sex offenders in a given place and time using birth cohorts. Marshall (1997) used five cohorts of individuals born in the UK in 1953, 1958, 1963, and 1968 to estimate the participation rate, and the cumulative participation rate in sex crimes. One of out of 70 men born in 1953 and followed up to age 40 had been
convicted for a sexual offense involving a victim, 1 out of 90 men had been convicted for a serious sexual crime (i.e., hands-on behaviors against children and/or adults), while about 1 out of 140 men had been convicted of a sexual crime against a child (Marshall, 1997). Furthermore, Marshall reported that about 10% of these men sexually reoffended within the first five years of their first conviction, a number in line with recidivism studies using a comparable follow-up period (e.g., Lussier & Healey, 2009). Looking at the cumulative participation rate up to age 20 is also interesting because it allows comparisons to be made with the studies conducted by Koss et al. with undergraduate university students. For example, the study by Marshall showed that about 0.5%, or 1 out of 200 men, had been convicted for a sexual crime involving a victim up to age 20. This is a far cry from the self-reported 25% prevalence estimate reported by Koss et al. (1987), but closer to the 1.6% arrest rate reported by Cline (1980) in late adolescence. Granted, these cumulative participation rate estimates in the Marshall study and those found in the Koss et al. and Cline studies were based on samples from different countries. Yet, they do suggest that men's self-reported rate of sexual aggression is about 50 times higher than the rate based on official data. The discrepancy is considerable, especially considering that the Koss et al. study did not include acts of sexual aggression against children. Marshall (1997) also looked at the participation rate (not to be confused with the cumulative participation rate) and found that it steadily increased from the 20–24 age group (0.3%) to the 40 and older group (1.8%) thus suggesting that older men might be either more active, or more at-risk of being caught. This trend is also reminiscent of the one reported by Cline (1980) using arrest data on a sample of adjudicated juvenile delinquents. Official data, therefore, suggest that adults in their 40s are the group most at-risk of sex offenses, when using a broad definition of sex crimes (e.g., Marshall, 1997). This is departure from criminological work suggesting that crime peaks much earlier.
Much work is needed to establish prevalence rate at different time points using various indicators of sex offending in the same study (i.e., self-report, official, etc.).

**Onset of sex offending.** The age of onset of sex offending refers to the age at which sex offending is initiated. The age of onset is particularly interesting because it marks the origins of the behavior and allows the examination of why and under what circumstances the criminal behavior was initiated. The age of onset has been discussed in several empirical studies on sex offenders, but the operationalization of this criminal career dimension has not always been clear and straightforward. In earlier investigations, clinical researchers have been concerned with the age of onset of sexual problems of adult offenders. Using the term sexual problems is problematic because it encompasses behaviors such as the onset of deviant sexual arousal, the onset of deviant sexual fantasizing, the onset of deviant sexual behaviors as well as the onset of sexual offending. Using these criteria, early clinical studies suggested that adolescence-onset among adult sexual offenders was common (e.g., Abel, Becker, Mittleman, Rouleau, & Murphy, 1987). In turn, early theoretical models also heavily emphasized the role of deviant sexual fantasies as a precursor to sexual offending (Abel & Blanchard, 1974). Subsequent clinical research, however, has shown that not only do a small proportion of adult sex offenders report deviant sexual fantasies and/or paraphilia, but also that even a far smaller proportion of them report having experienced such deviant fantasies prior their offending (Marshall et al., 1991). Furthermore, the preponderance of evidence suggests that adolescence-onset sexual offending is more likely the exception rather than the rule among adult sex offenders (Marshall et al., 1991; Smallbone & Wortley, 2004). This reinforces the importance of distinguishing deviant fantasies, deviant sexual behaviors, and sex offending.

Many early studies that considered the onset of sex offending have therefore described adult sex offenders as grown up juvenile sex offenders. For example, in the study by Prentky and
Knight (1993), 49% of their sample of adult rapists reported an onset prior age 18, while the rest of the sample reported an onset in adulthood. These results mirrored those reported in the earlier study of Groth, Longo, and McFadin (1982), which showed an average age of onset of 19 years old for a sample of sexual aggressors of women, while in the study of Abel, Osborn, and Twigg (1993), it was 22 years old. The self-reported onset age for child molesters appears to be different than the one reported for rapists, however, these findings are not stable across studies. In the Prentky and Knight (1993) study, whereas 49% of adult rapists were juvenile sexual offenders, that number increased to 62% for child molesters. Therefore, given these results, one would expect that the average age of onset for child molesters would be younger than the one reported for rapists. This is not the case however and could be attributable to sampling differences. More precisely, these earlier studies showed some discrepancies across child molester types. To illustrate, in the Marshall et al. (1991) study, the self-reported age of onset was 24 years old for extra-familial offenders against boys, 25 years old for extra-familial offenders against girls, and 33 years old for incestuous fathers. Similar numbers were reported by Smallbone and Wortley (2004) suggesting that the onset of extra-familial child molestation is younger than the onset of intra-familial child molestation. These differences may also be explained to some extent by the opportunity structure of the offense, as one needs to have a biological child in order to offend against them. Importantly, these studies used retrospective data to estimate the age at which adult sex offenders started their offending behavior. From these self report studies (e.g., Abel et al., 1993), however, it is not always clear whether the onset refers specifically to sex offending or to some other behavior such the onset of deviant sexual interests, the onset of deviant sexual fantasizing, and the onset of deviant sexual arousal.

