Assessment and Treatment of Sexual Offenders Detained by TBS-Hospital Order

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"Everything in the world is about sex except sex.
Sex is about power."

— Oscar Wilde

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CHAPTER ONE

Introduction

BACKGROUND

Sexual offending is among the most reprehensible behaviors in modern society and raises lots of public concern (Levenson, Brannon, Fortney, & Baker, 2007). Sexual offending is generally defined as performing sexual activities with an individual who does not give consent or is deemed incapable of giving consent (Abel, Becker, & Cunningham-Rathner, 1984). There are several circumstances in which an individual can be considered as incapable of consenting to sexual contact, of which being under the 'age of majority' is most common. The age of majority is the legally defined minimum age at which an individual is considered to have the full competency to make decisions, such as voluntarily agree to engage in sexual behavior or to get married without parental consent. The age of majority is set in the range of 14 to 16 years for the majority of countries in Europe, while the North American jurisdictions have set limits between 16 and 18 years. The age of majority in non-Western cultures is generally comparable to that of Western cultures, although in some countries in Africa and Asia the age of majority is 12 years (e.g., Angola, Philippines). Other circumstances involving incapability to consent are when an individual is unconscious or asleep, has impaired judgment (e.g., intellectual disability), or in a dependent relationship with the perpetrator.

The Dutch Penal Code penalizes various sexual behaviors, which are described in Act 239 to 249 of crimes against morality (see Table 1). Acts 239 and 240 describe hands-off sexual offenses. These are sexual offenses without direct physical contact with the victim. Acts 242 to 249 describe hands-on sexual offenses, which involve direct physical contact with the victim. For hands-on sexual offenses, the Dutch law provides for a three-way division on the basis of the following criteria: (a) use of physical violence (or threats), (b) penetration of the victim (including penetration with fingers or objects, a French kiss, and forced oral sex), and (c) age of the victim. The law speaks of rape or assault when the offender uses physical coercion or (threats of) violence, irrespective of the victim's age.

Sexual offending is a widespread international problem, with fairly high prevalence rates. The percentage of individuals who have ever become victim of

TABLE 1

Short Description of the Criminal Sexual Behaviors in the Dutch Penal Code.

Act	Description
239	Exhibitionism: exposing of genitals in public area or to individuals under the age of 16 years
240	Unsolicited showing of pornographic material
240a	Showing pornographic material to individuals under the age of 16 years
240b	Possession or distribution of pornographic material involving individuals under the age of 18 years
242	Rape: penetration of the body of an individual with physical coercion or (threats of) violence
243	Abuse: penetration of the body of an individual who is unable to give consent
244	Abuse: penetration of the body of an individual who is under the age of 12 years
245	Abuse: penetration of the body of an individual between 12 and 16 years
246	Sexual assault: lewd acts with physical coercion or (threats of) violence
247	Lewd acts with an individual who is 12 years or above, but incapable of giving consent
248.1-8	Aggravating circumstances
248a	Alluring an individual who is under the age of 18 years to perform lewd acts
248b	Using the services of a prostitute aged between 16 and 18 years
248c	Being present when someone performs lewd acts with an individual under the age of 18 years
248d	Expose an individual under the age of 16 years to sexual acts
248e	Meeting an individual under the age of 16 years to perform lewd acts
248f	Forcing an individual under the age of 18 years to perform lewd acts with a third party
249	Lewd acts enforced by abuse of authority
250	Promoting a third party to perform lewd acts with a minor entrusted to their authority

child sexual abuse is approximately 20% (Pereda, Guilera, Forns, & Gómez-Benito, 2009a, 2009b). The prevalence of rape is comparable to that of child sexual abuse, with most studies indicating prevalence rates of 15% (Kolivas & Gross, 2007). The true scope of sexual offending, however, is difficult to determine. Studies regarding the occurrence of sexual offending are often based on official statistics, which are known to be subject to under-reporting (Chaffin, 2008). Especially sexual offenses for which the perpetrator is known to the victim (e.g., incest) are more likely not to

be reported to the authorities than sexual offenses committed by strangers under threat of physical violence (e.g., rape). Approximately 2% of the male population will ever be convicted for a sexual offense (Lisak & Miller, 2002; Marshall, 1997), which suggests that a relatively small number of men is responsible for the rather large number of sexual offenses. However, there are clear indications that the actual number of men committing sexual offenses is much higher (Hanson & Scott, 1995; Koss, 1985; Koss, Gidycz, & Wisniewski, 1987; Koss & Oros, 1982). Moreover, sexual offending is related to various mental health problems in a large number of the victims. Internalizing disorders such as anxiety, depression, and posttraumatic stress disorder (PTSD) are among the most frequently reported problems, but victims also report somatic complaints, interpersonal problems, self-destructive behavior, low self-esteem, identity problems, educational difficulties, and aggressive behavior (Beitchman et al., 1992; Ellis, Atkeson, & Calhoun, 1981; Paolucci, Genuis, & Violato, 2001). Consequently, a reduction of sexual offenses would result in a lower number of victims and thus prevent a lot of psychological suffering.

ETIOLOGICAL THEORIES OF SEXUAL OFFENDING

There are many multifactorial models for the origins of sexual offending (see Ward, Polaschek, & Beech, 2006 for a comprehensive overview), but for the purpose of this dissertation only a brief overview of the main theories is given. Although each of these theories view sexual offending in a different way, they all provide an explanation for the development of sexually violent behavior.

The Integrated Theory (Marshall & Barbaree, 1990) views sexual offending as the result of various biopsychosocial factors. According to this model, all men have a biological predisposition to display (sexually) aggressive behavior. Insecure attachment and negative childhood experiences increase the likelihood of developing offense-related vulnerabilities (e.g., problems with emotion regulation, impaired problem solving skills, impulsivity). In addition, specific socio-cultural contexts (e.g., domestic violence or negative attitudes towards women) contribute further to the formation of antisocial attitudes. All these vulnerability factors, potentially in combination with situational variables such as substance abuse, emotional states (e.g., anger), or victim opportunity, will eventually result in sexually violent behavior. Although there are clear indications that most predictors in the Integrated Theory indeed contribute to sexual offending, empirical verification of the complete theory is still lacking (Marshall, 2001). Moreover, this account emphasizes that loss of control is an important risk factor, whereas only a small number of sexual offenders actually show clear self-regulation problems (e.g., Hudson, Ward, & McCormack, 1999; Proulx, Perrault, & Ouimet, 1999).

The Confluence Model of Sexual Aggression (Malamuth, 1996) explains rape from a feminist and evolutionary perspective, and states that the basic function of sexuality is genetic reproduction. This model assumes that men and women have different reproduction strategies. For women, optimal partner choice is limited to men with high genetic quality who are committed to parenting, while the most effective male mating strategy is concerned with sexual promiscuity and hostile masculinity and is characterized by impersonal sex with a large number of sexual partners, including a tendency to force unwilling partners to engage in sex and deny other men to have sexual access to women. Although the core constructs of this model (i.e., hostile and antisocial attitudes to women, sexual responsiveness to rape) have received some empirical support (Ward et al., 2006), the theory relies heavily on inborn characteristics that apply to the complete male population and as such is considered as less useful for explaining the deviant behaviors displayed by a limited number of sexual offenders.

The Pathways Model (Ward & Siegert, 2002) describes four sets of psychological pathways that are thought to play a causal role in the development of sexual offending against children. These pathways are: (1) antisocial cognitions; (2) deviant sexual scripts; (3) intimacy deficits; and (4) emotional dysregulation. According to this model, child sexual abuse can be initiated by all of these causal mechanisms, although their influence may vary from one person to another. That is, some individuals with deviant sexual scripts (e.g., children are sexual beings) commit sexual offenses when confronted with situational triggers (e.g., sexual arousal or victim

opportunity), while others have to be also emotionally dysregulated before engaging in such deviant behavior. Although this model clearly elaborates the generally accepted assumption that there are multiple routes towards sexual offending, it should only be regarded as a provisional framework (Ward et al., 2006).

In addition to these multifactorial theories, there are various single risk factor theories for the etiology of sexual offending that are not necessarily part of a comprehensive model. These risk factors include deviant sexual preferences (McGuire, Carlisle, & Young, 1965), cognitive distortions (Abel et al., 1984), intimacy deficits (Marshall, 1989), and deficient victim empathy (Marshall, Hudson, Jones, & Fernandez, 1995). Feministic approaches of sexual offending have identified additional risk variables, such as masculinity/powerlessness (Cossins, 2000) and pornography (Russell, 1988, 1998).

The etiological theories presented above all have strengths and weaknesses, and their clinical utility also varies considerably. Some theories need further empirical investigation, while others simply lack explanatory power. Ward and colleagues (2006) proposed to develop a global model that includes all aspects of sexual offending – the unified theory of sexual offending – in which various causal factors (i.e., early developmental experiences, genetic predispositions, the social/cultural environment, contextual factors, psychological dispositions, clinical symptoms) are explicitly linked to explain the origin and maintenance of deviant sexual behavior. However, the heterogeneity of the sex offender population complicates the development of such a unified theory, and factors that contribute to the initiation of sexual offending may not necessarily be the same as the factors that lead to the persistence of sexual offending (i.e., recidivism; Hanson, 2000c). Further exploration of the contributions of well-known risk factors to both the initiation and persistence of sexual offending, could still provide us with a better understanding of deviant sexual behavior and give new impetus towards a unified framework of sexual offending.

SEXUAL DEVIANCE

Although the definition has shifted over time, *sexual deviance* has generally been described as atypical sexual behavior, defined in moral, medical or legal terms (Milner, Dopke, & Crouch, 2008). Originally termed *perversions*, these atypical sexual behaviors were eventually named *paraphilias* in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychiatric Association, 1980). Definitions of paraphilic behavior have expanded in following editions of this classification system, so that its description now includes both covert activities (i.e., abnormal sexual urges) and overt behaviors. Paraphilias refer to a spectrum of sexual expressions, including sexual interest in inanimate objects, arousal to causing/receiving pain or humiliation, and interest in children or other non-consenting sexual partners. For a long time, sexual deviance and paraphilias have been regarded as interchangeable concepts (e.g., Ward & Beech, 2008). However, while considered to be unusual, atypical, or abnormal, paraphilic behavior by itself does not necessarily justify or require clinical intervention. Therefore, the DSM-5 (American Psychiatric Association, 2013) now distinguishes between *paraphilias* and *paraphilic disorders*, defining paraphilia as “any intense and persistent sexual interest other than sexual interest in genital stimulation or preparatory fondling with phenotypically normal, physically mature, consenting human partners” (p. 685), and a paraphilic disorder as “a paraphilia that is currently causing distress or impairment to the individual or a paraphilia whose satisfaction has entailed personal harm, or risk of harm, to others” (p. 685). A paraphilia is thus a necessary but not a sufficient condition for having a paraphilic disorder.

Not all individuals with a deviant sexual preference will act on it. There is substantial evidence that atypical sexual interests are relatively common in the non-offender population. The mean percentage of men who admit to having rape fantasies but have actually never committed a sexual offense is approximately 30% (Leitenberg & Henning, 1995). Briere and Runtz (1989) demonstrated that 21% of male students acknowledged some level of sexual attraction to children and 9% of these students confessed to having pedophilic fantasies, with over half of them

admitting that they had masturbated to these fantasies. Seven percent would even consider child sexual abuse if they could escape the consequences. To complicate matters further, sexual offenders do not necessarily have a sexual deviance. Not all child sexual abusers have a sexual interest in children (Seto, 2008), and most rapists do not prefer coerced sexual interactions (Stinson & Becker, 2008).

Nevertheless, meta-analytic studies have identified sexual deviance as one of the strongest predictors of future sexual offending (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005). Therefore, accurate determination of sexual offenders' (deviant) sexual interests should play a critical role in risk assessment. Sexual interest has typically been studied using self-report and physiological measures, although each of these assessments has limitations. For example, penile plethysmograph (PPG) assessment requires specialized expertise and equipment, and is not applicable to all persons (Kalmus & Beech, 2005). PPG is also not used in many locations outside of North America (McGrath, Cumming, Burchard, Zeoli, & Ellerby, 2010) because of privacy issues and the purported use of explicit pornographic material (Launay, 1999). Meanwhile, the validity of self-report questionnaires has also been debated (e.g., Andrews & Bonta, 2010; Beech, 1998; Horley, 2000; Marshall, Anderson, & Fernandez, 1999; Ward, Hudson, Johnston, & Marshall, 1997), in particular because of concerns about social desirable response tendencies and deliberate faking (Gannon, Ward, & Collie, 2007, but see Kroner, Mills, & Morgan, 2007; Mathie & Wakeling, 2011; Mills & Kroner, 2005). This concern is especially salient in forensic settings, where disclosure of certain sexual interests may have important legal implications (Kalmus & Beech, 2005). The application of implicit measures might obviate some of the concerns raised with regard to the use of self-report questionnaires measuring sexual interest (Ward et al., 1997), and, more importantly, may provide complementary information to self-report and physiological measures (e.g., Babchishin, Nunes, & Kessous, 2014).

RISK ASSESSMENT

Risk assessment is a method of determining the (statistical) probability that an offender will recommit a (sexual) offense. The available risk assessment methods can be categorized into two main approaches: professional judgment and actuarial assessment (Hanson, 2000a). The professional judgment approach determines risk levels with subjective evaluations from forensic professionals, which can be solely based on personal experience (unstructured professional judgment) or guided by a list of relevant risk factors associated with sexual recidivism (structured professional judgment). With actuarial risk assessment, risk levels are determined by the presence/absence of empirically well-supported factors that differentiate (sexual) recidivists from non-recidivists. Risk levels can be calculated by solely using a statistical scoring algorithm (pure actuarial approach), which can be adjusted afterwards based on important considerations not addressed in the standardized assessment (adjusted actuarial approach). Individual risk scores are compared to recidivism rates of large offender groups with similar risk levels, indicating the probable rate of (sexual) recidivism for that individual. Although almost all risk assessment methods emphasize the use of various risk factors for determining recidivism, there is general consensus for the superiority of structured approaches over unstructured approaches (Grove, 2005; Hanson & Morton-Bourgon, 2009) because clinicians are, for instance, inclined to overestimate the risk of sexual recidivism (Quinsey, Rice, & Harris, 1995). However, one should note that even structured approaches have their shortcomings (e.g., lack of generalizability over different sex offender populations).

Meta-analytic studies have identified deviant sexual interests and antisocial orientation/lifestyle instability as the primary risk factors associated with sexual recidivism (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005). Other empirically supported risk factors are self-regulation problems, poor problem solving skills, offense-supportive attitudes, and negative social influences (Hanson & Harris, 2000, 2001; Mann, Hanson, & Thornton, 2010). Therefore, these risk factors can be found in various risk assessment instruments. The identification of relevant

risk factors is hindered by the low *base rate* of serious sexual recidivism. Base rate can be described as the prevalence of a particular type of behavior within a given population over a specific period of time (De Ruiter & Hildebrand, 2000; Quincey, Harris, Rice, & Cormier, 1998). Base rates depend on several factors, including the period of observation, recidivism criteria (e.g., self-report, arrest, or detention), and the nature of recidivism (e.g., sexual, non-sexual). Among convicted sexual offenders, the average rate of observed sexual recidivism is only 13.4% (18.9% for rapists and 12.7% for child sexual abusers) after a follow-up period of 5 years (Hanson & Bussière, 1998), but polygraph (i.e., lie detection) data suggest that most convicted sexual offenders have committed more sexual offenses than their official statistics indicate (Salter, 2003).

The Dutch Ministry of Security and Justice has obliged all forensic psychiatric hospitals to annually conduct risk assessment of sexual offenders by means of validated instruments, of which the Sexual Violence Risk-20 (SVR-20; Boer, Hart, Kropp, & Webster, 1997) is most commonly used. The SVR-20 is a structured professional judgment instrument for assessing the risk of sexual recidivism and is also internationally widely used (Rettenberger, Boer, & Eher, 2011). The SVR-20 consists of 20 items that are based on the literature about the characteristics of sexual offenders who recommitted a sexual crime after being previously convicted. According to the original authors, these items can be grouped into three domains, namely psychosocial adjustment (eleven items), sexual offenses (seven items), and future plans (two items). The psychometric properties of the SVR-20 have only been studied in a limited number of published studies (De Vogel, De Ruiter, Van Beek, & Mead, 2004). Although items of the SVR-20 can be reliably scored, individual items and domain scores of this instrument substantially differ in their association with future sexual and nonsexual violence (Rettenberger et al., 2011). In addition, sexual offenders constitute a heterogeneous population, with each subgroup being subject to specific risk factors (Ward & Steward, 2003). The SVR-20, like many other risk assessment instruments, does not satisfactorily differentiate between various types of sexual offenders (e.g., child sexual abusers and rapists). Consequently, the SVR-20 may be prone to overestimation (or underestimation) of the actual risk levels of specific sex offender subtypes. For instance, item 15 (uses weapons or threats of death) may be less relevant for assessing the risk levels of child sexual abusers. Providing forensic professionals with additional information about the psychometric properties of the SVR-20 could further aid them in making important decisions, such as treatment length or supervision intensity.

TREATMENT PRINCIPLES

In order to reduce sexual offenders' risk of recidivism, treatment is often needed. There are several guidelines available for the treatment of sexual offenders and offenders in general. For the purpose of this dissertation, I only provide a brief summary of the main treatment frameworks.

The Relapse Prevention model (Pithers, Marques, Gibat, & Marlatt, 1983) can best be viewed as an addition to the already existing cognitive-behavioral interventions for sexual offenders developed in the seventies that primarily focused on deviant sexual orientations, relationship skills, and sex education (e.g., Barlow, 1973). According to Pithers and colleagues (1988), relapse is a process consisting of several successive steps, namely: negative affect, deviant sexual fantasies, distorted cognitions, planning of a sexual offense, masturbation fantasies, and finally the offense itself. Relapse Prevention provides offenders with insight into all these subsequent steps leading to the sexual offense, including offense-related thoughts, emotions, and behaviors. Additionally, offenders learn skills (i.e., social skills, relational skills, anger management) and acquire qualities (i.e., empathy, self-esteem) for minimizing the risk in future problem situations (Marshall & Anderson, 2000; Marshall & Hollin, 2015; Marshall & Laws, 2003). Thanks to groundbreaking work of Van Beek and Mulder (1992), Relapse Prevention-based treatment has already been applied in the Netherlands since the beginning of the 1990s. In a critical review of the Relapse Prevention model, Hanson (2000b) argues that treatment should focus on factors that initiate criminal behavior and prevent recidivism rather than situations that might lead to a (sexual) offense.

The Risk-Need-Responsivity (RNR) principles (Andrews & Bonta, 2010; Andrews, Bonta, & Hodge, 1990) are widely regarded as a leading guideline for the assessment and treatment of sexual offenders (Ward, Mesler, & Yates, 2007). The risk principle implies that the intensity of treatment interventions should be matched to the offender's recidivism risk: offenders with a high risk of recidivism should receive more intensive treatment than offenders with a lower risk of recidivism. Risk of recidivism is determined by both static (i.e., highly stable) risk factors such as prior (sexual) offenses and past supervision failure, and dynamic risk factors which include antisocial cognitions and personality features. Static risk factors are generally regarded as the best predictors of sexual recidivism (e.g., Hanson & Bussière, 1998; Hanson, Harris, Scott, & Helmus, 2007), although recent research has indicated that dynamic risk factors are equally important in this regard (e.g., Olver, Wong, Nicholaichuk, & Gordon, 2007). The other RNR principles also have implications for treatment and intervention. That is, the need principle states that in order to reduce the risk of (sexual) recidivism, treatments should focus on the underlying dynamic risk factors of criminal behavior (the so-called criminogenic needs), whereas the responsivity principle states that interventions are most effective when they are adapted to the abilities, skills and learning styles of the offender.

The Good Lives Model of offender rehabilitation (GLM; Ward, 2002; Ward & Gannon, 2006; Ward & Stewart, 2003) was developed several years ago as an alternative approach for interventions that mainly focus on risk factors (e.g., the RNR principles). It is a strength-based treatment framework that is based on the belief that people offend because they are trying to obtain primary human goods. According to the GLM, sexual offending is merely an inadequate, inappropriate attempt to obtain these human goods. Improving the capabilities and strengths of offenders by teaching them to obtain their human goods in socially acceptable, personally satisfying, and sustainable ways will reduce the risk of reoffending. Within this treatment framework, offenders are asked about their life goals within several areas (i.e., life, knowledge, excellence in play, excellence in work, excellence in agency, inner peace, relatedness, community, spirituality, pleasure, and creativity). All obstacles and steps towards these life goals become the target of treatment, which could involve the reduction of risk factors and the improvement of protective factors.

Although the GLM presents itself as an alternative for the RNR principles, the major difference between both models is only in orientation (Andrews, Bonta, & Wormith, 2011). That is, the GLM is based on the principle that obtaining aforementioned life goals will eventually lead to reductions in criminogenic needs, whereas the RNR states that reductions in criminogenic needs should be the main focus of treatment. According to RNR, the patients' well-being and a positive treatment approach are simply regarded as part of good clinical practice. To date, there has hardly been any empirical research on the effectiveness of GLM-based treatment interventions (Marshall & Marshall, 2014), although there seems to be consensus on a balanced treatment approach which focusses on both negative risk and positive protective behaviors (Marshall et al., 2005).

SETTING

Treatment is especially needed in sexual offenders with a high risk of recidivism. The sexual offenders described in this dissertation are mainly detained under hospital order and reside in various forensic psychiatric hospitals across the Netherlands. These hospitals provide a high-security environment with a high staff-patient ratio. Offenders are extensively examined by a multidisciplinary team consisting of psychiatrists, psychologists, nurses, and social workers. The offenders are considered to have such high risk of (sexual) recidivism that, without care of treatment, they remain a danger for society. Therefore, the forensic psychiatric hospitals provide treatment programs, both individually and in groups, that are aimed at the criminogenic needs of each offender. If indicated, offenders can also receive psychopharmacological treatment. The average length of stay in a forensic psychiatric hospital is approximately 9 years (Van Gemmert & Van Schijndel, 2014).

GENERAL AIM AND OUTLINE OF THIS DISSERTATION

As stated before, deviant sexual interests and antisocial orientation/lifestyle instability are the primary criminogenic needs of sexual offenders. As a consequence, a proper understanding of these constructs is required for the supervision, (risk) assessment, and treatment of sexual offenders. The general aim of this dissertation is to explore to what extent various risk factors of (sexual) (re)offending are relevant for the (risk) assessment and treatment of sexual offenders detained by TBS-hospital order.

Chapter 2 investigates a number of risk factors that are thought to be related to sexual offending. According to the pathways model (Ward & Siegert, 2002), antisocial cognitions, deviant sexual scripts, intimacy and social skill deficits, and emotional dysregulation are thought to play a causal role in sexual offending against children. In order to examine whether antisociality and social skill deficits also contribute to the persistence of sexual offending (i.e., recidivism), I explore differences in self-reported aggression, anger, hostility, social anxiety, and social skills between child sexual abusers, rapists, and nonsexual violent offenders who are detained under hospital order. In addition, differences between inpatient and outpatient child sexual abusers on the pertinent constructs are evaluated. The main research question in this chapter is:

1) To what extent are the risk factors of aggressiveness, anger, hostility, social anxiety, and lack of social skills associated with an increased risk of sexual reoffending against children?

Chapter 3 focuses on the aforementioned SVR-20, the risk assessment instrument that is currently used in the Netherlands to determine the risk of sexual recidivism in forensic psychiatric inpatients. An optimal factor structure for the SVR-20 is explored in a combined sample of child abusers and rapists. The validity of the obtained risk domains is then examined by calculating correlations with observed sexual, violent, and general recidivism, psychopathy, and various other factors related to sexual offending. The main research questions in this chapter are:

1) What is the optimal factor structure of the SVR-20?
2) What are the psychometric properties (i.e., internal consistency, predictive validity, and convergent validity) of the original SVR-20 domains and the alternative SVR-20 factors?
3) What is the predictive value of structured professional judgment and the actuarial scoring method of the SVR-20 in predicting sexual, violent, and general recidivism?

Chapter 4 elaborates on the assessment of deviant sexual interest. More specifically, the study presented in this chapter explores whether sexual offenders are, on an implicit level, sexually attracted to submissiveness. An Implicit Association Test (IAT) is used to examine this hypothesis. More precisely, this reaction-time based computer task is employed to investigate whether *submissive-sexy* associations have incremental value over the already well-established *child-sex* associations in differentiating child sexual abusers from rapists and (non-sexually) violent offenders. In addition, the predictive value of both implicit associations is explored by correlating IAT scores with measures for recidivism risk, aggression, and interpersonal anxiety. The main research questions in this chapter are:

1) Are child sexual abusers and rapists, on an implicit level, sexually attracted to submissiveness?
2) Do these submissive-sexy associations have incremental value over the already well-established child-sex associations in differentiating child sexual abusers from other offenders?
3) To what extent are submissive-sexy associations and child-sex associations predictive for risk of (sexual) recidivism?

Chapter 5 describes the development of a cognitive behavioral therapy (CBT)-based group treatment for Dutch forensic psychiatric sexual offenders. I critically discuss the treatment options that are already available for child sexual abusers and rapists, based on the aforementioned treatment frameworks and their effects. I also

provide a brief review of the literature regarding criminogenic needs of these sexual offenders and propose a detailed treatment program for both offender populations, including our first clinical experiences.

Finally, in chapter 6, the general discussion, the results of all studies will be summarized and integrated in the current literature. Furthermore, implications for clinical practice and suggestions for future research will be given for each individual study.

CHAPTER TWO

Aggression and social anxiety are associated with sexual offending against children

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ABSTRACT

The current study examined a number of risk factors that are thought to be related to sexual offending. More specifically, we investigated differences in self-reported aggression, anger, hostility, social anxiety, and social skills between child sexual abusers (n = 28), rapists (n = 36), and non-sexual violent offenders (n = 59) who were detained under hospital order. In addition, differences between inpatient (n = 28) and outpatient child sexual abusers (n = 61) on the pertinent constructs were evaluated. Consistent with our expectations, we found that child sexual abusers reported themselves as lower on the aggression-related measures and higher on social anxiety than non-sexual violent offenders. In contrast with our hypotheses, however, the results also indicated that the inpatient child sexual abusers reported lower levels of aggression, anger, hostility, and social anxiety than the outpatient child sexual abusers. The observed differences between child sexual abusers, rapists and non-sexual violent offenders are generally consistent with theories about the etiology of sexual abuse. The differences between the inpatient and outpatient child sexual abusers were not in the expected direction, but may be due to a number of methodological limitations of this research.

INTRODUCTION

Sexual offending is a widespread international problem. Meta-analyses have indicated that the international prevalence rate of child sexual abuse is approximately 20% (Pereda, Guilera, Forns, & Gómez-Benito, 2009a, 2009b). The prevalence of rape is comparable to that of child sexual abuse, with most studies among American community samples showing prevalence rates of 15% (Kolivas & Gross, 2007). Approximately 2% of the male population will ever be convicted of a sexual crime (Lisak & Miller, 2002; Marshall, 1997), which suggests that a relatively small number of men is responsible for the rather large number of sexual offenses. In the meantime, there are also indications that the actual number of men committing sexual offenses is much higher (Grotpeter & Elliott, 2002; Lisak & Miller, 2002). To understand deviant sexual behavior and to implement the appropriate prevention and treatment programs, identification of sexual offenders' psychological characteristics might be helpful (Hanson & Morton-Bourgon, 2005).

There are several multifactorial models that try to explain the etiology of child sexual abuse (see Ward, Polaschek, & Beech, 2006 for a comprehensive overview). An account that has attracted considerable research attention is the *pathways model* (Ward & Siegert, 2002), which describes four sets of psychological mechanisms (i.e., pathways) that are thought to play a causal role in sexual offending against children: (1) antisocial cognitions; (2) deviant sexual scripts; (3) intimacy and social skill deficits; and (4) emotional dysregulation. According to this model, child sexual abuse can be initiated by all these factors, although the influence of each factor may vary for each individual case. Hudson and Ward (2000) have also hypothesized that deficits in social competency are central to sexual offending. In addition, child sexual abusers have been shown to have specialized atypical sexual interests (e.g., sexual interest in children) compared with other offenders and non-offenders (e.g., Beech et al, 2008; Gray, Brown, MacCulloch, Smith, & Snowden, 2005; Worling, 2006). Various studies have found that child sexual abusers are less (or equally) prone to anger and hostility than other offender samples (e.g., Lee, Pattison, Jackson, & Ward, 2001; Overholser & Beck, 1986; Seidman, Marshall, Hudson, & Robertson, 1994; Yates & Kingston, 2006), with only one investigation showing that child sexual abusers report more (trait) anger than rapists (Kalichman, 1991).

Factors that contribute to the initiation of sexual offending may not be the same as the factors that contribute to the persistence of sexual offending (i.e., recidivism; Hanson, 2000b). Meta-analytic studies have identified deviant sexual interests and antisocial orientation/lifestyle instability as the primary risk factors associated with sexual recidivism (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005). Other empirically supported risk factors are self-regulation problems, poor problem solving skills, offense-supportive cognitions, and negative social influences (Hanson & Harris, 2000, 2001; Mann, Hanson, & Thornton, 2010). Although social incompetence and intimacy deficits are common among child sexual abusers (e.g.,

Geer, Estupinan, & Manguno-Mire, 2000; Overholser & Beck, 1986; Seidman et al., 1994), there is no evidence that social skills deficits predict sexual recidivism. Further, the predictive power of various subcomponents of intimacy deficits remains unclear (Hanson & Morton-Bourgon, 2004), although emotional congruence with children, lack of emotionally intimate relationships with adults, and conflicts in intimate relationships have emerged as empirically well-supported risk factors for sexual recidivism (Mann et al., 2010).