Not surprisingly therefore, the age of onset based on self-report data is younger than those based on official data (e.g., Baxter, Marshall, Barbaree, Davidson, & Malcolm, 1984; Cale, 2012;
Gebhard et al., 1965; Lussier et al., 2005; Proulx, Lussier, Ouimet, & Boutin, 2008; Smallbone & Wortley, 2004). When looking at the official age of onset, results clearly indicate that it significantly varies across sex offender types. These reports suggest that sexual aggressors of women are typically charged for a first offense in their late twenties/early thirties, while for sexual aggressors of children it is typically in their late thirties/early forties. There is a gap between the age of onset reported in self-report studies with adult sex offenders and those found in studies based on police data. That gap, however, is relatively unknown given that self-report and official data on the age of onset are not typically analyzed in the same study limiting the conclusions that can be drawn. Furthermore, the utility of other sources of information, such as police reports and victim statements have not been examined in prior research. Lussier and Mathesius (2012) provided evidence that the official age of onset, as measured with criminal justice data, provides a distorted view on the actual onset of offending, at least for some sex offenders. Their claim was based on the observation that official data of offending does not take into consideration the offender's ability to avoid and/or delay detection. In their study, official data, police data, and victim accounts were analyzed to compare and contrast the official and actual age of onset. On average, it was found that there is a gap of about seven years between the actual and official age of onset in sex offending. The findings showed that the gap between actual and official onset was much more important for child molesters, more specifically incestuous and pseudo-incestuous fathers. These findings may suggest that victims may take significantly longer to report the crime to the authorities (if they do) when the crime is committed by a parental figure. For the most part, while the actual age of onset in adulthood does not vary across sex offender types, it does for the official age of onset, suggesting differential investment in detection avoidance across offenders. Further, the findings also showed that close to 20% of sex offenders
have already desisted or are in the process of desisting by the time they are first charged for their sex crime.

*Frequency of sex offending.* Frequency of sex offending refers to the number of sex crimes committed over the course of a criminal career, or in other words, an offender's volume of crimes. It is interesting to note that researchers have not spent much time describing this aspect of sex offender's offending. Like most other crime types, measuring the frequency of sex offending is not as straightforward as it may seem. In the case of sexual offending, this is due in part to the nature of the offending behavior and the various offending strategies adopted by sex offenders (Lussier et al., 2011). As such, the frequency of sex offending may refer to the number of victims an individual has offended against. However, it can also refer to the number of sex crime events, or the number of times an individual has sexually offended against the same person. Some offenders may adopt an offending strategy in which they offend against different victims on a very limited number of occasions (e.g., once or twice). This victim-oriented strategy may characterize offenders who target strangers. Other offenders may decide to limit the number of victims they offend against choosing instead to maximize a single offending opportunity by reoffending on multiple occasions against the same person. This is referred to as an event-oriented strategy and characterizes incest and pseudo-incest offenders as well as intimate partner sexual violence. Therefore, it becomes clearly evident that it is difficult to estimate the frequency of offending using available data found in prior research because too often criminal justice indicators are used, such as the number of arrests or convictions for a sex crime. Such indicators typically do not provide a very accurate reflection of the actual behaviors that lead to a subsequent arrest and conviction, especially for persistent offenders. For example, a sex offender may have been convicted once for a sex crime that involved the abuse of a child over a 5-year period in which the victim was molested on more than 500 occasions. From a legal point of view,
evidence would have to support each specific victimization event in order to secure separate convictions, which is highly unrealistic given the volume of offenses and the time over which they were committed. Therefore, the frequency of sexual offending can also be influenced by the time an offender was at risk of perpetrating a crime (e.g., not incarcerated, not hospitalized, and not dead). As such, criminal career researchers have used the term lambda or the annual frequency of offending that takes into account the time at risk.

Empirical studies have shown much heterogeneity in the frequency of sex offending across sex offenders. In the Lussier et al. (2011) study using a sample of convicted adult male sex offenders, the average number of victims was 1.8 but the number of victims actually varied between 1 and 13. Similarly, in another sample of sex offenders Groth (1982) indicated that the number of self-reported sex crimes varied between 1 and 30. Even greater variance was uncovered in the study by Weinrott and Saylor (1991) where the range of self-reported victims varied between 1 and 200. Heterogeneity in the volume of sex offending is also evident across sex offender types. For example, Pham, DeBruyne, and Kinappe (1999) found that their sample of sexual aggressors of women had, on average, 1.8 victims while their sample of extra-familial child molesters had a mean number of 3.4 officially recorded victims. Such discrepancies between sexual aggressors of women and children using official data however were not found in the Weinrott and Saylor (1991) study. To the contrary, they found that on average, sexual aggressors of women had 1.8 victims while for child molesters this figure was 2.0 victims. Similarly, Groth et al. (1982) using self-reported data found that rapists and child molesters had a similar average number of sex crimes (about five). However, these discrepancies may be attributable, in part, to differences in sample composition between studies. For example, Pham et al. (1999) also reported that their group of intra-familial offenders had a mean number of 1.6 victims, much lower than what was reported for extra-familial child molesters. Indeed, intra-
familial child molesters tend to have a significantly lower number of victims (Abel et al., 1987). Intra-familial offenders' lower average number of victims may be a function of structuring opportunity factors. Indeed, the average number of victims generally corresponds to the number of children typically found in contemporary families of Western industrialized nations. This may suggest that these particular offenders are less likely to offend outside the family setting. It may well be also that incestuous fathers are seeking event-oriented opportunities where they can maximize the number of offending opportunities against the same victim. One possibility, therefore, is that the sample used in the Weinrott and Saylor (1991) study included a high proportion of intra-familial child molesters.

The findings of Weinrott and Saylor (1991) provide further insight regarding sex offenders' volume of offending because they also include self-reported data. In other words, they asked these men to report their number of victims. Hence, while sexual aggressors of women had, on average, about 2 official victims, these men reported, on average, having offended against close to 12 victims. In other words, the mean number of self-reported victims was more than five times the number of officially recorded victims. It should be noted, however, that the median number of victims was 6, or three times the average number of official victims. The median is much lower than the mean, most probably due to the presence of a small group offenders with a disproportionately high number of victims. Similar discrepancies between official and self-reported data were also observed for child molesters. If their sample of child molesters had, on average, officially offended against two victims, these men self-reported having offended, on average, against seven. Similar numbers were reported by Marshall et al. (1991) as well as by Groth et al. (1982). Nonetheless, the number of self-reported victims in the Weinrott and Saylor study is a far cry from those reported by Abel et al. (1987).
The Abel et al. study reported that extra-familial offenders against girls had about 20 victims on average, while for extra-familial offenders against males the average was 150. Note that the median number of victims for the two groups was 1 and 4 respectively; suggesting that 50% of their sample of extra-familial offenders against girls self-reported only one victim while 50% of the sample of extra-familial offenders against boys reported no more than four victims. Perhaps, for some reason, a small group of offenders included in the Abel et al. (1987) exaggerated the volume of their offending. Hence, while the mean number of victims presented by Abel et al. (1987) is striking, considering the median suggests that most child molesters, with the exception of those offending against boys outside the family setting, typically offend against a single victim. This is not meant to imply, however, that there are no prolific sex offenders.