The current study further explored risk factors related to sexual offending against children. For this purpose, we examined differences between child sexual abusers, rapists, and non-sexual violent offenders on various self-report questionnaires measuring aggression, hostility, and anger (Hanson & Morton-Bourgon, 2004, 2009; Ward, Hudson, & Marshall, 1996), interpersonal anxiety, and social skills deficits (Hoyer, Kunst, & Schmidt, 2001; Segal & Marshall, 1985). Previous studies have consistently demonstrated that sexual offending against children is associated with lower levels of aggression (e.g., Yates & Kingston, 2006) and higher levels of social anxiety (e.g., Eher, Neuwirth, Fruehwald, & Frottier, 2003). Therefore, it was hypothesized that child sexual abusers would report less aggression and hostility in comparison with rapists and non-sexual violent offenders, and that child sexual abusers would be characterized by higher levels of self-reported social anxiety. Differences between inpatient and outpatient samples of child sexual abusers could provide an initial test of the plausibility that these factors are associated with an increased risk of reoffending. Therefore, we compared these groups on the same constructs. Since antisocial orientation/lifestyle instabilities are consistently correlated with sexual recidivism (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005), it was hypothesized that the inpatients would report more antisocial behavior, anger, aggression, and hostility than the outpatients.

METHOD

Participants

The study was conducted among 123 male forensic psychiatric inpatients and 61 male outpatients. The inpatients were recruited from the forensic psychiatric hospitals De Kijvelanden, 2Landen, Oldenkotte, and Veldzicht. According to the Dutch Entrustment Act (TBS: Terbeschikkingstelling), offenders who have committed offenses for which a maximum imprisonment of four or more years applies (such as child sexual abuse, rape, manslaughter or murder) can be detained under hospital order. Another prerequisite for a TBS-sentence is that the offender cannot be held (fully) responsible for his actions. This diminished accountability is defined as a causal relation between a diagnosis of mental illness and/or personality disorder and the offense committed (e.g., Van Marle, 2000, 2002). To determine such relationship (and the risk of recidivism), suspects are extensively examined by a multidisciplinary team consisting of psychiatrists, psychologists, and nurses on the ward in a specialized assessment center of the Dutch Ministry of Justice. Forensic psychiatric inpatients are considered to present such high risk of sexual and violent recidivism that without treatment they would pose a danger to others and/or to the general safety of persons and property. The average length of stay in a forensic hospital is approximately 9 years (Van Gemmert & Van Schijndel, 2014). Of the 123 inpatients in the present sample, 28 were convicted child sexual abusers (mean age: 45.25 years, *SD* = 10.25, range: 26-64 years), 36 were rapists (mean age: 39.83 years, *SD* = 9.60, range: 22-59 years), and 59 were non-sexual violent offenders (mean age: 35.44 years, *SD* = 7.73, range: 24-56 years). Offenders in both the child sexual abuser and rapist sample had no history of prior sexual offenses against victims of varying ages.

The 61 outpatients in this study were all child sexual abusers recruited from the forensic psychiatric outpatient and day treatment center Het Dok. In the Netherlands, offenders can be required to undergo outpatient treatment for a variety of reasons such as (a) an added condition for offenses to which maximum imprisonment for 3 years or less applies, (b) an alternative to prison for offenses to which

maximum imprisonment for 6 months or less applies, (c) a condition of suspension of detention while awaiting trial, (d) part of a Penal Program, or (e) a supervision element for a protection agency. Although we were unable to determine the precise convictions (see procedure), most outpatients were first-time offenders convicted for intrafamilial child molestation. The average duration of outpatient treatment is approximately 2 years. The mean age of the outpatients in this study was 40.28 years (*SD* = 15.61, range: 13-76 years).

Measures

The *Sexual Violence Risk-20* (SVR-20; Boer, Hart, Kropp, & Webster, 1997; Dutch version: Hildebrand, De Ruiter, & Van Beek, 2001) is a structured professional rating instrument that assesses the risk of sexual violence in sexual offenders (Hanson & Morton-Bourgon, 2009). The SVR-20 comprises 20 items that have to be scored on a three-point scale (0 = *does not apply*, 1 = *probably or partially applies*, and 2 = *applies*). De Vogel, De Ruiter, Van Beek, and Mead (2004) found that the Dutch version of the SVR-20 displayed good inter-rater reliability and predictive validity, both for the total score and the three subscale scores (i.e., psychosocial adjustment, history of sexual offenses, and future plans). Cronbach's α in the current study was .44.

The *Psychopathy Checklist-Revised* (PCL-R; Hare, 1991, 2003; Dutch version: Vertommen, Verheul, De Ruiter, & Hildebrand, 2002) is a 20-item inventory to assess psychopathy. The items are scored on a three-point scale (0 = *does not apply*, 1 = *applies to some extent*, and 2 = *applies*). The psychometric qualities of the Dutch version of the PCL-R are comparable to those of its original English counterpart (Hildebrand, De Ruiter, De Vogel, & Van der Wolf, 2002). That is, the internal consistency is found to be high and the inter-rater reliability of individual items and the total score varies from good to excellent. Cronbach's α in the current study was .83.

The *Spielberger Trait Anger Scale* (STAS, Spielberger, 1980; Dutch version: Van der Ploeg, Defares, & Spielberger, 1982) is a 10-item questionnaire for assessing dispositional anger. Respondents have to indicate the frequency for items, such as "I easily lose my temper", using a four-point Likert scale ranging from 1 = *almost never* to 4 = *almost always*. Van der Ploeg et al. (1982) demonstrated good internal consistency (Cronbach's α = .86) and test-retest reliability (r = .78) for the STAS in a non-clinical sample, while Zwets et al. (2014) found a Cronbach's α of .96 in a forensic psychiatric offender sample. Cronbach's α in the current study was .94.

The *Adapted Version* of Rosenzweig's (1978) *Picture-Frustration Study* (PFS-AV; Hornsveld, Nijman, Hollin, & Kraaimaat, 2007) was employed for measuring hostility. Respondents were instructed to write down their initial reactions to 12 cartoon-like pictures in the blank text box (e.g., a shopkeeper in conversation with a customer saying, "This is the third time that this watch has stopped working"). Responses were scored by an experienced and independent research assistant on a seven-point Likert-scale, ranging from 1 (*not hostile at all*) to 7 (*extremely hostile*). Hornsveld et al. (2007) demonstrated moderate to good internal consistency (Cronbach's α = .76), test-retest reliability (r = .67), and inter-rater reliability (r = .77) in a similar forensic psychiatric inpatient sample. In the current study, Cronbach's α was .63 and the inter-rater reliability was .82.

The *Aggression Questionnaire-Short Form* (AQ-SF; Bryant & Smith, 2001; Dutch version: Hornsveld, Muris, Kraaimaat, & Meesters, 2009) is a shortened version of Buss and Perry's (1992) Aggression Questionnaire and contains 12 items that can be allocated to four subscales: Physical Aggression (e.g., "Once in a while I can't control the urge to strike another person"), Verbal Aggression (e.g., "My friends say that I'm somewhat argumentative"), Anger (e.g., "I have trouble controlling my temper"), and Hostility (e.g., "Other people always seem to get the breaks"). Respondents have to rate each item using a five-point Likert-scale ranging from 1 (*entirely disagree*) to 5 (*entirely agree*). Hornsveld et al. (2009) demonstrated good internal consistency (Cronbach's α = .88) and modest test-retest reliability (r = .38) in a violent forensic psychiatric outpatient sample. Cronbach's α in the current study was .85.

The *Inventory of Interpersonal Situations* (IIS; Van Dam-Baggen & Kraaimaat, 2000) assesses the level of discomfort respondents experience in response to 35 hypothetical social interactions (social anxiety) and the frequency of various

social behaviors that would be performed in the given situations (social skills). The IIS assesses social anxiety and social skills in five domains: Giving criticism, Expressing one's own opinion, Initiating contact, Giving compliments, and Positive self-statements. Items are scored on a five-point Likert-scale. For social anxiety (discomfort) scores range from 1 (*no tension at all*) to 5 (*very tense*), whereas social skills (frequency) scores range from 1 (*never*) to 5 (*always*). Van Dam-Baggen and Kraaimaat (2000) demonstrated good internal consistency for both the Discomfort Scale (Cronbach's α = .93) and the Frequency Scale (Cronbach's α = .91) and good test-retest reliability (r = .84) in a non-clinical sample. Zwets et al. (2014) found a Cronbach's α of .95 for the Discomfort Scale in a forensic psychiatric offender sample. Cronbach's α in the current study was .95 for the Discomfort Scale and also .95 for the Frequency Scale.

Procedure

All patients received an information letter in which the purpose and content of the study was described. This letter clearly stated that participation was on a voluntary basis, data would be processed anonymously, patients would receive 10 Euros for their participation, and that refusing to participate would not influence the patient's treatment in any way. Patients had approximately 1 week to consider their potential participation, after which they signed an informed consent form. The SVR-20 and PCL-R were scored by certified examiners and obtained as part of the standard screening protocol of the forensic psychiatric institutions (thus not the risk assessment of the specialized assessment center that advised the court on inpatient or outpatient treatment). For respectively 2 and 10 inpatients, SVR-20 (one child abuser and one rapist) and PCL-R (four child abusers, four rapists, and two non-sexual violent offenders) scores could not be obtained. SVR-20 data of only 10 outpatients were available. For the inpatients, the questionnaires were completed individually in a separate testing room at the forensic hospitals. The outpatients completed the questionnaires at home. As several patients failed to complete all questionnaires according to the instructions, the number of patients involved in the data analyses varied per questionnaire.

RESULTS

Inpatient child sexual abusers versus inpatient rapists versus inpatient non-sexual violent offenders

The differences between the inpatient child sexual abusers (n = 28), rapists (n = 36) and non-sexual violent offenders (n = 59) were examined. As a first step, a one-way analysis of variance (ANOVA) was conducted to test whether these inpatient groups differed in terms of age. Age indeed differed significantly across offender types, $F(2, 120) = 11.75$, $p < .001$, with post-hoc comparisons indicating that the child sexual abusers were significantly older than both the non-sexual violent offenders ($p < .001$) and rapists ($p = .045$). Therefore, we decided to include age as a covariate in all further between-group analyses.

Next, we compared whether the child sexual abusers differed from the rapists in terms of risk of sexual recidivism, as measured by the SVR-20. An analysis of covariance (ANCOVA) with age as the covariate indicated that the child sexual abusers' risk of sexual recidivism (mean: 21.53, SD = 4.95, range: 11-32) was significantly lower than that of the rapists (mean: 22.90, SD = 5.76, range: 8-32), $F(1, 59) = 4.32$, $p = .042$, $d = 0.25$, 95% CI = [-0.25, 0.76]. Hereafter, the three groups were compared with regard to their psychopathy scores as measured by the PCL-R. The child sexual abusers had a mean psychopathy score of 19.20 (SD = 6.61, range: 9-29), the rapists scored 24.15 (SD = 6.83, range: 12-37), and the non-sexual violent offenders' mean score was 21.64 (SD = 7.92, range: 4-34). The ANCOVA with age as a covariate revealed that there was a significant main effect of offender group, $F(2, 109) = 4.10$, $p = .019$, with post-hoc tests showing that the psychopathy score of the child sexual abusers was significantly lower than that of the rapists ($p = .005$), $d = 0.73$, 95% CI = [0.19, 1.28].

Finally, a multivariate ANCOVA indicated that the three inpatient groups differed in terms of their scores on the self-report questionnaires, $F(16, 180) = 1.91$, $p = .022$. The univariate tests revealed that the child sexual abusers reported significantly lower levels of aggression as measured by the AQ-SF as compared to the non-sexual violent offenders (Table 1), and this appeared true for total aggression,

TABLE 1

Differences in self-reported levels of aggression, social anxiety, and social skills between child sexual abusers, rapists and non-sexual violent offenders (all inpatients), corrected for age differences.

Questionnaire	Subscale	Child sexual abusers		Rapists		Violent offenders			Child sexual abusers vs Rapists	Child sexual abusers vs Violent offenders
		n	*M (SD)*	*n*	*M (SD)*	*n*	*M (SD)*	*F*-value	Cohen's *d* [95% CI]	Cohen's *d* [95% CI]
STAS	Anger (trait)	27	15.11 (5.05)	32	17.19 (4.25)	55	18.78 (7.50)	1.86, p = .16	-0.45 [-0.97, 0.07]	-0.54 [-1.01, -0.07]*
PFS-AV	Hostility	24	28.79 (4.15)	28	29.11 (6.67)	51	30.35 (4.60)	0.35, p = .71	-0.06 [-0.60, 0.49]	-0.35 [-0.84, 0.14]
AQ-SF	Aggression	27	22.93 (7.04)	33	26.97 (8.02)	57	30.05 (10.14)	5.49, p = .01**	-0.53 [-1.05, -0.01]	-0.77 [-1.24, -0.30]**
	Physical aggr.	27	5.85 (2.98)	33	7.73 (3.28)	57	9.00 (2.99)	9.20, p < .01***	-0.60 [-1.12, -0.08]*	-1.05 [-1.54, -0.57]***
	Verbal aggr.	27	5.44 (1.95)	33	5.85 (2.17)	57	6.79 (2.57)	3.15, p = .05*	-0.20 [-0.71, 0.31]	-0.56 [-1.03, -0.10]*
	Anger	27	5.56 (2.38)	33	6.18 (2.62)	57	7.23 (3.26)	3.84, p = .02*	-0.25 [-0.76, 0.26]	-0.56 [-1.02, -0.09]*
	Hostility	27	6.07 (2.32)	33	7.21 (2.95)	57	7.04 (3.28)	0.98, p = .38	-0.42 [-0.94, 0.09]	-0.32 [-0.78, 0.14]
IIS	Social anxiety	28	67.46 (21.75)	34	66.97 (18.89)	58	61.78 (19.34)	1.29, p = .28	0.02 [-0.48, 0.52]	0.28 [-0.17, 0.73]
	Social skills	28	114.46 (21.15)	34	118.21 (16.74)	58	108.33 (26.86)	1.36, p = .26	-0.20 [-0.70, 0.30]	0.24 [-0.21, 0.70]

Note. STAS = Spielberger Trait Anger Scale, PFS-AV = Picture-Frustration Study - Adapted Version, AQ-SF = Aggression Questionnaire - Short Form, IIS = Inventory of Interpersonal Situations.
* p < .05. ** p < .01. *** p < .001.

d = 0.77, 95% CI = [0.30, 1.24], physical aggression, d = 1.05, 95% CI = [0.57, 1.54], verbal aggression, d = 0.56, 95% CI = [0.10, 1.03], and anger, d = 0.56, 95% CI = [0.09, 1.02]. Effect sizes obtained for these differences ranged from moderate to large. Child sexual abusers were also found to report significantly lower levels of physical aggression than rapists, d = 0.60, 95% CI = [0.08, 1.12]. The effect size for this difference was moderate. In addition, some evidence was found for elevated social anxiety in the sex offender samples. That is, both child sexual abusers and rapists reported more social anxiety than non-sexual violent offenders when giving criticism, with effect sizes of d = 0.61, 95% CI = [0.15, 1.08] and d = 0.62, 95% CI = [0.18, 1.05], respectively. Child sexual abusers also reported more social anxiety than non-sexual violent offenders when expressing their opinion, d = 0.55, 95% CI = [0.09, 1.01]. No between-group differences were found in self-reported social skills and hostility.

Inpatient child sexual abusers versus outpatient child sexual abusers

First, we examined whether the outpatient child sexual abusers differed from the inpatient child sexual abusers in terms of age. An independent-samples t-test indicated that age was comparable between both samples, $t(87) = 1.54$, $p = .128$. Next, we compared whether the outpatients differed from the inpatients in terms of risk of sexual recidivism, as measured by the SVR-20. An independent-samples t-test indicated that the outpatients' risk of sexual recidivism (mean: 9.10, SD = 6.03, range: 3-19) was significantly lower than that of the inpatients (mean: 21.53, SD = 4.95, range: 11-32), $t(35) = 6.50$, $p < .001$, d = 2.41, 95% CI = [1.50, 3.31].

Differences in the mean scores on the self-report questionnaires were evaluated and effect sizes (Cohen's d) and 95% confidence intervals (CIs) were computed. A multivariate ANOVA indicated there was no significant main effect of offender group on the self-report questionnaires, $F(8, 63) = 1.31$, $p = .127$. The univariate tests revealed several significant differences between the inpatient and outpatient child sexual abusers on the aggression-related variables, but as can be seen in Table 2, these differences were not in the expected direction. That is, inpatient child sexual abusers reported significantly lower levels of total aggression, d = 0.61, 95%

TABLE 2

Differences in self-reported levels of aggression, social anxiety, and social skills between inpatient child sexual abusers and outpatient child sexual abusers.

Questionnaire	Subscale	Inpatient Child sexual abusers		Outpatient Child sexual abusers		*F*-value	Inpatients vs Outpatients
		n	*M (SD)*	*n*	*M (SD)*		Cohen's *d* [95% CI]
STAS	Anger (trait)	27	15.11 (5.05)	59	17.15 (5.64)	2.58, p = .11	-0.37 [-0.83, 0.09]
PFS-AV	Hostility	24	28.79 (4.15)	57	30.32 (5.58)	1.45, p = .23	-0.29 [-0.77, 0.19]
AQ-SF	Aggression (total)	27	22.93 (7.04)	58	28.45 (9.89)	6.79, p = .01*	-0.61 [-1.07, -0.14]
	Physical aggression	27	5.85 (2.98)	58	6.33 (3.19)	0.43, p = .52	-0.15 [-0.61, 0.30]
	Verbal aggression	27	5.44 (1.95)	58	6.22 (2.58)	1.95, p = .17	-0.32 [-0.78, 0.13]
	Anger	27	5.56 (2.38)	58	7.03 (3.16)	4.68, p = .03*	-0.50 [-0.96, -0.04]
	Hostility	27	6.07 (2.32)	58	8.86 (3.72)	12.77, p < .01***	-0.83 [-1.31, -0.36]
IIS	Social anxiety	28	67.46 (21.75)	57	76.84 (24.85)	2.89, p = .09	-0.39 [-0.85, 0.06]
	Social skills	28	114.46 (21.15)	52	110.73 (17.69)	0.71, p = .40	0.20 [-0.26, 0.66]

Note. STAS = Spielberger Trait Anger Scale, PFS-AV = Picture-Frustration Study - Adapted Version, AQ-SF = Aggression Questionnaire - Short Form, IIS = Inventory of Interpersonal Situations.
* p < .05. *** p < .001.

CI = [0.14, 1.07], anger, d = 0.50, 95% CI = [0.04, 0.96], and hostility, d = 0.83, 95% CI = [0.36, 1.31]. Results regarding social anxiety and social skills were, again, counterintuitive: the inpatient child sexual abusers reported significantly lower levels of social anxiety in comparison with the outpatients while complimenting others, d = 1.55, 95% CI = [1.04, 2.05], and during positive self-statements, d = 0.67, 95% CI = [0.21, 1.14]. Note also that the inpatients reported a higher frequency of positive self-statements in comparison with the outpatients, d = 0.50, 95% CI = [0.03, 0.96]. All effect sizes for these significant differences were in the moderate to large range.

DISCUSSION

The primary goal of the current study was to examine psychological risk factors related to sexual offending. For that purpose, inpatient child sexual abusers, rapists, and non-sexual violent offenders were compared with respect to self-reported levels of aggression, anger, hostility, social anxiety, and social skills. In addition, we analyzed differences on these variables between samples of inpatient and outpatient child sexual abusers to provide an initial test of the plausibility that these factors are associated with an increased risk of reoffending.

Regarding the differences between the child sexual abusers, rapists and non-sexual violent offenders, results were consistent with previous research. Child sexual abusers reported lower levels of aggression than non-sexual violent offenders and, although to a lesser extent, rapists. This was particularly evident for physical aggression and to a lesser extent for verbal aggression and anger. However, it should be noted that the self-reported AQ-SF scores of the inpatients were comparable to normative scores as reported by Hornsveld et al. (2009), implying that the inpatients in this study were equally aggressive as secondary vocational students. In addition, it was found that child sexual abusers reported significantly higher levels of social anxiety than non-sexual violent offenders. This finding is in line with earlier studies indicating that social anxiety is associated with sexual of-

fending against children (Nunes, McPhail, & Babchishin, 2012). The child sexual abusers, however, reported less social anxiety than the norm group of the original IIS-study (Van Dam-Baggen & Kraaimaat, 2000), suggesting that these child sexual abusers were not more anxious in social situations than the general population. An additional comparison of child sexual abusers (both inpatient and outpatient) to the inpatient rapists and non-sexual violent offenders yielded similar results: the child sexual abusers reported significantly less physical aggression and significantly more social anxiety than both the rapists and non-sexual violent offenders, indicating that lower levels of (self-reported) physical aggression and higher levels of social anxiety are consistently associated with sexual offending against children. Despite the increased risk of Type I errors when making large numbers of comparisons, no corrections were made for the number of calculated differences. Note that if such a correction had been applied, only the difference regarding physical aggression would have reached statistical significance.

With respect to the differences between the inpatient and outpatient child sexual abusers, it is notable that all significant effects were in contrast with our expectations. We hypothesized that the inpatients would report more aggression and social anxiety than the outpatient child sexual abusers. However, the inpatients generally reported lower levels of aggression than the outpatients. Moreover, the inpatients considered themselves as more socially skilled and less socially anxious than the outpatients. This latter finding could be explained by the possibility that being a sex offender in the community causes more stress and anxiety which are not experienced by the sex offenders in an inpatient facility, although it should be immediately noted that other interpretations cannot be ruled out due to the cross-sectional design of the study. Again, no corrections were made for the number of calculated differences; otherwise only the difference on hostility would have attained statistical significance.

Our findings regarding the contrasts between inpatient and outpatient sexual offenders against children seem inconsistent. We were unable to determine the precise convictions of the outpatients who participated in this study. However, based on the larger sample of child sexual abusers who were treated in the outpatient facility, we were able to make a rough estimation of these convictions. The majority of the outpatients were convicted for intrafamilial child molestation and nearly all were first-time offenders. The inpatients, however, had an extensive history of sexual and/or non-sexually violent offenses with mostly extrafamilial victims. This suggests higher levels of pedophilia and aggression among the inpatient than the outpatient sexual offenders against children. Given that pedophilia has been found to be associated with greater social anxiety (Eher et al., 2003) and that our inpatient sexual offenders against children had more pedophilic and aggressive criminal histories than did the outpatients, it is difficult to account for our finding that the inpatient group had *less* socially anxious and *more* aggressive scores on the self-report measures than did the outpatient group.

However, the results may have been influenced by confounding factors, such as social desirability, treatment effects, or contextual differences. As to social desirability, detention under hospital order is (re-)evaluated annually by the court and without treatment progress this sentence can be renewed an unlimited number of times. Although all patients were informed that the data collected during this study would be processed anonymously, the inpatients may nevertheless have been under the assumption that their responses could have legal implications. The self-report measures used in this study had no validity scales for defensive response styles, but our findings that child sexual abusers report more social anxiety and that aggression and anger are more characteristic for rapists and non-sexual violent offenders are in line with previous research, thereby implying that social desirability had a minimal impact on the results within the inpatients sample. Another confounding factor could be the effects of treatment. It seems plausible to assume that patients are more likely to display problem behavior at the beginning of their treatment than at the end of treatment. We could not determine the length of outpatient treatment at the time this study was conducted, but note that the average duration of outpatient treatment is approximately 2 years. The average length of admission for the inpatients was 34 months. Therefore, the differences found between the inpatients and the outpatients could have been influenced by the period that these patients were under treatment. In addition, treatment intensity differs

substantially from inpatient to outpatient settings. Inpatient treatment comprises various forms of therapy and 24-hour supervision, whereas the outpatients generally receive one (group) session of therapy per week. Our results may also be influenced by medication differences. Pharmacological interventions are commonly applied in (hypersexual) sex offenders to reduce their risk of reoffending (Briken, Hill, & Berner, 2014). For sexual offenders in clinical settings, pharmacotherapy (including medication compliance) is generally a necessary condition in order to qualify for leave, whereas outpatient sex offenders only receive pharmacotherapy upon request or when indicated. Policy differences regarding psychotropic medication could provide us with an alternative explanation for the differences found in aggression, anger, hostility, and anxiety between the inpatient and outpatient child sexual abusers. There are also some clear indications that the lack of clinical elevation in the self-report measures could be attributed to contextual differences (also see Olver, Kingston, Nicholaichuk, & Wong, 2014). Research by Hornsveld, Kraaimaat, Bouwmeester, Polak, and Zwets (2014) demonstrated, within a similar inpatient sample, that these inpatients barely show any aggressive behavior after admission and that this effect remained stable over a follow-up period of three years. These authors attributed the absence of aggressive behavior to the maximum-security environment with a high staff-patient ratio, allowing staff members to settle potential high-risk situations at an early stage. Because the outpatients in this study did not receive such intensive staff supervision, they could be more likely to relapse to problem behavior, which could result in higher levels of self-reported aggressive behavior. Another context-related explanation is that the inpatients' responses may reflect, at least to some degree, a social comparison against their fellow inpatients (e.g., "I am not as aggressive as patient x"), whereas the outpatients' responses may reflect a social comparison against mostly non-offenders in the community. If this is the case, maybe these different comparisons change the inpatients' self-appraisal such that they view themselves as less aggressive and more socially competent than they would have when residing in the community. Finally, we emphasize some limitations regarding the operationalization of the samples used in this study. Because file data were used to group the samples, it must be recognized that some offenders may have been misclassified. As noted earlier, we were unable to determine the precise convictions of the outpatients, and this may have resulted in a disproportionately greater number of intrafamilial child sexual abusers in the outpatient group in comparison with the inpatients.

The results of our study are generally in line with the etiological theories of sexual offending, but given the cross-sectional nature of this study, we cannot conclude that there is a causal relationship between these risk factors and sexual offenses. Identifying differences between child sexual abusers, rapists and non-sexual violent offenders may contribute to more differentiation in treatment for these subgroups. Although limited skills with respect to intimate relationships are central to sexual offending (Hudson & Ward, 2000), social skills deficits are, however, unrelated to both sexual and violent recidivism (Mann et al., 2010), indicating that these risk factors might not be worth targeting in sex offender treatment. The elevated levels of psychopathy and aggression in the rapists (and non-sexual violent offenders) suggests that antisocial traits and attitudes are a specific treatment target for these subgroups. The differences between the inpatient and outpatient child sexual abusers were not in the expected direction, but methodological limitations make it difficult to draw conclusions from these findings. It is most likely that our results were influenced by contextual differences and therefore we advise caution when using self-report measures across different settings. Furthermore, other methods of measurement, such as clinical observations or structured interviews, could have been more effective in identifying group differences. More research into the risk factors involved with sexual offending is required for a better understanding of this phenomenon and will result in the improvement of risk assessment, treatment, and supervision of forensic psychiatric child sexual abusers and sex offenders in general.

CHAPTER THREE

The Sexual Violence Risk-20: Factor structure and psychometric properties

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ABSTRACT

Although the Sexual Violence Risk-20 (SVR-20) is widely used, its psychometric properties have only been investigated in a limited number of studies. This study explored the factor structure of the SVR-20 and examined its psychometric properties. Confirmatory factor analysis (CFA) was used to examine the fit of the original three-domain model of the SVR-20. The CFA showed that the original structure was not satisfactory. Exploratory principal components analysis (PCA) was conducted in search of a more optimal factor structure. Psychometric properties (i.e., internal consistency, predictive value, and convergent validity) of both the original domains and alternative factors were investigated. The PCA and subsequent CFAs pointed in the direction of an alternative, more optimal three-factor solution. The three alternative factors were labeled as Antisociality, Sexual deviance, and Problematic thinking and produced better internal consistency coefficients than the original domains. However, the validity of the SVR-20 was modest and no evidence was found indicating that the alternative factors were better in this regard as compared to the original domains. Despite the overall superiority of actuarial measures in predicting recidivism, the structured professional judgment of the SVR-20 proved to be more predictive of sexual, violent, and general recidivism than its actuarial scoring method.

INTRODUCTION

Risk assessment is paramount in forensic psychiatry. One of its primary goals is to predict the likelihood of recommitting new offenses after discharge. In addition, risk assessment also provides a guideline for the intensity of treatment services since offenders with a high risk of recidivism should receive more intensive treatment than offenders with a low risk of recidivism (Bonta & Andrews, 2007). There are three major approaches in performing risk assessment: unstructured clinical judgment (UCJ), actuarial risk assessment instruments (ARAI), and structured professional judgment (SPJ) (e.g., Boer & Hart, 2009; Craig, Browne, & Beech, 2008; Hanson, 2009; Hart & Boer, 2009). UCJ-based decisions are solely guided by the knowledge and experience of the evaluator, whereas ARAIs are highly standardized checklists using only empirically based risk factors. With the SPJ-approach, empirically tested risk factors are combined with case-specific risk factors, circumstances, and clinical observations and integrated into risk levels using the knowledge and experience of the evaluator. The value of UCJ is seriously questioned, but there is sufficient evidence that ARAIs and SPJ can meaningfully estimate risk of sexual recidivism (Hanson & Morton-Bourgon, 2009; Hanson & Thornton, 2000).

The Sexual Violence Risk-20 (SVR-20; Boer, Hart, Kropp, & Webster, 1997) is a widely-used checklist for assessing the risk of sexual recidivism (Rettenberger, Boer, & Eher, 2011). The SVR-20 is based on the literature surrounding the characteristics of sexual offenders who recommitted a sexual crime after being previously convicted, although some empirically supported risk factors for sexual recidivism, such as social isolation and lack of social and emotional support, are not included (De Vogel, De Ruiter, Van Beek, & Mead, 2004; Mann, Hanson, & Thornton, 2010). Most SVR-20 items mainly measure static/stable risk factors (e.g., victim of child abuse) with only four items relating to potentially dynamic risk factors (e.g., attitudes that support offenses). According to the developers of the SVR-20, its items can be grouped into three domains: Psychosocial adjustment, Sexual offending, and Future plans (see Appendix A). Although no explicit procedure is provided for determining the risk level of individuals on the basis of their SVR-20 scores, the authors instruct evaluators to use their professional judgment to assigning offenders to the categories of low, moderate, or high risk, which also corresponds to the required level of treatment intensity for that individual. Its SPJ scoring method allows consideration of rare but potentially relevant case-specific risk factors. For research purposes, scores on all 20 items can also be summed to yield a total score that reflects the mechanical scoring approach (Hanson & Morton-Bourgon, 2009).