Lussier et al. (2011) investigated the presence of prolific offenders in a sample of adult males convicted for a sex crime. Using several sources of information (i.e., self-reports, police investigations, victim statements), the frequency of offending (and lambda) was estimated. This study provided important insight regarding the presence of prolific sex offenders for three key reasons. First, the authors examined frequency in terms of the number of specific sex crime events offenders had been involved. This approach highlighted that about 11% of their sample had been involved in over 300 sex crime events as opposed to about 40% whom had been involved in only one sex crime event. Second, there were no differences in the number of different victims offenders of both groups had offended against suggesting that maximizing the number of victims is independent of the offender's decision to maximize the number of crime events. In other words, some offenders take advantage of low-risk short-term opportunities with different victims while others exploit a single offending opportunity by repeatedly offending against the same victim over and over. Third, the findings revealed that the most prolific sex offenders were older, had a more conventional background characterized by a stable relationship
with an adult partner, a job at the time of the offense(s), no drug issues, and no prior record for a sex crime. Therefore, the conventional image of the prolific sex offender stands somewhat in contrast with the typical image of the chronic offender stemming from empirical research with prison populations of general offenders as someone who is young, single, unemployed, has significant alcohol and/or drug issues, and a lengthy criminal record. These findings therefore also provide a stark contrast with the media portrayal of the “sexual predator” profile. While we use the term prolific offenders here, we recognize that there is no current operational definition of the term (or chronic sex offending). While recidivism studies have repeatedly found distinctive correlates of sex offenders, it could be argued that within this group of sexual recidivists is a group (or small subgroups) of prolific offenders with a distinctive profile. More research is needed to clarify these issues.

**Continuity in sex offending.** Continuity refers to the persistence of sex offending from adolescence to adulthood. Continuity, therefore, provides information about the proportion of juvenile sex offenders who become adult sex offenders as well as the proportion of adult sex offenders who were juvenile sex offenders. The continuity hypothesis stipulates that today's juvenile sex offenders will become the adult sexual offenders of tomorrow, and several policies in Western countries are based on this fundamental assumption. Ironically, the empirical evidence seems to point in the opposite direction suggesting that most juvenile sex offenders do not go on to become adult sex offenders and that, for the most part, juvenile sex offenders' offending behavior is limited to the period of adolescence. One important lesson here that emerged from criminal career research more generally is that retrospective data with samples of adult offenders tend to over-estimate continuity of offending because such studies fail to include youth who have desisted from offending in adolescence. Even so, retrospective studies using samples of incarcerated adult sex offenders show that only a small proportion of these men have
convictions in adolescence for sexual offenses (usually between 10% and 15%) with child molesters slightly more likely to have convictions for juvenile sex offenses compared to sexual aggressors of women (Cale, 2012). Using longitudinal data, Robins (1978) concluded that there is much discontinuity in antisocial behavior but antisocial personality disorder in adulthood virtually requires antisocial behavior in youth. Whether this conclusion applies also to sex offending is unclear.

It has, in fact, been argued that juvenile sex offenders typically do not continue their sexual offending into adulthood (Lussier & Blokland, in press; Caldwell, 2002; Zimring, 2004), and constitute a discrete population of sexual offenders. While this is certainly true for most juvenile sex offenders, prospective empirical studies with juveniles indicate that a small fraction (between 5 and 10%) may indeed continue their sexual offending in young adulthood (e.g., Lussier, van den Berg, Bijleveld, & Hendriks, 2012; Nisbet, Wilson, & Smallbone, 2004; Sipe, Jensen, & Everett, 1998; Vandiver, 2006; Zimring, Jennings, Piquero, & Hays, 2009; Zimring, Piquero, & Jennings, 2007). The proportion of juvenile sex offenders continuing in adulthood gradually increases with a longer follow-up period in adulthood (between 10 and 15%) (e.g., Hagan, Gust-Brey, Cho, & Dow, 2001; Hendriks & Bijleveld, 2008). Bremer (1992) reported a 6% reconviction rate in a sample of serious juvenile sex offenders, but the recidivism rate rose to 11% when based on self-reports. Therefore, while the use of official data underestimates recidivism rates, it is also unlikely to be able to explain the fact that the vast majority are not re-arrested or caught again for a sex crime. Taken together, there appears to be sizeable discontinuity in sexual offending from adolescence to adulthood superimposed on a small degree of continuity. Hence, while aggregate data indicate that the overwhelming majority of juveniles do not persist with their sexual offending in adulthood, it does not inform practitioners and policymakers about those few juvenile offenders who do persist.
Criminal versatility. Versatility refers to offenders' tendency to commit a wide array of offenses. Criminal versatility is concerned with the crime switching patterns of offenders as their offending persists over time. There are two main contexts in which to conceptualize the notion of crime switching. First, crime-switching patterns can be analyzed in the context of sex offenders' overall criminal activity. Consequently, from this perspective, researchers are primarily concerned with the number of different types of non-sex crimes sex offenders are involved in. The underlying theme here would be to examine the crime mix, or the nature of the different types of criminal activities characterizing sex offenders' overall criminal repertoire. Generally, both adult-victim and child-victim sexual offenders commit non-sexual offenses before and after their sexual offense convictions (e.g., Soothill, Francis, Sanderson, & Ackerley, 2000), and the former tend to exhibit a wider array of non-sexual offenses than the latter (for detailed reviews see Lussier, 2005; Simon, 1997). Second, crime-switching can also be examined strictly in the context of sexual offending. This would refer to sex offenders' tendency to limit themselves to one form of sex crime. In this context, crime-switching patterns can occur along several dimensions such as victim's age, gender, relationship to the offender, the nature of sexual acts committed by the offender and the level and type of coercion used. Others have also used the term sexual polymorphism to describe a sexual criminal career characterized by versatility (see Guay, Proulx, Cusson, & Ouimet, 2001; Lussier et al., 2008).