Although the SVR-20 is widely used in countries all over the world, its validity has only been investigated in a limited number of studies (De Vogel et al., 2004). Meta-analytic research has indicated that the structured professional judgment

scoring method of the SVR-20 was more accurate at predicting sexual recidivism (average d = 1.11, k = 3) than the mechanical scoring approach (average d = 0.68, k = 10; Hanson & Morton-Bourgon, 2009). Furthermore, tentative evidence suggests that the three domains of this instrument have differential predictive power for future sexual and non-sexual violence (Rettenberger et al., 2011). More precisely, general criminal/violent recidivism would be best predicted by the domain Psychosocial adjustment, whereas the domains Sexual offending and Future plans would mainly predict sexual recidivism. According to Sjöstedt and Långström (2002), the variation found in the predictive accuracy of the SVR-20 is mainly caused by the inclusion of risk items related to various types of recidivism (i.e., sexual, violent, and general recidivism). These authors even stated that the current SVR-20 is too heterogeneous to be used routinely in the risk assessment of sexual offenders. Modification of the SVR-20 domains into more homogeneous factors, however, may lead to a better clinical use of this instrument and could facilitate future tests of its construct validity.

Although the SVR-20 was never intended to measure three homogeneous domains in a traditional measurement sense, there is some evidence to suggest that the proposed three-domain structure of the SVR-20 may indeed not be optimal. The internal consistency (Cronbach's α) of the SVR20- total score seems to be acceptable, but there are indications that the domains Psychosocial adjustment and Sexual offending demonstrate poor internal consistency (e.g., Koster, Van Lankveld, & Spreen, 2006). In what seems to be the only published study on the factor structure of the SVR-20, Hornsveld, Kanters, Zwets, Kraaimaat, and Van Veen (2014) found by means of an exploratory factor analysis that the items of the SVR-20 can be grouped into five new factors: Non-sexual history, Limited compliance, Sexual offenses, Use of violence, and Psychopathology. Although this new factor structure was derived from the data of only 100 forensic psychiatric sexual offenders, which is the bare minimum for this type of analysis (e.g., Gorsuch, 1983, see also statistical analyses), it provided a much clearer overview of sexual offenders' risk factors than the original SVR-20 domains. The internal consistency coefficients of these new factors were slightly better than those of the original three domains.

The current study explored an optimal factor structure for the SVR-20 in a sample of 639 sexual offenders detained by hospital order. In addition, we explored the internal consistency of the total scale as well as its domains and the accuracy of both the SPJ and mechanical scoring method in predicting sexual, violent, and general recidivism. Finally, SVR-20 domains were validated by computing correlations with the Psychopathy Checklist-Revised (PCL-R; Hare, 1991, 2003) and various questionnaires measuring relevant factors related to sexual offending such as aggression, anger, and hostility (Hanson & Morton-Bourgon, 2004, 2009; Ward, Hudson, & Marshall, 1996), as well as interpersonal anxiety and social skills deficits (Hoyer, Kunst, & Schmidt, 2001; Segal & Marshall, 1985). It was hypothesized that the alternative factors would be more homogeneous than the original SVR-20 domains, resulting in improved psychometric properties (i.e., internal consistency, predictive validity, and convergent validity).

METHOD

Participants

The study was conducted on 639 male sexual offenders detained under hospital order at various forensic psychiatric centers in the Netherlands. These offenders committed sexual offenses for which a maximum imprisonment of four or more years applies, but at the same time they cannot be considered fully responsible for their actions. According to the Dutch Entrustment Act, this diminished accountability is defined as a causal relation between a diagnosis of mental illness and/or personality disorder and the offense committed (e.g., Van Marle, 2000, 2002). To determine such a relationship, suspects are extensively examined in a specialized assessment center of the Dutch Ministry of Security and Justice. Forensic psychiatric inpatients are considered to present such high risk that without treatment recidivism is deemed very likely. The mean age of the sexual offenders in this study was 48.84 years (SD = 10.69, range = 26-88 years).

Measures

As noted in the introduction, the SVR-20 (Boer et al., 1997; Dutch version: Hildebrand, De Ruiter, & Van Beek, 2001) assesses the risk of recommitting sexual violence in sexual offenders. The scale comprises 20 items that have to be rated by certified examiners on a three-point scale (0 = *does not apply*, 1 = *probably or partially applies*, and 2 = *applies*). The offenders' risk of recidivism is determined by SPJ.

The *Psychopathy Checklist-Revised* (PCL-R; Hare, 1991, 2003; Dutch version: Vertommen, Verheul, De Ruiter, & Hildebrand, 2002) is a checklist consisting of 20 items, which are scored by certified examiners on a three-point scale (0 = *does not apply*, 1 = *applies to some extent*, and 2 = *applies*). Previous research has consistently demonstrated that the combination of psychopathy and sexual deviance results in substantially higher risk of recommitting sexual offenses than either one alone (e.g., Hildebrand, De Ruiter, & De Vogel, 2004; Olver & Wong, 2006; Serin, Mailloux, & Malcolm, 2001). In the present study, we used the four-facet structure as proposed by Hare (2003), which was recently validated for Dutch offenders by Zwets, Hornsveld, Neumann, Muris, and Van Marle (2015). The four-facet model incorporates the following dimensions: Interpersonal (e.g., grandiose self-worth), Affective (e.g., callous and lack of empathy), Lifestyle (e.g., impulsivity), and Antisocial (e.g., juvenile delinquency). The psychometric qualities of the Dutch version of the PCL-R are comparable to those of its original English counterpart (Hildebrand, De Ruiter, De Vogel, & Van der Wolf, 2002). That is, the internal consistency is found to be high and the inter-rater reliability of individual items and the total score vary from good to excellent.

In addition to the SVR-20 and the PCL-R, participants completed a standard set of psychometrically sound questionnaires for measuring trait anger (State–Trait Anger Scale [STAS]; Spielberger, 1980; Dutch version: Van der Ploeg, Defares, & Spielberger, 1982), aggression (Aggression Questionnaire–Short Form [AQ-SF]; Bryant & Smith, 2001; Dutch version: Hornsveld, Muris, Kraaimaat, & Meesters, 2009), hostility (Picture-Frustration Study [PFS]; Rosenzweig, 1978; Dutch version: PFS-AV; Hornsveld, Nijman, Hollin, & Kraaimaat, 2007), personality traits (NEO Five-Factor Inventory [NEO-FFI]; Costa & McCrae, 1992; Dutch version: Hoekstra, Ormel, & De Fruyt, 1996), and interpersonal anxiety/social skills (Inventory of Interpersonal Situations [IIS]; Van Dam-Baggen & Kraaimaat, 2000).

Procedure

SVR-20 data from 639 sexual offenders were retrieved from the LDR-tbs (Landelijke Databank Risicotaxatie tbs [National Database Risk Assessment]; Van Binsbergen, De Spa, Verwaaijen, Embley, & Van Rooy, 2012) of the EFP (center of Expertise for Forensic Psychiatry). The SVR-20 was administered as part of the standard risk assessment protocol of the forensic institutions. SPJ risk categories of the SVR-20 were rated on a five-point scale (1 = *low risk*, 2 = *between low and medium risk*, 3 = *medium risk*, 4 = *between medium and high risk*, and 5 = *high risk*). To investigate the factor structure of this instrument, the first administration of SVR-20 after admission was used. Recidivism data were retrieved from the WODC (Wetenschappelijk Onderzoek- en Documentatiecentrum [Scientific Research and Documentation Center], December 22, 2015), and were available for 70 former forensic psychiatric inpatients who had been discharged for at least two years. Recidivism was defined as conviction(s) for sexual, violent, and any re-offense, with 0 = *absent* and 1 = *present*.

For the correlations between the SVR-20, PCL-R, and self-report measures, a subsample of sexual offenders who resided in FPC (Forensic Psychiatric Center) De Kijvelanden at the time of this study were approached to participate. All potential participants received an information letter describing the study. This letter clearly stated that participation was on a voluntary basis, that data would be processed anonymously, refusal to participate would not influence the participant's treatment in any way, and that participation would be rewarded with a monetary compensation of 10 Euros. Patients had approximately 1 week to consider participation, after which they signed an informed consent form. Sixty-two sexual offenders completed the package of self-reports: 27 were child sexual abusers and 35 were rapists. All questionnaires were completed individually in a separate testing room. As several inpatients failed to complete all questionnaires according to the instructions, the number of participants involved in the data analyses varied per questionnaire.

Statistical analyses

The fit of the original three-domain model of the SVR-20 was examined by means of confirmatory factor analysis (CFA) using the Mplus software, version 6 (Muthén & Muthén, 1998-2010) on the SVR-20 consensus data obtained at admission. Rough guidelines for estimating an adequate sample size for factor analysis are based on the number of variables included in the analysis. Proposed ratios range from five participants per variable with a minimal sample size of 100 (e.g., Gorsuch, 1983) to ratios of 10:1 (e.g., Everitt, 1975; Nunnally, 1978). Given the ordinal data of the SVR-20 items, the robust weighted least squares estimation procedure was applied (Brown, 2006). As recommended by Hu and Bentler (1999), a relative index and an absolute index were used to test model adequacy. The χ^2 goodness of fit index and the root mean square error of approximation (RMSEA; Browne & Cudeck, 1993) were used as an absolute index. Significant χ^2 values indicate there is a statistically meaningful difference between the hypothesized model and the structure of the sample data, but it should be noted that the χ^2 index is relatively sensitive to model misspecification (Browne & Cudeck, 1993; Kline, 2011; Sun, 2005), certainly when the sample size is quite large. According to Hoyle (1995), RMSEA values equal to or less than .08 can be considered to represent a reasonable model fit. As a relative index, we used the comparative fit index (CFI; Bentler, 1990) and the Tucker-Lewis index (TLI; Tucker & Lewis, 1973). For the CFI and TLI fit indices, cut-off values equal to or greater than .90 indicate reasonable fit (Bentler, 1990; Hu & Bentler, 1999) but values above .95 are recommended for good model fit (Jackson, Gillaspy, & Purc-Stephenson, 2009). Exploratory principal components analysis (PCA) with varimax rotation was conducted on the same data to explore the optimal factor structure of the SVR-20. The fit of the alternative SVR-20 structure was then tested by conducting a second CFA for this solution.

The internal consistency of the SVR-20 was examined by calculating Cronbach's α for both the original domains and the alternative factors found in this study. The predictive accuracy of the SVR-20 was examined through point-biserial correlations and Areas Under the Curve (AUC) in Receiver Operating Characteristic (ROC) analyses (e.g., Rice & Harris, 1995). AUC values quantify the ability of a risk assessment instrument to discriminate between recidivists and non-recidivists, with values of .50 representing a chance level of predictive accuracy. AUC values of .56 are considered small, .64 medium, and .71 large effect sizes (Rice & Harris, 2005). Finally, Pearson correlations were computed to examine the extent to which the SVR-20 was associated with the PCL-R and various self-report measures in the child abuser and rapist samples separately. Item 3 of the SVR-20 (Psychopathy) was removed from its domain when calculating correlations with the PCL-R facets.

RESULTS

Factor analyses

The fit of the original three-domain model of the SVR-20 was tested using the data of 639 sexual offenders by means of a CFA. Results indicated that the model fit was poor, with CFI = .61, TLI = .56, and RMSEA = .11 [90% CI = .10, .12]. The scree test (Cattell, 1978) of the PCA pointed in the direction of a two-, three-, or four-factor solution (i.e., eigenvalues for the first nine factors were 3.59, 2.48, 1.72, 1.28, 1.17, 1.06, 0.93, 0.83, and 0.80). CFA of these solutions indicated that the three-factor solution, CFI = .79, TLI = .77, RMSEA = .08 [90% CI = .08, .09], χ^2 = 569.34, χ^2 difference = 294.28, had a better fit than both the two-factor solution, CFI = .71, TLI = .66, RMSEA = .12 [90% CI = .11, .12], χ^2 = 863.62, χ^2 difference = 940.92, and the four-factor solution, CFI = .81, TLI = .78, RMSEA = .08 [90% CI = .08, .09], χ^2 = 733.29, χ^2 difference = -163.94. As can be seen in Table 1, we named the three alternative factors Antisociality, Sexual deviance, and Problematic thinking, and most item loadings were substantial. Item 4 (Major mental illness), item 6 (Suicidal/homicidal ideation), and item 7 (Relationship problems) did not load on any factor and were eventually removed (see Appendix A).

Internal consistency

The internal consistency of the SVR-20 was also examined in the total sample of 639 inpatients. The Cronbach's α coefficient of the SVR-20 total score was mod-

TABLE 1

SVR-20 exploratory principal components analysis (PCA) results (N = 639)

Factor	Item		Component		
			1	2	3
Antisociality	15	Uses weapons or threats of death	**0.65**	0.08	-0.08
	14	Physical harm to victim(s)	**0.58**	0.23	-0.14
	9	Past nonsexual violent offenses	**0.56**	-0.37	0.16
	3	Psychopathy	**0.55**	-0.20	0.33
	10	Past nonviolent offenses	**0.52**	-0.38	0.22
	5	Substance use problems	**0.51**	-0.37	0.01
	8	Employment problems	**0.50**	-0.22	0.27
	2	Victim of child abuse	**0.43**	0.20	-0.09
	11	Past supervision failure	**0.34**	-0.17	0.23
	6	Suicidal/homicidal ideation	0.29	0.04	0.05
Sexual deviance	12	High density sex offenses	-0.13	**0.72**	0.13
	16	Escalation in frequency/severity	0.17	**0.70**	-0.01
	1	Sexual deviance	-0.17	**0.70**	0.09
	13	Multiple sex offense types	-0.02	**0.66**	0.15
	4	Major mental illness	-0.05	-0.31	0.10
Problematic thinking	17	Extreme minimization/denial	-0.06	0.03	**0.71**
	20	Neg. attitude toward intervention	0.19	0.07	**0.70**
	19	Lacks realistic plans	0.15	-0.08	**0.66**
	18	Attitudes that support offenses	-0.15	0.18	**0.64**
	7	Relationship problems	0.26	-0.02	0.30

Note. SVR-20 = Sexual Violence Risk-20. Items with factor loadings in bold are included in the alternative factor structure.

est (α = .62). For the original domains, internal consistency coefficients ranged from insufficient to modest (.57, .51, and .64). For reasons of comparison, we also calculated the internal consistency coefficients of the alternative factors. These Cronbach's alphas were better than those obtained for the original domains and were all in the modest to moderate range (.71, .73, and .67).

Predictive accuracy

The predictive accuracy of the SVR-20 was examined by calculating point-biserial correlations between the SVR-20 domains and sexual, violent, and general recidivism and conducting ROC curve analyses using the data of 70 inpatients (mean age = 48.24 years, *SD* = 10.90, range = 26-79 years). The average time between discharge and follow-up was 70.26 months (*SD* = 55.42, range = 26-242 months). Recidivism rates after this period were 5.7% for sexual recidivism, 7.1% for violent recidivism, and 22.9% for general recidivism. As can be seen in Table 2, the original domain Psychosocial adjustment predicted sexual recidivism for both the pretreatment measurement, AUC = .69, 95% CI = [.52, .85], and the posttreatment measurement, AUC = .71, 95% CI = [.56, .86]. Violent recidivism was significantly predicted by the alternative factor Antisociality (pretreatment), AUC = .70, 95% CI = [.50, .90], and various posttreatment measurements, including the original domains Psychosocial adjustment, AUC = .74, 95% CI = [.60, .89], and Future plans, AUC = .73, 95% CI = [.52, .94], and the alternative factor Antisociality, AUC = .76, 95% CI = [.62, .90].

The structured professional judgment (SPJ) scoring method of the SVR-20 generally outperformed the mechanical scoring method in predicting sexual, violent, and general recidivism. The pretreatment SPJ score significantly predicted general recidivism, AUC = .71, 95% CI = [.53, .88], whereas the posttreatment SPJ score significantly predicted sexual recidivism, AUC = .76, 95% CI = [.56, .96], violent recidivism, AUC = .75, 95% CI = [.54, .96], and general recidivism, AUC = .70, 95% CI = [.52, .89]. The posttreatment mechanical scoring method attained only statistical significance for the prediction of violent recidivism, AUC = .74, 95% CI = [.60, .88].

TABLE 2

Predictive accuracy of the pretreatment and posttreatment SVR-20

			Sexual recidivism			Violent recidivism			General recidivism		
	Measure	*n*	*r*	*AUC*	95% CI	*r*	*AUC*	95% CI	*r*	*AUC*	95% CI
Pretreatment	Original domains										
	Psychosocial adjustment	70	.12	.69*	[.52, .85]	.17	.65	[.42, .88]	.17	.61	[.46, .77]
	Sexual offending	70	-.02	.47	[.25, .70]	.07	.61	[.32, .90]	.09	.56	[.41, .71]
	Future plans	70	.07	.60	[.33, .88]	.13	.61	[.28, .94]	.15	.59	[.42, .76]
	Alternative factors										
	Antisociality	70	.04	.56	[.33, .80]	.19	.70*	[.50, .90]	.20	.64	[.49, .79]
	Sexual deviance	70	.13	.65	[.44, .85]	.04	.56	[.31, .81]	.11	.57	[.41, .72]
	Problematic thinking	70	.04	.56	[.29, .84]	.07	.55	[.21, .88]	.11	.57	[.41, .74]
	Final scoring method										
	Mechanical	70	.09	.62	[.36, .88]	.18	.64	[.33, .95]	.19	.61	[.44, .78]
	SPJ	47	.09	.58	[.21, .95]	.18	.67	[.30, 1.00]	.33*	.71*	[.53, .88]
Posttreatment	Original domains										
	Psychosocial adjustment	40	.16	.71*	[.56, .86]	.11	.74*	[.60, .89]	.17	.66	[.45, .87]
	Sexual offending	40	-.14	.34	[.08, .61]	.05	.56	[.40, .73]	-.02	.48	[.28, .68]
	Future plans	40	.09	.64	[.43, .85]	.10	.73*	[.52, .94]	.09	.59	[.36, .81]
	Alternative factors										
	Antisociality	40	.05	.55	[.29, .82]	.16	.76*	[.62, .90]	.16	.61	[.38, .84]
	Sexual deviance	40	.09	.60	[.30, .89]	-.03	.42	[.25, .59]	.14	.60	[.39, .81]
	Problematic thinking	40	-.09	.45	[.25, .65]	-.02	.54	[.35, .73]	-.03	.49	[.27, .70]
	Final scoring method										
	Mechanical	40	.08	.60	[.38, .81]	.13	.74*	[.60, .88]	.14	.60	[.37, .83]
	SPJ	35	.23	.76*	[.56, .96]	.13	.75*	[.54, .96]	.25	.70*	[.52, .89]

Note. SVR-20 = Sexual Violence Risk-20; AUC = Area Under the Curve; CI = Confidence Interval.
* $p < .05$

Relations to other constructs

The validity of the SVR-20 was further examined in a subsample of 27 child sexual abusers (mean age = 45.48 years, *SD* = 10.37, range = 26-64 years) and 35 rapists (mean age = 39.43 years, *SD* = 9.42, range = 22-59 years) by relating the original SVR-20 domains to the four facets of the PCL-R and various questionnaires. As can be seen in Table 3, the PCL-R facets correlated significantly with the domains of the SVR-20. For the child sexual abusers, The SVR-20 domain Psychological adjustment was significantly correlated with PCL-R facets Interpersonal (*r* = .58), and Lifestyle (*r* = .65), while the Future plans domain had a significant correlation with Lifestyle (*r* = .49). For the rapists, we found significant correlations between the Psychological adjustment domain and PCL-R components of Lifestyle (*r* = .46) and Antisocial (*r* = .53), and again between the Future plans domain and Lifestyle facet (*r* = .58). As to the relation between the SVR-20 domains and the self-reports, only three noteworthy results were found, all within the child abuser sample: the SVR-20 domain Psychological adjustment was negatively correlated with agreeableness as measured by the NEO-FFI (*r* = -.44) and correlated significantly with trait anger as measured by the STAS (*r* = .40), whereas the Sexual offending domain also had a significant correlation with trait anger (*r* = -.50). Due to the exploratory nature of these analyses, no corrections were made for the number of calculated correlations, but it should be noted that if such corrections were made, none of the correlations would have reached statistical significance.

We also conducted correlations between the alternative SVR-20 factors, the PCL-R, and the questionnaires and found highly similar correlation patterns between the SVR-20 and the PCL-R (see Table 4). Especially the factor Antisociality was strongly correlated with the facets of the PCL-R for both the child sexual abusers and the rapists. Correlations between the SVR-20 and self-reports only yielded three significant results. For the child sexual abusers, the factor Antisociality was negatively correlated with agreeableness as measured by the NEO-FFI (*r* = -.49), whereas Sexual deviance correlated positively with openness as measured by the NEO-FFI (*r* = .44) and negatively with social anxiety as measured by the IIS (*r* = -.42).

TABLE 3

Pearson correlations between the original SVR-20 domains, PCL-R facets, and self-report measures for child sexual abusers and rapists

		Child sexual abusers					Rapists				
			SVR-20 domains					SVR-20 domains			
Measure	Scales	*n*	Total	Psychosocial adjustment	Sexual offending	Future plans	*n*	Total	Psychosocial adjustment	Sexual offending	Future plans
PCL-R	Total	24	.61**	.62**	-.11	.42*	32	.60**	.52**	.07	.41*
	Interpersonal	24	.52**	.58**	-.11	.36	32	.33	.17	.15	.10
	Affective	24	.25	.04	.18	.23	32	.35*	.19	.12	.05
	Lifestyle	24	.58**	.65**	-.20	.49*	32	.49**	.46*	-.10	.58**
	Antisocial	24	.28	.35	-.13	.18	32	.40*	.53**	-.04	.30
STAS	Trait anger	26	.07	.40*	-.50**	.00	31	-.21	-.18	-.24	.21
AQ-SF	Aggression	26	-.04	.23	-.28	-.26	32	.07	.07	-.06	.23
PFS-AV	Hostile thoughts	23	-.03	.19	-.28	-.00	27	-.17	-.15	-.19	.04
NEO-FFI	Neuroticism	26	.07	.36	-.35	-.21	30	.02	-.07	.03	.31
	Extraversion	26	-.02	-.10	.11	-.01	30	.08	.12	.11	-.27
	Openness	26	.14	-.03	.30	.09	30	.15	.19	-.01	.09
	Agreeableness	26	-.26	-.44*	.17	.02	30	.01	.09	-.09	-.13
	Conscientiousness	26	-.17	-.13	-.11	-.03	30	-.05	-.03	.07	-.30
IIS	Social anxiety	27	-.27	-.15	-.37	.09	33	-.14	-.21	-.04	.24
	Social skills	27	-.06	-.25	.28	.00	33	.23	.22	.18	-.13

Note. PCL-R = Psychopathy Checklist-Revised; STAS = Spielberger Trait Anger Scale; AQ-SF = Aggression Questionnaire - Short Form; PFS-AV = Picture-Frustration Study - Adapted Version; NEO-FFI = NEO Five Factor Inventory; IIS = Inventory of Interpersonal Situations
* $p < .05$,** $p < .01$

TABLE 4

Pearson correlations between the alternative SVR-20 factors, PCL-R facets, and self-report measures for child sexual abusers and rapists

		Child sexual abusers				Rapists			
			SVR-20 factors				SVR-20 factors		
Measure	Scales	*n*	Antisociality	Sexual deviance	Problematic thinking	*n*	Antisociality	Sexual deviance	Problematic thinking
PCL-R	Total	24	.71**	-.35	.08	32	.58**	-.15	.42*
	Interpersonal	24	.52**	-.05	-.08	32	.41*	-.20	.21
	Affective	24	.14	-.11	.33	32	.22	-.02	.19
	Lifestyle	24	.67**	-.42*	.13	32	.43*	-.26	.44*
	Antisocial	24	.55**	-.41*	.03	32	.51**	-.01	.22
STAS	Trait anger	26	.31	-.32	-.28	31	-.26	-.17	-.01
AQ-SF	Aggression	26	.12	-.07	-.31	32	-.03	-.01	.17
PFS-AV	Hostile thoughts	23	.11	-.10	-.16	27	-.18	-.17	-.02
NEO-FFI	Neuroticism	26	.32	-.35	-.35	30	-.25	.09	.15
	Extraversion	26	-.18	-.02	.22	30	.18	.11	-.11
	Openness	26	-.19	.44*	.16	30	.08	.07	.13
	Agreeableness	26	-.49*	.25	.20	30	.20	.08	-.22
	Conscientiousness	26	-.15	-.27	.19	30	.01	-.07	-.12
IIS	Social anxiety	27	-.14	-.42*	-.03	33	-.22	-.17	.03
	Social skills	27	-.26	.27	.28	33	.16	.17	-.00

Note. PCL-R = Psychopathy Checklist-Revised; STAS = Spielberger Trait Anger Scale; AQ-SF = Aggression Questionnaire - Short Form; PFS-AV = Picture-Frustration Study - Adapted Version; NEO-FFI = NEO Five Factor Inventory; IIS = Inventory of Interpersonal Situations
* $p < .05$,** $p < .01$

DISCUSSION

The current study examined the factor structure and psychometric properties of the SVR-20. Results indicated that the model fit of the original SVR-20 domains was poor. An exploratory PCA and subsequent CFA suggested three alternative factors, which we labelled Antisociality, Sexual deviance, and Problematic thinking. The alternative factor structure generally corresponded with that obtained by Hornsveld, Kanters, Zwets, Kraaimaat, and Van Veen (2014) who found a highly similar factor solution and suggested that SVR-20 items cluster in a somewhat different way than hypothesized by its developers. Because deviant sexual preferences and antisocial orientation are regarded as the major predictors of sexual recidivism (Hanson & Morton-Bourgon, 2005), the alternative factor structure initially appeared promising. However, closer examination of the factor structure revealed some potential inconsistencies within the Antisociality factor. That is, Uses weapons or threats of death (item 15) and Physical harm to victim(s) (item 14) both refer to aggressive behaviors displayed during sexual offenses, and Victim of child abuse (item 2) refers to the offender's victimization rather than perpetration of antisocial behavior. However, the violent behaviors in Items 14 and 15 could be manifestations of general antisociality in the context of the sexual offense, and there is evidence showing that childhood victimization is correlated with future antisocial behavior (e.g., Widom, Schuck, & White, 2006). Thus, these items may be appropriately included in this factor, and all the items in this factor may in fact reflect antisociality. Future research should attempt to replicate our findings and explore this issue further. The items Major mental illness (item 4), Suicidal/homicidal ideation (item 6), and Relationship problems (item 7) were considered rest items because they did not show adequate factor loadings. In particular, the removal of relationship problems seemed unfortunate since meta-analytic research has demonstrated relatively large effects for conflicts in intimate relationships and sexual recidivism (Hanson & Morton-Bourgon, 2005); however, closer examination of our data revealed that this item individually was not predictive of sexual, violent, or general recidivism.

Inspection of the psychometric properties indicated that the alternative factors did not offer much of a practical advantage. More precisely, although the internal consistency coefficients of the alternative SVR-20 factors were somewhat better than those documented for the original domains, the predictive accuracy of both the original domains and the alternative factors was similar. The observed AUC values were comparable to those of other studies regarding the predictive accuracy of various risk assessment instruments (e.g., Hanson & Morton-Bourgon, 2009). The original domain Psychosocial adjustment (posttreatment) proved to be a good predictor of both sexual and violent recidivism, whereas posttreatment measurements of the original domain Future plans and the alternative factor Antisociality were predictive for violent recidivism. The significant association between the domain Psychosocial adjustment and violent recidivism is in line with previous research and was to be expected since this domain includes several well-known risk factors associated with violent recidivism (e.g., Sjöstedt & Långström, 2002). Noteworthy is the low predictive accuracy of the original domain Sexual offending in predicting sexual recidivism. With AUC values of .47 (pretreatment) and .34 (posttreatment), this domain even performed below chance level. A heretical interpretation of this result would be that scoring high in this domain is actually an indicator of *lower* risk for sexual recidivism, but this claim would contradict the available literature regarding risk factors for sexual recidivism. The current study again confirmed that the SPJ scoring method of the SVR-20 outperforms its mechanical scoring method in the prediction of sexual, violent, and general recidivism. However, one could argue the tentativeness of these results. That is, none of these differences are statistically significant, and the small sample size and low recidivism base rates (especially for sexual recidivism) limit the confidence we can have in how well these results reflect the true relative performance of its approach. In addition, meta-analytic studies have generally demonstrated that actuarial and mechanical approaches to risk assessment are the most accurate for the prediction of sexual (and violent) recidivism (e.g., Hanson & Morton-Bourgon, 2009). The SVR-20, however, appears to be an exception to this, as it shows the largest average association of all risk assessment instruments between its SPJ and sexual recidivism, although this finding was based on only three studies.

The relation between the SVR-20 and external correlates did not yield particularly impressive results. The clear correlation pattern between the SVR-20 and PCL-R was to be expected since the PCL-R has various items that closely resemble those of the SVR-20 (e.g., lack of realistic long-term goals, revocation of conditional release, and criminal versatility). We mainly found significant associations between the PCL-R facets and SVR-20 domains/factors containing items that reflect an antisocial/impulsive lifestyle (i.e., Psychosocial adjustment and Antisociality). Barbaree, Seto, Langton, and Peacock (2001) correlated six other risk assessment instruments for adult sexual offenders (i.e., VRAG, SORAG, RRASOR, Static-99, MnSOST-R, and MASORR) with the PCL-R and found that all risk assessment instruments, with the exception of the RRASOR, strongly correlated with the PCL-R.

Regarding the correlations between the SVR-20 and the self-report measures, only two correlations seem worth mentioning. For the child sexual abusers, agreeableness was negatively correlated with both Psychosocial adjustment and Antisociality, roughly indicating that an antisocial/impulsive lifestyle is associated with reduced compliance, straightforwardness, and tender-mindedness. The standard set of questionnaires used to examine the validity of the factor structure of the SVR-20 was not ideal. In retrospect, only significant correlations between questionnaires measuring aggression and general violence and the domain Sexual offending (containing several aggression related items) were to be expected. Measurements of, for instance, sexual interest, cognitive distortions or treatment engagement could have provided more evidence for the convergent validity of the factor structure.