Few studies have examined the level of sexual polymorphism and crime-switching patterns in the sexual criminal activity of persistent sex offenders. Based on the current state of knowledge, there are three broad conclusions that can be drawn regarding the offending pattern of persistent sexual offenders. First, Soothill et al. (2000) came to the conclusion that while sex offenders are generalists in their criminal offending, they tend to specialize in their sexual offending confining themselves to one victim type. Similarly, Radzinowicz (1957) also found
specialization in victim-choice in that only 7% of his large sample of sex offenders had convictions for crimes against both male and female victims, a finding consistent with the early work of Gebhard et al. (1965). More recently, Cann, Friendship, and Gozna (2007) found that only about 25% of their sample of incarcerated sex offenders was versatile when considering victim's age and gender as well as the offender–victim relationship. On the other hand, crime-switching patterns may vary as a function of the dimension of the sexual polymorphism considered. For instance, while Guay et al. (2001) found much stability regarding the victim's gender, they reported considerable versatility for those targeting adolescents. While offenders targeting children and those targeting adults remained in the same category, those offending against adolescents were likely to switch either to adults or to children. Guay et al. (2001) hypothesized that adolescents may be a sex surrogate choice when the preferred partner was not available (see also Cale, Leclerc, & Smallbone, 2012).

Empirical studies conducted in clinical settings have shown a divergent picture of sex offenders' crime switching pattern. Weinrott and Saylor (1991) as well as Heil, Ahlmeyer, and Simons (2003) have argued that official data vastly under-represent the number of sex crimes committed by a sex offender. Using official data only, Weinrott and Saylor (1991) found that only 15% of their sample of offenders was versatile considering only three categories: 1) adult females; 2) extra-familial children; and 3) intra-familial children. Using a self-reported computerized questionnaire on offending, however, that number rose to 53%. Similarly, Heil et al. (2003) reported that incarcerated offenders in treatment are not versatile in terms of their victim's age (7% were versatile) and gender (8.5% were versatile) when assessed with official data, but are versatile when interviewed using a polygraph (70% and 36%, respectively). Less dramatic numbers were reported for parolees, however this may be explained by sampling differences (i.e., incarcerated offenders were more serious offenders) and the fact that admitting a
crime was a pre-requisite to enter treatment. Abel's well known study conducted under strict conditions of confidentiality showed that 42% of their sample targeted victims in more than one age group, 20% targeted victims of both genders, and 26% committed both hands-on and hands-off crimes (Abel & Rouleau, 1990). Similar results have been reported elsewhere in a sample of sex offenders assessed in a forensic psychiatric institution (e.g., Bradford, Boulet, & Pawlak, 1992).

The over-lapping nature of different forms of sexually deviant acts found in these clinical studies is counterintuitive to typological models of sex offenders based on the characteristics of the offense. The victim's gender, the victim's age, the offender–victim relationship, the level of sexual intrusiveness, and the level of force used during the commission of the crime are some examples of criteria that have been used over the years to classify sex offenders (e.g., Gebhard et al., 1965; Groth & Birnbaum, 1979; Knight & Prentky, 1990). If persistent sex offenders are versatile in their sex offending, then such classification models based on crude measure of sex offending (e.g., rapists vs. child molesters; intra-familial vs. extra-familial) needs to be reassessed accordingly.

Smallbone and Wortley (2004) came to the conclusion that diversity in paraphilic activities may be a function of a broader syndrome of general offending. Looking at different paraphilia (e.g., voyeurism, frotteurism, and sexual sadism) in a sample of child molesters, they found that a scale measuring the versatility of sexual deviance correlated significantly and positively with non-sexual offending. In other words, as the frequency of offending increases, so does the versatility in paraphilic interests and behaviors. Similarly, Lussier et al. (2005) found in a sample of adult sex offenders that versatility in sex offending was strongly related to versatility in non-sexual non-violent offending as well as versatility in non-sexual violent crime. Furthermore, using structural equation modeling, they found that this pattern of general
versatility was related to early-onset and persistent antisocial behavior. In other words, sex offenders characterized by a life-course persistent antisocial tendency were more likely to show much versatility in their sexual offending. This would suggest that antisocial sex offenders would persisting their sex offending would present a non-specific pattern of sexual reoffending. In this regard, Guay et al. (2001) hypothesized that crime-switching in sexual offending might be partly explained by low self-control or a tendency to pursue immediate gratifications in spite of more long-term consequences. Observations regarding persistent sex offenders suggest that their sex offending is not simply reflective of low self-control or the tendency to take advantage of risky, exciting, pleasurable opportunities.

Lussier et al. (2008) analyzed crime-switching patterns of a sample of convicted adult sex offenders using transition matrices and diversity indexes. They observed that crime-switching in sex offending is multidimensional; various sexual offending diversity indexes tend to be relatively independent from one another. In other words, if an offender offends against victims from different age groups, it does not imply that this person will also likely offend against both males and females. Therefore, contrary to the conclusions of Abel and Rouleau (1990), minimal evidence was uncovered to suggest that sex offenders are sexual deviates offending against different types of victims in different contexts. Furthermore, the study findings highlighted that crime-switching patterns vary across dimensions of sex crimes. On the one end of the continuum, victim's gender and level of physical force are relatively stable across crime-transitions. The notion of preference is relevant and important in understanding persistent sexual offending. These findings were in line with those of Soothill et al. (2000) which explain that specialization is evident for certain aspects of sex offending, therefore, suggesting that these aspects are far from being random upon unique situational contingencies.
On the opposite end of the continuum, the victim's age and sexual intrusiveness in the offense are characterized by more crimeswitching (Lussier et al., 2008). In other words, persistent sex offenders are not as prone to switching from male to female victims (and vice versa) or to change their level of violence across offenses. It is the nature of sexual acts (hands-on, hand-off, oral sex, and penetration) and victim's age that tend to fluctuate the most across the longitudinal sequence of sex crimes committed by sex offenders (Lussier et al., 2008). The concept of sex surrogate might also play a part in stimulating crime-switching (Guay et al., 2001). This appears to be especially true for those having offended against adolescent victims, who might represent the second best option in the absence of the preferred victim-type (i.e., children or adults) (Cale et al., 2012). This situation appears to be true for both child molesters and rapists. Of importance, and in keeping with the sex surrogate hypothesis, is that very few child molesters also offended against adults and vice-versa. Finally, Lussier et al. (2008) highlighted that versatility in sex offending tends to increase as a function of persistence in sex offending, especially for victim age, offender–victim relationship, and sexual intrusiveness in the offense. Therefore, the more sex offenders offend against different victims, the more their sexual criminal repertoire will diversify along these dimensions. This might partly explain discrepancies reported in earlier studies as clinical samples including more serious and persistent offenders should report more evidence of crime-switching.

Specialization. Crime specialization is another important aspect of the criminal career of sex offenders. Various definitions of crime specialization have been proposed over the years. Criminal career researchers have generally defined specialization as the probability of repeating the same type of crime (Blumstein, Cohen, Roth, & Visher, 1986). Crime specialization is important from a crime control perspective for obvious reasons. If offenders specialize in a particular crime type, then the implementation of crime prevention strategies targeting known
offenders involved in the specific crime type should be paramount. The sex offender registry, for example, reflects the assumption that sex offenders are sex crime specialists. Recording personal information in a database helping to track down convicted sex offenders is undoubtedly considered useful from a law enforcement standpoint. It can be used as a tool to prioritize suspects by assisting in the criminal investigation of new cases of sexual assault and abuse.

According to the specialization hypothesis, if the criminal activity of a sexual offender persists, it would be primarily in sexual crime. When considering criminal careers more generally, Cohen (1986) has highlighted that the level of specialization may vary across crime types as well as across offenders. Therefore, following Cohen's recommendation, one should distinguish specialization and specialists. On the one hand, specialization is understood as the tendency for some crime to involve a higher or lower level of repetition over time. In this context, researchers may be interested in comparing whether specialization in sex crime is similar or different than specialization in burglary, drug-related offenses, driving under the influence, auto-theft, etc. The concept of a specialist, on the other hand, refers to individuals with a higher probability of repeating the same crime over time. In this context, researchers may be interested in determining the proportion of sex crime specialists among sex offenders and their characteristics. Therefore, specialization can be studied in two contexts: (a) whether sex offenders tend to specialize in the type of sex crime they commit (e.g., Lussier et al., 2008; Soothill et al., 2000), and (b) whether sex offenders tend to specialize in sex crimes when considering their overall criminal activity. The latter has been the subject of closer empirical scrutiny by researchers.

Lussier (2005) reviewed the scientific literature on crime specialization in sex offending and concluded that empirical studies have provided little empirical evidence supporting the specialization hypothesis (see also, Simon, 1997). More precisely, sex offenders do not limit themselves to sex crimes, but rather quite the contrary. This is not to say, however, that all sex
offenders are criminally versatile or that sex offenders' criminal records always include other crime types. Sex offenders characterized by persistent criminal activity tend to be involved in other crime types that are not sexual in nature. This conclusion, however, requires closer scrutiny. Recidivism studies do show that sex offenders have a greater likelihood of being re-arrested for a sex crime than non-sex offenders. For example, in the study by Langan, Schmitt, and Durose (2003), using a three-year follow-up of close to 270,000 prisoners, 5% of adult sex offenders were re-arrested for a sex crime compared to 1% of non-sex offenders. Similar numbers were reported by Sample and Bray (2003). However, these results do not take into account the fact that the recidivism rates significantly vary across types of sex offenders. For example, Quinsey, Lalumière, Rice, and Harris (1995) showed that for comparable follow-up periods, the sexual recidivism rate of incest offenders was 8% as opposed to 18% for child molesters offending against girls and 35% for child molesters offending against boys. Recidivism studies are inaccurate measures of crime specialization because they do not consider the whole criminal activity of an offender but rather only two successive crimes. Other studies have used transition matrices and have reported on the probabilities of being re-arrested for a sex crime while taking into account the offender's entire criminal career. Here, the results have shown that crime specialization is much lower for rape (Blumstein, Cohen, Das, & Moitra, 1988; Britt, 1996) than when using a broader definition that includes child molesters (e.g., Stander, Farrington, Hill, & Altman, 1989). This suggests that child molesters are more likely to specialize in sex crimes than rapists. This conclusion seems to be reinforced by the analysis of criminal records and the importance of sex crimes in the criminal histories of sex offenders. Indeed, studies have shown that sex crimes represent about 4 to 14% of the entire criminal activity of rapists, while it is about 40% for child molesters (Gebhard et al., 1965; Lussier et al., 2005). These numbers should be
seen as tentative given the small number of studies having examined specialization in sex crime using a ratio of sex crimes to all crimes committed by sex offenders.

Neglected dimensions of the criminal career

The study of the criminal career of sex offenders is still in its infancy. Not surprisingly, therefore, several dimensions of the criminal careers of sex offenders have escaped empirical scrutiny. Of importance, patterns of escalation and de-escalation in sex offending have been largely overlooked (e.g., Leclerc, Lussier, & Deslauriers-Varin, in press; Sample & Bray, 2003). Another key criminal career dimension that has been overlooked until recently is desistance (e.g., Kruttschnitt, Uggen, & Shelton, 2000; Laws & Ward, 2011).