Our study should be interpreted with respect to several limitations. First, it should be noted that the psychometric properties of the SVR-20 were tested within an offender sample detained under hospital order, which was already characterized as high-risk. As a result, our findings might be attenuated by the restriction of range problem, and may not necessarily generalize to lower risk populations. Second, correlations with external correlates may have been affected by socially desirable response tendencies (Gannon, Ward, & Collie, 2007, but also, see Kroner, Mills, & Morgan, 2007; Mathie & Wakeling, 2011; Mills & Kroner, 2005). Detention under hospital order is evaluated by the court and without treatment progress this sentence can be renewed for an unlimited number of times. Although all patients were informed that data would be processed anonymously, the inpatients may nevertheless have been under the assumption that their responses on the self-reports could have legal implications. Finally, the small sample sizes limited the statistical power of the analyses, such that even medium correlations and AUC values did not reach statistical significance. These medium effect sizes would have reached statistical significance with a larger sample.

This study explored the factor structure of the SVR-20 and its psychometric properties. Given that the SVR-20 was never intended to measure three homogeneous constructs, the observed improved internal consistency for the alternative factors was to be expected. The predictive validity of the SVR-20, however, was generally modest and no evidence was found indicating that the alternative factors were better than the original domains at predicting recidivism. This suggests that the modest predictive accuracy of the original domains may not be attributable to its heterogeneous nature. Perhaps differences in the predictive value of the three SVR-20 domains are attributable to variations in their inter-rater reliability (Hildebrand et al., 2004; Sjöstedt & Långström, 2002), although the inter-rater reliability of the SVR-20 has been demonstrated to be moderate to good (e.g., Hart & Boer, 2009), with only two studies reporting poor to fair inter-rater reliability (Hildebrand et al., 2004; Sjöstedt & Långström, 2002). In addition, there are some indications that the predictive value of the SVR-20 could be further improved when scores are corrected for age (Barbaree, Langton, Blanchard, & Boer, 2008). It remains unclear why the SPJ scoring method of the SVR-20 outperforms its actuarial scoring method in predicting sexual, violent, and general recidivism.

This study was an attempt to further investigate the factor structure of the SVR-20. Results indicated that the psychometric properties of the original SVR-20 domains were insufficient to modest. The factors obtained in the present study yielded factors that were more reliable, but no evidence was found indicating that this new structure improved the validity of the scale. Future research should compare the validity of the SVR-20 with that of alternative instruments, most preferably the STABLE-2007 (Fernandez, Harris, Hanson, & Sparks, 2012; Dutch version: Van den

Berg, Smid, & Koch, 2014), which also contains factors of antisociality and sexual deviance. Such analysis could establish which instrument can best be used for the risk assessment of sexual offenders. Meanwhile, the administration of the current SVR-20 is still required for the leave applications of all sexual offenders detained by hospital order in the Netherlands. Given its psychometric properties and rather static nature, the SVR-20 seems insufficient as the sole basis for such important decisions. The SVR-20 is currently under revision (Boer, 2011), but its expected completion date is unclear. There are also clear indications that a combination of actuarial static and dynamic risk assessment instruments results in an improved prediction of sexual re-offenses (e.g., Eher, Matthes, Schilling, Haubner-MacLean, & Rettenberger, 2012; Hanson, Harris, Scott, & Helmus, 2007). More research into the factor structure of the SVR-20 is required before any alternative factors should be used in the treatment, risk assessment, and supervision of sexual offenders.

CHAPTER FOUR

Are child abusers sexually attracted to submissiveness? Assessment of sex-related cognition with the implicit association test

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ABSTRACT

Child sexual abuse is associated with social anxiety, low self-esteem, and intimacy deficits. This, in combination with the core belief of a dangerous world, might suggest that child abusers are sexually attracted to submissiveness. The Implicit Association Test (IAT) was used to examine this hypothesis. Results indicated that child abusers have a stronger sexual preference for submissiveness than rapists, although there were no differences between child abusers and non-sexual offenders. Multinomial logistic regression analysis revealed that submissive-sexy associations have incremental value over child-sex associations in differentiating child abusers from other offenders. The predictive value of both implicit associations was explored by correlating IAT scores with measures for recidivism risk, aggression, and interpersonal anxiety. Child abusers with stronger child-sex associations reported higher levels of interpersonal anxiety and hostility. More research on implicit cognition in sex offenders is required for a better understanding of what these and similar implicit measures are exactly measuring and what role implicit cognition may play in sexual offending.

INTRODUCTION

Child sexual abuse is a widespread international problem (Finkelhor, 1994; Pereda, Guilera, Forns, & Gómez-Benito, 2009a) and is related to various mental health problems for a large number of its victims (Beitchman et al., 1992; Paolucci, Genuis, & Violato, 2001). Sexual interest in children is posited to play a key role in the onset and persistence of child sexual abuse (Finkelhor & Araji, 1986; Hall & Hirschman, 1992; Seto, 2008; Ward & Beech, 2006). Meta-analytic research consistently shows that a deviant sexual interest in children is one of the best predictors of sexual recidivism among child abusers (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005). Consequently, accurate assessment of sexual interest is paramount in the (risk) assessment of child abusers.

The sexual interest of child abusers has typically been studied using self-report and physiological measures. Both self-report questionnaires and the commonly used penile plethysmograph (PPG) are significantly associated with sexual offending against children (e.g., Babchishin, Nunes, & Kessous, 2014; Banse, Schmidt, & Clarbour, 2010; Hanson & Morton-Bourgon, 2004, 2005; Harris, Rice, Quinsey, & Chaplin, 1996). Nevertheless, self-reports and PPG have a number of limitations. For example, PPG assessment requires specialized expertise and equipment, and cannot be used with everyone (Kalmus & Beech, 2005). PPG is also not used in many locations outside of North America (McGrath, Cumming, Burchard, Zeoli, & Ellerby, 2010). The validity of self-report questionnaires has been debated (e.g., Andrews & Bonta, 2003; Beech, 1998; Horley, 2000; Marshall, Anderson, & Fernandez, 1999; Ward, Hudson, Johnston, & Marshall, 1997), in particular because of concerns about social desirability and deliberate faking (Gannon, Ward, & Collie, 2007, but also, see Kroner, Mills, & Morgan, 2007; Mathie & Wakeling, 2011; Mills & Kroner, 2005). This concern is especially salient in forensic settings, where disclosure of certain sexual interests has important legal implications (Kalmus & Beech, 2005). The application of implicit measures might obviate some of the concerns raised with regard to the use of self-report questionnaires measuring sexual interest (Ward et al., 1997), and, more importantly, may provide complementary information to self-report and physiological measures (e.g., Babchishin, Nunes, & Kessous, 2014).

There is considerable evidence that implicit measures, such as the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998), may be useful for assessing sexual interest and provide complementary information to self-report measures (e.g., Banse et al., 2010). The IAT has good predictive validity in various domains of psychopathology (Roefs et al., 2011) and is relatively resistant to deliberate faking (Cvencek, Greenwald, Brown, Gray, & Snowden, 2010; Steffens, 2004). Moreover, previous studies have successfully demonstrated the ability of the IAT to accurately characterize the sexual interest of child abusers; results indicate that child abusers more strongly associate “children” and “sex” (or “sexual” or “sexy”) than do other types of offenders (Gray, Brown, MacCulloch, Smith, & Snowden,

2005; Hempel, Buck, Goethals, & Van Marle, 2013; Nunes, Firestone, & Baldwin, 2007; Steffens, Yundina, & Panning, 2008). Brown, Gray, and Snowden (2009) even showed that child-sex associations can be used to reliably distinguish pedophilic offenders (who victimize children <12 years of age) from hebephilic offenders (who victimize youths aged 12-15 years). These researchers also found indications that child-sex associations can indicate the sexual interest of child abusers who deny their offenses. In a recent meta-analytic review of these and other studies (Babchishin, Nunes, & Hermann, 2013), IAT measures of associations between "children" and "sex" (or "sexual" or "sexy") were able to differentiate child abusers from rapists, non-sexual offenders, and non-offenders. Some studies even found that associations between "children" and "sexy" are correlated with a higher risk of recidivism, but the pattern across studies is inconsistent (Babchishin, Nunes, & Hermann, 2013; Nunes et al., 2007).

In addition to a sexual interest in children, social anxiety, low self-esteem, and intimacy deficits have been proposed as relevant risk factors in the etiology of child sexual abuse (Marshall, 1996; Ward, Keenan, & Hudson, 2000). Furthermore, it has been suggested that child abusers tend to believe that the world is a dangerous place (Ward & Keenan, 1999). As a result, child abusers may try to achieve dominance and control over others or they will seek security in children because children are considered to be more reliable, accepting, and able to be trusted. When combining these results, one could hypothesize that child abusers are not only sexually attracted to the physical appearance of children, but also to their submissive nature. Howells (1979) found indications that hospitalized child abusers are more likely to view interpersonal relations in terms of dominance and submission than a prison control group, but it remains unclear whether child abusers become sexually aroused by this inequality. A study by Kamphuis, de Ruiter, Janssen, and Spiering (2005) may have addressed an equivalent theme. Kamphuis and colleagues used a lexical decision task to explore implicit associations between "power" words and "sex" words. It was found that child abusers were relatively faster to respond to "power" words when preceded by subliminally presented "sex" words as compared with non-sexual violent offenders and university students. Thus, these results suggest that child abusers more strongly associated "sex" with "power" than did the comparison groups.

The current study was conducted to examine whether child abusers are sexually attracted to submissiveness. It was hypothesized that child abusers would associate "submissive" relatively more strongly with "sexy" (and "dominant" with "not sexy") than other offender samples. In addition, a multinomial logistic regression analysis was conducted to determine whether submissive-sexy associations have incremental value over the already well-established child-sex associations in differentiating child abusers from rapists and non-sexual offenders. Finally, the potential contribution of submissive-sexy and child-sex associations in the (risk) assessment of child abusers was explored by correlating these associations with measures of sexual recidivism risk and other relevant factors associated with sexually deviant behavior, such as interpersonal anxiety and social skills (Hoyer, Kunst, & Schmidt, 2001; Segal & Marshall, 1985) and general violence/antisocial behavior (Hanson & Morton-Bourgon, 2009; Ward, Hudson, & Marshall, 1996), including aggression, hostility, and trait anger. It was hypothesized that stronger submissive-sexy and child-sex associations would be significantly related to higher recidivism risk, interpersonal anxiety, and lower levels of general violent behavior. Since a sexual preference for submissiveness is potentially relevant in the etiology of rape, we also examined the predictive value of submissive-sexy associations within the rapist sample. We expected correlations between submissive-sexy associations and sexual recidivism risk and the measures of general violence.

METHOD

Participants

The study was conducted among 123 forensic psychiatric inpatients. In the Netherlands, patients are detained by hospital order, when the court has established a relation between a psychiatric disorder on one hand and an offense on the other hand (e.g., Van Marle, 2000, 2002). These patients have committed an offense for

which a maximum imprisonment of four or more years applies, such as child abuse, rape, manslaughter, or murder. Rulings are based on the evaluations of a psychiatrist and/or psychologist at a special assessment center of the Ministry of Justice.

Initially, patients who were admitted in FPC de Kijvelanden were approached to participate. Later, sex offenders from other Dutch forensic psychiatric hospitals (FPC 2Landen, FPC Oldenkotte, and FPC Veldzicht) were approached to participate. Of the 123 patients in the final sample, 28 were convicted child abusers (mean age: 45.25 years, *SD* = 10.25, range: 26-64 years), 36 were rapists (mean age: 39.83 years, *SD* = 9.60, range: 22-59 years), and 59 were non-sexual offenders (mean age: 35.44 years, *SD* = 7.73, range: 24-56 years).

As a first step, a one-way analysis of variance (ANOVA) was conducted to test whether the offender groups differed in terms of age. Age indeed differed significantly across the three offender groups, $F(2, 120) = 11.75$, $p < .001$, with post-hoc comparisons indicating that child abusers were significantly older than non-sexual offenders, with no differences between the other offender groups. Since latency measures suffer from age-related slowing (e.g., Faust, Balota, Spieler, & Ferraro, 1999; Ratcliff, Spieler, & McKoon, 2000), it was decided to include age as a covariate in all further analyses.

Implicit Association Test

The IAT is a reaction time-based categorization task that assesses the strength of associations between concepts in memory. During this computer task, a number of stimuli are presented in succession. The patient's assignment is to sort the presented stimuli as quickly as possible to the correct category by pressing the left or right button on a response box. Category names are placed on the upper left and right corners of the computer screen, corresponding to the correct response button for that category. Each trial commences with the presentation of a fixation cross that is replaced after 500 ms by a stimulus (either a picture or a word), which remains on the screen until the participant responds. Following an incorrect response, a red X appears below the stimulus, after which the participant has to press the correct button to continue to the next trial.

Three IAT measures were used for the current experiment: (a) a standard valence IAT, (b) a submissive-sexy IAT, and (c) a child-sex IAT. The submissive-sexy IAT was developed for the purpose of this study by using Dutch translations of dominant/submissive stimulus words as suggested by Haines (1999) and Rudman, Greenwald, and McGhee (2001) and sexy/not sexy stimulus words from Babchishin, Nunes, and Kessous (2014). The standard valence IAT and child-sex IAT were Dutch translations of the IAT measures administered in the Brown et al. (2009) study. A list of the original pictures and words used for the IAT measures can be found in Appendix B, C and D[1].

A pilot study was conducted among a subsample of participants in the main study to ensure the correct interpretation of the submissive-sexy associations: as a personal characteristic (e.g., "I am sexually attractive because *I am submissive*") or as a characteristic of other individuals (e.g., "I feel sexually attracted *towards submissive people*"). Participants had to explain the extent to which they believe the concept pairs submissive-sexy/not sexy and dominant-sexy/not sexy belong together. Thirty of the 43 participants (69.8%) conceived the concepts as characteristics of other individuals, five (11.6%) as a personal characteristic and the answers of eight participants (18.6%) were undecided. This suggests that the submissive-sexy associations in this study can be interpreted as a sexual interest in submissiveness in partners or victims rather than in one's own submissiveness.

IAT procedure

The IAT-procedure used in this study was identical to the procedure as described by Greenwald, Nosek, and Banaji (2003). Blocks 1 and 2 were practice blocks to familiarize participants with the procedure and stimuli. Blocks 3 and 4 consisted of the *congruent* condition during which the left button was the correct response for the concept pairs submissive-not sexy, child-not sex, and, flower-pleasant and the right button was the correct response for the concept pairs dominant-sexy, adult-sex, and insect-unpleasant. Block 5 was again a practice block. In blocks 6 and 7 the *incongruent* condition[2] was presented during which the left button was

1 *A complete list of the used Dutch translations can be obtained from the first author.*
2 *The incongruent condition was defined on the basis of the hypothesized deviant associations of child abusers.*

correct for the concept pairs dominant-not sexy, child-sex, and insect-pleasant, and the right button was correct for the concept pairs submissive-sexy, adult-not sex, and flower-unpleasant. In Blocks 1, 2, 3, 5 and 6, each stimulus was presented once in random order. Blocks 4 and 7 were test blocks in which each stimulus was presented twice in pseudo-random order, such that all stimuli were presented once before any were repeated.