Desistance

Desistance refers to the termination of the criminal career and can be understood here as the termination of sex offending. The concept of desistance is important to provide information about the age at which sex offenders stop their sex offending; it allows us to determine the length of a sexual offending career, and also whether desistance from sex offending is accompanied by desistance from other crime types. Criminal career researchers understand desistance as a discrete event (i.e., the period after which offending has stopped). Developmentalists, however, understand desistance as a dynamic process by which offending slows down and become more specialized until its complete termination (LeBlanc & Fréchette, 1989). Studies that have considered the issue of desistance in the context of sex offending have generally relied on sexual recidivism indicators to determine desistance, that is, desistance is implied for the absence of a new charge or conviction during a given follow-up period. This approach is somewhat misleading because with a longer follow-up period, offenders considered to be desisters may become sexual recidivists. Recidivism is also problematic in the context where desistance is seen
as a process and the presence of a new conviction for a sex crime does little to inform us about whether or not offending is less frequent and less serious as time progresses.

In the field of sexual violence and abuse, desistance has generally been discussed in terms of the presence (or absence) of an age effect on the risk of sexual recidivism (Lussier & Healey, 2009). In other words, is it possible that with age, aging, and the passage of time, sex offenders' propensity to commit a sex crime changes. Researchers have reached a general consensus on the official recidivism rates of younger adult offenders and older offenders, but there is controversy about the age effect regarding other offenders. Three main issues have been at the core of the debate about the link between aging and reoffending in adult offenders: (1) identification of the age at which the risk of reoffending peaks; (2) how to best represent the trend in risk of reoffending between the youngest and the oldest group; and (3) the possibility of differential age–crime curves of reoffending. One hypothesis stipulates that, when excluding the youngest and oldest group of offenders, age at release and the risk of sexual recidivism is best represented by a plateau. Thornton (2006) argued that the inverse correlation revealed in previous studies may have been the result of the differential reoffending rates of the youngest and oldest age groups, rather than a steadily declining risk of reoffending. In this regard, one study presented sample statistics suggesting a plateau between the early 20s and the 60+ age groups (Langan et al., 2003). No statistical analyses were reported between the groups, thus limiting possible conclusions for that hypothesis. Another hypothesis suggested there might be a curvilinear relationship between age at release and sexual recidivism, at least for a subgroup of offenders.

Hanson (2002) found evidence of a linear relationship for rapists and incest offenders, and a curvilinear relationship was found for extra-familial child molesters (see also Prentky & Lee, 2007). Whereas the former two groups showed higher recidivism rates in young adulthood (i.e., 18–24), the latter third group appeared to be at an increased risk when released in the subsequent
age bracket (i.e., 25–35). This led the researchers to conclude that, although rapists are at highest risk in their 20s, the corresponding period for child molesters appears to be in their 30s. These results, however, have been criticized on methodological grounds, such as the use of small samples of offenders, the presence of a small base rate of sexual reoffending, the use of uneven age categories to describe the data, the failure to control for the time at risk after release and the number of previous convictions for a sexual crime (Barbaree, Blanchard, & Langton, 2003; Thornton, 2006). Finally, the controversy over the age effect has led researchers to question whether risk assessors should consider the offender's age at the time of prison release, and if so, how the adjustment should be done (Barbaree et al., 2007; Doren, 2006; Hanson, 2006; Harris & Rice, 2007).

Subsequently, two prominent schools of thought emerged, and two main corresponding hypotheses have been used to describe and explain the roles of propensity, age, and reoffending in sexual offenders: (a) the static-maturational hypothesis; and (b) the static-propensity hypothesis. The static-maturational hypothesis suggests that sex offenders' risk of reoffending is subject to a maturation effect, as this risk typically follows the age–crime curve (Barbaree et al., 2007; Hanson, 2006; Lussier & Healey, 2009). Importantly, the maturation hypothesis is based on the assumption of a stable propensity to reoffend, but the offending rate can change over life course. In other words, the rank ordering of individuals (between-individual differences) on a continuum of risk to reoffend remains stable, but the offending rate decreases (within-individual changes) in a similar fashion across individuals. It was determined that the offender's age at release contributes significantly to the prediction of reoffending, over and above scores on various risk factors said to capture sex offenders' propensity to reoffend. Multivariate analyses showed that when controlling for prior criminal history, the rate of sexual reoffending decreases by about 2% for every one-year increase of the offender's age at release (Thornton, 2006).
Adjusting for sociodemographic and criminal history factors, Meloy (2005) replicated this finding for probation failure and for non-sexual reoffending, but not for sexual reoffending. However, this could be explained by the low base rate of sexual reoffending in this sample (i.e., 4.5%). Other studies indicated that age at release contributes significantly to the prediction of reoffending, even after adjusting for actuarial scores (Barbaree et al., 2003; Hanson, 2006). Similar to Thornton (2006), Hanson (2006) reported that after adjusting for the scores on Static-99, the risk of sexual reoffending decreased by 2% for every one-year increase in age after release. No interaction effects were found between scores of the Static-99 and age at release. Although these preliminary results provide evidence to support the static-maturational hypothesis, many questions remain unanswered. The key question is whether sex offenders identified as high risk are also subject to an age effect. Because previous studies did not test the maturational hypothesis separately for high risk offenders, and considering that high risk sex offenders constitute only a small minority of all convicted sex offenders, researchers might have been limited in finding a differential age effect.

The static-propensity hypothesis suggests that, by using historical and relatively unchangeable factors, adult sex offenders can be distinguished based on their likelihood of reoffending. The main assumption here is that criminal propensity is stable over life course, and, therefore, risk assessment tools should only be used for measuring the full spectrum of this propensity. An important point of contention for the static-propensity hypothesis is whether younger offenders who are at a high risk to reoffend show the same or similar recidivism rates as older offenders evaluated as having the same risk to reoffend. Therefore, according to the static-propensity hypothesis, older offenders with high scores on risk assessment tools represent the same risk of reoffending as younger offenders with similar scores (Doren, 2004; Harris & Rice, 2007). For static-propensity theorists, the only age factors that risk assessors should include are
those reflecting a high propensity to reoffend, such as the age of onset of criminal activity. For example, Harris and Rice (2007) argued that the effect of aging on recidivism is small. In fact, they argued that age of onset is a better risk marker for reoffending than age at release. In other words, those who start their criminal career earlier in adulthood show an increased risk of reoffending. Their findings showed that the offender's age-at-release did not provide significant incremental predictive validity over actuarial risk assessment scores (i.e., VRAG) and age of onset. However, this could be explained, in part, by the fact that age of onset and age at release were strongly related, that is, early-onset offenders are more likely to be released younger than late-onset offenders. The high covariance between these two age factors might have limited researchers in finding a statistical age at release effect in multivariate analyses. Furthermore, looking at the predictive validity of the VRAG and the SORAG (Quinsey, Harris, Rice, & Cormier, 1998), Barbaree et al. (2007) found that after correcting for age at release, the predictive accuracy of instruments decreased significantly, suggesting that an age effect was embedded in the risk assessment score. These actuarial tools have been developed by identifying risk factors that are empirically linked to sexual reoffending. If the risk of reoffending peaks when offenders are in their 20s, it stands to reason that characteristics of this age group are most likely to be captured and included in actuarial tools. Consequently, scores of risk assessment tools might be more accurate with younger offenders, but over-estimate the risk of older offenders.

The findings of Lussier and Healey (2009) were generally consistent with the age–crime curve. Most sex offenders do not reoffend sexually after being released from prison and Lussier and Healey (2009) provided additional evidence of this. Congruent with the findings of Kruttschnitt et al. (2000), their findings provided further evidence in the face of the argument that sex offenders respond to nothing but long-term imprisonment and intensive community supervision. All offenders eventually desist, albeit at a different rate (Sampson & Laub, 2005). It
is the factors or mechanisms explaining desistance that remain tentative (Laws & Ward, 2011). To illustrate the importance of age on desistance, Lussier and Healey (2009) compared the predictive accuracy of the offender's age-at-release to that of the scores of an actuarial tool (i.e., Static-99) that includes one item reflecting the offender's age-at-release. The findings showed that, by itself, age-at-release was as good a predictor of reoffending as the score of the Static-99, an actuarial tool designed to determine the risk of reoffending in sexual offenders. These results suggest that the offender's age-at-release should be an important component considered by risk assessors when considering cases for long-term incapacitation and intensive community supervision. As suggested by Tittle (1988), it is plausible that even if the age–crime association is quite general, it is not necessarily invariant and some offenders might deviate from that pattern. Hence, it is possible that the age effect might not operate the same way for individuals characterized by different offending trajectories (Lussier, Tzoumakis, Cale, & Amirault, 2010). Future studies should examine whether the age–crime curve is present for sex offenders characterized by different offending trajectories and whether the age effect has the same impact on sexual recidivism across these groups. The results of the Lussier and Healey (2009) study do not provide empirical evidence for a strategy of selective incapacitation aimed at sex offenders, but rather highlight the limited understanding of the role of aging and the process of desistance in sex offenders.

Conclusion

The study of sex offenders' criminal activity using the criminal career approach is still in its infancy. Therefore, the conclusions drawn here should be interpreted accordingly (see Table 2). Prevalence has primarily been estimated through victimization surveys which limit the estimation of the size of the sex offender population in a given place during a given period. Self-report studies suggest that about 5% of young adult males report having raped someone. This
prevalence increases to approximately 25% when broadening the definition to sexual aggression to include deceptive and coercive behaviors. Comparatively speaking, using official statistics, the prevalence rate of sexual offending for the similar age group is less than 1%. These numbers reiterate that acts of sexual aggression are vastly undetected, unreported, or non-sanctioned by the criminal justice system. Recently, Bouchard and Lussier (in press) proposed a capture-recapture method to estimate the size of the sex offender population using criminal career information from offenders who have been arrested for a sex crime. Much is still left to uncover about individuals who commit sexual offenses without any legal consequences as well as the factors and the context under which these individuals go undetected. This is especially important given that much of the scientific literature on sex offenders is based on those who were apprehended, charged, convicted and imprisoned for their crime. It is unlikely that knowledge stemming from prison-based populations of sex offenders can be generalized to undetected sex offenders (see Lalumière, Harris, Quinsey, & Rice, 2005).

---Insert Table 2---

Longitudinal studies have shown that most juvenile sex offenders do not become adult sex offenders. In fact, studies suggest that about 10% of convicted juvenile sex offenders become adult sex offenders. Similarly, retrospective longitudinal studies with adult sex offenders suggest that most adult sex offenders were not previously juvenile sex offenders. Put differently, there is minimal continuity in sex offending from adolescence to adulthood. Retrospective continuity, however, appears to be more important for adult sex offenders sampled in maximum-security psychiatric facilities, suggesting the possibility that continuity in sex offending is potentially associated with mental health disorders. Empirical studies suggest, therefore, that the onset of sex offending for the majority of adult offenders occurred in adulthood. The investigation of the onset of sex offending shows a gap of about 7 years between the actual onset of sex offending
and the age at first conviction for a sex crime. Importantly, this gap varies across types of sex offenders. While there are minimal age differences in terms of the actual onset of sex offending, there are much larger differences in terms of the age at first conviction for a sex crime. Child molesters are more likely to be first convicted for a sex crime later than sexual aggressors of women. Such differences may explain why child molesters are often found to be older than sexual aggressors of women, and this is also likely due to the fact that child molesters go undetected for longer time periods than sexual aggressors of women. This is also likely due in part to the differential opportunity structure involved in sexual offenses against women and children.

The study of offending frequency reveals that most sex offenders will commit one crime against a single victim. In terms of those who persist, studies reveal two main offending strategies, one based on maximizing the number of victims (victim-oriented), and the other based on maximizing the number of sex-crime events (event-oriented). Those opting for a victim-oriented strategy tend not to reoffend against the same victim while those following an event-oriented strategy will target few victims repeatedly, and in some cases over long time periods that potentially span many years. The study of desistance suggests that all sex offenders inevitably desist from sex offending, but at a different rate. Empirical research also suggests that age, and the aging process does impact sex offenders' risk of reoffending over time in a traditional fashion (i.e., the age-crime curve). Older sex offenders have a significantly lower probability of reoffending than younger ones. Yet, the criminal justice system is often imposing the most stringent conditions and sentences on older offenders which may impact their ability for successful community reintegration. Such conclusions, however, are based on official recidivism data and subject to well known limitations pertaining to official statistics on crime. Using other sources of information in future research to measure sex crime represents an important challenge.
for researchers in the field of sexual violence and abuse. A greater understanding of the (sexual) criminal careers of sex offenders will inform policymakers about these individuals' offending patterns over time, in addition to how to best tackle the problem of sexual violence and abuse.

References


<table>
<thead>
<tr>
<th>Parameters</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Prevalence</td>
<td>The proportion of a given population committing a crime during a specific time period.</td>
</tr>
<tr>
<td>Age of onset</td>
<td>The age at first offense.</td>
</tr>
<tr>
<td>Frequency (volume)</td>
<td>The number of crimes committed.</td>
</tr>
<tr>
<td>Lambda</td>
<td>The number of crimes committed taking into account the time at risk (excluding periods during which the offender did not have the opportunity to offend, i.e., hospitalization, incarceration, death).</td>
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<tr>
<td>Continuity</td>
<td>The passage from juvenile offending to adult offending.</td>
</tr>
<tr>
<td>Career length</td>
<td>The length of time between onset and termination of offending.</td>
</tr>
<tr>
<td>Versatility (diversity)</td>
<td>The number of different crime types committed.</td>
</tr>
<tr>
<td>Seriousness</td>
<td>The degree of gravity of the criminal activity.</td>
</tr>
<tr>
<td>Specialization</td>
<td>The tendency to limit offending to one particular form of crime.</td>
</tr>
<tr>
<td>Desistance</td>
<td>Termination of offending.</td>
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BEYOND SEXUAL RECIDIVISM

Table 2. Descriptive overview and current understanding of sexual criminal career dimensions of adult sex offenders.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Overview and key issues</th>
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<tr>
<td>Prevalence</td>
<td>Current evidence suggests that perpetration of sex crimes is more prevalent among adults than adolescents. Victimization studies provide underestimates of the proportion of a given population committing sex crimes. Self-report studies also potentially provide underestimates due to minimization in responding. Nonetheless, the self-reported prevalence estimate of sexual aggression is typically substantially higher than the ones based on official data.</td>
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<tr>
<td>Age of onset</td>
<td>Adolescence onset of sexual offending is less common than adult onset. Later adulthood onset is particularly common among incest offenders. However, the age of onset based on self-reported data is younger than those based on official data. Self-reported data indicate that sexual aggressors of women and children exhibit the onset of sexual offending in young adulthood, and discrepancies between data sources reflect, at least in part, delayed reporting and detection.</td>
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<tr>
<td>Frequency (volume) and lambda</td>
<td>There is heterogeneity in the frequency of sex offending across sex offenders. Frequency of sexual offending can be conceptualized in two key ways: 1) the number of victims an offender has offended against; and, 2) the number of sex crime events. Similar to offending in general, a small proportion of sex offenders are considered to be prolific and offend against multiple victims. Self-reported information uncovers more victims than those based on official data. Differential opportunity structures involved in intra-familial offending (i.e., compared to extra-familial offending) may support the development of event-oriented offending strategy where an offender maximizes the number of offending opportunities against the same (or a limited number) of victim(s).</td>
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<tr>
<td>Continuity and career length</td>
<td>Most juvenile sexual offenders do not go on to become adult sexual offenders. In fact, for the most part, these respective groups likely constitute discrete populations. The proportion of juvenile sexual offenders who offend in adulthood increases with the length of follow-up. Even so, overall it is apparent that there is substantial discontinuity in sexual offending superimposed on a small degree of continuity. Most convicted adult offenders commit only a single sexual offense. The proportion of adults who reoffend also increases with the length of the follow-up period.</td>
</tr>
<tr>
<td>Versatility (diversity) and seriousness</td>
<td>Versatility in sexual offending can be conceptualized in two ways: 1) the crime mix in an offender’s history (i.e., the nature and extent of crime-switching that characterizes the overall criminal repertoire); and, 2) crime-switching in the context of sexual offending specifically (i.e., crime switching along the lines of victim and sexual offense characteristics). Sexual offenders tend to commit non-sexual offenses before and after their sexual offense convictions. A substantial minority of sex offenders show versatility in sexual offending. Versatility in sexual offending is also positively related to versatility in non-sexual offending. Sex offenders characterized by a life-course persistent antisocial tendency show more crime-switching patterns in their sexual offending. Crime switching patterns also vary across dimensions of sex crimes. Victim gender and the level of force in sex crimes tend to be relatively stable. Victim age and the nature of sexual acts committed tend to fluctuate more across the longitudinal sequence of sexual crimes.</td>
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<tr>
<td>Specialization</td>
<td>Specialization in sex crimes can be conceptualized in two ways: 1) the proportion of sex crimes when considering the overall criminal activity of an offender; and, 2) the tendency to repeat the same type of sex crime. Current evidence suggests that sexual aggressors against children tend to display a higher proportion of sex crimes in their criminal repertoire compared to sex aggressors against women. A significant minority of adult sex offenders have no criminal history and do not go on to commit further sexual or non sexual offenses. Much less is known about specialization within sexual crimes. Typically, desistance has been conceptualized as the point at which sex offending stops (i.e., the last conviction). From a developmental perspective, desistance is conceptualized as a dynamic process by which offending slows down and become more specialized until its complete termination. Central to this debate is the role of aging on sexual offending. Two main hypotheses have been proposed: 1) the static-maturational hypothesis suggests that sex offenders’ risk of reoffending is subject to a maturation effect, as this risk typically follows the age–crime curve; and, 2) the static-propensity hypothesis suggests that, by using historical and relatively unchangeable factors, adult sex offenders can be distinguished based on their likelihood of reoffending. There is currently much debate about the role of aging and desistence from sexual offending.</td>
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