Apparatus

All three versions of the IAT were administered on an Apple MacBook Pro 17-inch 2,53-GHz LED-backlit widescreen notebook and were controlled by E-Prime 2.0 software. Responses were collected by means of an E-Prime PST Serial Response Box.

Data reduction

Latencies and errors were registered for each trial. Data were analyzed using the scoring algorithm developed by Greenwald et al. (2003). Errors were replaced with the mean latency for that block plus a 600 ms penalty. In accordance with the scoring algorithm, trials with latencies above 10,000 ms were eliminated. Participants for whom more than 10% of trials had latencies below 300 ms or with a total error rate above 25% were excluded from the corresponding IAT-analysis.

IAT effects (*D* scores) and error rates comprised both practice and test blocks (Block 3, 4, 6 and 7). The *D* scores were calculated by expressing the difference between the mean latency of the congruent condition and the incongruent condition in terms of the pooled latency variance. *D* scores were calculated in such a manner that scores greater than zero indicated stronger submissive-sexy, child-sex, and flower-unpleasant associations, whereas *D* scores less than zero were an indication for stronger dominant-sexy, adult-sex, and flower-pleasant associations.

External variables

The *Sexual Violence Risk-20* (SVR-20; Boer, Hart, Kropp, & Webster, 1997; Dutch version: Hildebrand, de Ruiter, & Van Beek, 2001) assesses the risk of sexual violence in sex offenders. The SVR-20 comprises 20 items in three sections, namely, Psychosocial adjustment, History of sexual offenses, and Future plans, that have to be rated on a three-point Likert scale (0 = *does not apply*, 1 = *probably or partially applies*, and 2 = *applies*). Although scores on all items can be summed to one total score that reflects a "mechanical" measure of risk for sexual violence, the authors instruct evaluators to use clinical judgment in assigning offenders to risk categories, technically making the SVR-20 a structured professional judgment measure (Hanson & Morton-Bourgon, 2009). In this study, the structured professional judgment categories were not analyzed because the high-risk category comprises almost the entire patient sample. De Vogel, de Ruiter, Van Beek, and Mead (2004) found that the Dutch version of the SVR-20 had a good inter-rater and predictive validity, both for the total score and the three subscale scores. The SVR-20 (sum of items score) significantly predicts sexual recidivism (Hanson & Morton-Bourgon, 2009).

In addition, participants completed self-report questionnaires with good psychometric qualities about trait anger (State-Trait Anger Scale [STAS]; Spielberger, 1980; Dutch version: Van der Ploeg, Defares, & Spielberger, 1982), hostility (Picture Frustration Study [PFS]; Rosenzweig, 1978; Dutch version: PFS-AV; Hornsveld, Nijman, Hollin, & Kraaimaat, 2007), aggression (Aggression Questionnaire – Short Form [AQ-SF]; Bryant & Smith, 2001; Dutch version: Hornsveld, Muris, Kraaimaat, & Meesters, 2009), and interpersonal anxiety/social skills (Inventory of Interpersonal Situations [IIS]; Van Dam-Baggen & Kraaimaat, 2000).

Procedure

All potential participants received an information letter describing the study. This letter clearly stated that participation was voluntary, data would be processed anonymously, refusing to participate would not influence the participant's treatment in any way, and that participation would be rewarded with a monetary compensation of 15 Euros. Participants had approximately 1 week to consider their potential participation, after which they signed an informed consent form.

For most participants, the IAT measures and self-report questionnaires were completed within one testing session, but this was not always possible (e.g., due

to time constraints). In these cases, questionnaires and IAT measures were completed within the same week. The order in which IAT measures and questionnaires were administered was counterbalanced. When conducting the IAT measures, all participants started with the standard valence IAT to familiarize them with the procedure. The order of the submissive-sexy IAT and child-sex IAT was again counterbalanced across participants. All measures were conducted individually in separate testing rooms at the forensic hospitals. The SVR-20 was scored by certified clinical psychologists and obtained as part of the standard screening protocol of the institutions. Unfortunately, two SVR-20 scores (one child abuser and one rapist) could not be obtained.

RESULTS

IAT Effects

Sixteen patients (1 non-sexual offender on the standard valence IAT; 4 child abusers, 3 rapists, and 8 non-sexual offenders on the submissive-sexy IAT) had a total error rate above 25% and were therefore excluded from the corresponding analyses.

On the standard valence IAT, all three offender groups associated "flowers" with "pleasant" and "insects" with "unpleasant" more strongly than "insects" with "pleasant" and "flowers" with "unpleasant". As shown in Table 1, average *D* scores were all negative: -0.93 (*SD* = 0.37) for child abusers, -0.94 (*SD* = 0.34) for rapists, and -0.81 (*SD* = 0.42) for non-sexual offenders. A one-way ANCOVA with age as the covariate revealed no significant differences among the three groups, $F(3, 118) = 1.51$, $p = .23$. As the procedure of all IAT measures was identical, the absence of significant differences on the standard valence IAT implies that any significant differences on the other IAT measures cannot be attributed to methodological issues.

On the sex-relevant IAT versions, groups displayed more divergent results. As hypothesized, child abusers more strongly associated "submissive" with "sexy" as indicated by their positive mean score of 0.18 (*SD* = 0.61), whereas the rapists (*M* = -0.29, *SD* = 0.51) and non-sexual offenders (*M* = -0.17, *SD* = 0.50) more strongly

TABLE 1

D scores and standard deviation for child abusers, rapists and non-sexual offenders on the Implicit Association Tests.

Association	Child abusers	Rapists	Non-sexual offenders	Statistics
	M (SD)	*M (SD)*	*M (SD)*	
Submissive-sexy[1]	0.18 (0.61)[a]	-0.29 (0.51)[b]	-0.17 (0.50)[a, b]	F(3, 104) = 4.37
Child-sex[2]	0.13 (0.49)[a]	-0.16 (0.39)[b]	-0.23 (0.36)[b]	F(3, 119) = 5.26
Insect-pleasant[3]	-0.93 (0.37)	-0.94 (0.34)	-0.81 (0.42)	F(3, 118) = 1.51

Note. means not sharing a similar superscript differ at $p < 05$.
[1] Positive scores indicate that "submissive" is more strongly associated with "sexy" than "dominant" with "sexy."
[2] Positive scores indicate that "children" is more strongly associated with "sex" than "adults" with "sex."
[3] Positive scores indicate that "insects" is more strongly associated with "pleasant" than "flowers" with "pleasant."

associated "dominant" with "sexy" as indicated by their negative mean scores (see Table 1). An ANCOVA revealed that there was a significant main effect of offender group, $F(3, 104) = 4.37$, $p < .05$. Contrast tests showed that only the *D* score of the child abusers significantly differed from that of the rapists ($p < .01$). Effect sizes (Cohen's *d*) and 95% confidence intervals (CIs) were computed with the unadjusted means and standard deviations for all comparisons. The difference between the child abusers and rapists was large, $d = 0.85$, 95% CI [0.30, 1.40]. The difference between child abusers and non-sexual offenders was non-significant in the contrast test (covariate *age* accounted for the non-significance) but nonetheless in the moderate range, $d = 0.65$, 95% CI [0.16, 1.15].

As expected, child abusers also associated "children" with "sex" more strongly than "adults" with "sex" as indicated by the positive mean score of 0.13 (*SD* = 0.49). The rapists (*M* = -0.16, *SD* = 0.39) and non-sexual offenders (*M* = -0.23, *SD* = 0.36), however, associated "adults" with "sex" more strongly than "children" with "sex," as indicated by their negative mean scores (see Table 1). The ANCOVA revealed that there was a significant main effect of offender group, $F(3, 119) = 5.26$, $p < .01$. Contrast tests showed that the *D* score of the child abusers differed significantly from that of the rapists ($p < .05$) and the non-sexual offenders ($p < .01$). The difference between child abusers and rapists was found to be moderate,

d = 0.66, 95% CI [0.16, 1.17], whereas the difference between child abusers and non-sexual offenders was large, *d* = 0.89, 95% CI [0.42, 1.36].

To determine the incremental value of the submissive-sexy IAT in differentiating child abusers from other offenders, a multinomial logistic regression analysis was conducted in which group membership was identified based on submissive-sexy and child-sex associations. As shown in Table 2, both associations significantly differentiated child abusers from rapists and non-sexual offenders. With every 1-point increase in submissive-sexy and child-sex associations, the odds for being a sexual offender against children, as compared to being a rapist, increased by 5.7 and 5.6. A similar pattern was found in the differentiation between child abusers and non-sexual offenders: Odds ratios for the submissive-sexy and child-sex associations were 3.7 and 7.7, respectively. Moreover, the IAT measures together differentiated these groups better than the child-sex IAT alone, as indicated by the improvement for Block 2 over Block 1 (reported in the table note). This improvement in differentiation for Block 2 over Block 1 (both measures vs. one measure) was also found when the submissive-sexy IAT was entered in the first block and the child-sex IAT entered in the second block. In passing it should be noted that the correlation between submissive-sexy and child-sex associations was small and non-significant (*r* = .10) for the entire sample and moderate but non-significant (*r* = -.30) for child abusers

TABLE 2

Main results of the multinomial logistic regression analysis predicting child abuser status versus other offender types from IAT scores.

IAT	Child abusers (*n* = 24) vs. Rapists (*n* = 33)			Child abusers (*n* = 24) vs. Non-sexual offenders (*n* = 51)		
	OR [95% CI]	B (SE)	*p*	OR [95% CI]	B (SE)	*p*
Block 1						
Child/sex	5.6 [1.5, 20.3]	-1.72 (0.66)	.01	8.7 [2.6, 29.8]	-2.17 (0.63)	.00
Block 2						
Child/sex	5.6 [1.3, 24.0]	-1.72 (0.75)	.02	7.7 [2.0, 30.3]	-2.04 (0.70)	.00
Submissive/sexy	5.7 [1.8, 18.3]	-1.75 (0.59)	.00	3.7 [1.3, 10.8]	-1.31 (0.55)	.02

Note. R^2 = .11 (Cox and Snell), .13 (Nagelkerke) for Block 1. R^2 = .18 (Cox and Snell), .21 (Nagelkerke) for Block 2. IAT = Implicit Association Test; OR = odds ratio; CI = confidence interval; SE = standard error.

only. These findings indicate that submissive-sexy associations are complementary to the child-sex associations in differentiating child abusers from other offenders, and that both types of implicit associations address different aspects of distorted cognition relevant to child sexual abuse.

Since a sexual preference for submissiveness is potentially relevant in the etiology of rape, an additional multinomial logistic regression analysis was conducted with rapists as the reference category. This analysis revealed that rapists could not be significantly differentiated from non-sexual offenders.

External correlates

The potential contribution of submissive-sexy and child-sex associations in the (risk) assessment of child abusers was examined by correlating *D* scores with the SVR-20 (see Table 3). No correlation attained statistical significance. As to the relation between the implicit associations and the self-report questionnaires, only two noteworthy results were found: Stronger child-sex associations were positively associated with the PFS-AV and two scales of the IIS. That is, child abusers with stronger child-sex associations reported more hostility (*r* = .59) and experienced higher levels of interpersonal anxiety when initiating contact (*r* = .39) and during positive self-statements (*r* = .44).

TABLE 3

Pearson's r correlations between the IAT and the SVR-20 for child abusers.

Risk assessment	*M (SD)*	Implicit Association Test	
		Submissive-sexy	Child-sex
SVR-20		(*n* = 23)	(*n* = 27)
Psychosocial adjustment	12.32 (3.99)	.12	.09
History of sexual offenses	7.15 (2.67)	.26	-.25
Future plans	2.00 (1.18)	-.22	.24
Total score	21.53 (4.95)	.21	.01

Note. IAT = Implicit Association Test; SVR-20 = Sexual Violence Risk-20.

Regarding the rapists, no significant correlations between the submissive-sexy IAT and external correlates were found. However, one correlation between the child-sex IAT and other measures attained statistical significance: *D* scores of the rapists on child-sex IAT were significantly correlated with the SVR-20 subscale History of sexual offenses (r = -.34); a stronger association between "children" and "sex" was related to a lower recidivism risk as indicated by this specific subscale. Due to the exploratory nature of this study, no corrections were made for the number of calculated correlations, but note that if such corrections were made, none of the correlations would reach statistical significance.

DISCUSSION

The primary goal of the current study was to examine whether child abusers are, on an implicit level, sexually attracted to submissiveness. Therefore, an IAT was used to assess submissive-sexy associations, which were then compared between child abusers and other offender groups. In addition, a multinomial logistic regression analysis was conducted to investigate whether submissive-sexy associations have any incremental value beyond the already well-established child-sex IAT in identifying child abuser status. Finally, the potential contribution of submissive-sexy and child-sex associations in the (risk) assessment of child abusers was explored.

As hypothesized, child abusers had significantly stronger submissive-sexy associations than rapists. In contrast with our expectations, child abusers could not significantly be differentiated from non-sexual offenders when age was included as a covariate, although a clear trend in the predicted direction was emerging. When age was not included as a covariate, submissive-sexy associations indeed differentiated child abusers from both rapists and non-sexual offenders. Effect sizes indicated that these differences were all in the moderate to large range. The absence of significant or otherwise meaningful differences in submissive-sexy associations between rapists and non-sexual offenders appears inconsistent with previous research suggesting that dominance and power play an important role in the etiology of rape (Chiroro, Bohner, Viki, & Jarvis, 2004; Prentky & Knight, 1991). Assuming that our findings are replicable, it may be that rapists, unlike child abusers, are not especially attracted to submissiveness per se. However, it is still possible that attraction to more specific elements, such as subjugation and humiliation of victims (rather than their initial level of submissiveness), may play a role in rape (e.g., Proulx, Aubut, McKibben, & Côté, 1994).

Stronger child-sex associations also proved to be characteristic of child abusers. Effect sizes indicated that differences with other offenders were moderate to large, suggesting that child abusers are sexually attracted to children in particular, which sometimes contrasts with various child abusers' statements about their sexual orientation. The effect sizes were very similar to those found in a meta-analysis of studies using similar IAT measures (Babchishin, Nunes, & Hermann, 2013). Results of the current study are also consistent with the findings of the original study by Brown et al. (2009) who demonstrated (using a similar IAT) that sexual offenders with prepubescent victims clearly display stronger child-sex associations than non-sexual offenders (and sexual offenders with pubescent victims). However, our child abuser sample included both offenders against prepubescent and pubescent victims, which may have resulted in slightly weaker child-sex associations than we would have found otherwise.

The presence of both submissive-sexy and child-sex associations was more strongly associated with sexual offending against children, as compared with rape and non-sexual offending. Together these IAT measures were more effective in identifying child abuser status than either one alone. Moreover, the correlation between the submissive-sexy IAT and child-sex IAT was small and non-significant. These findings suggest that submissive-sexy associations are complementary to the child-sex associations in differentiating child abusers from other offenders, and that both types of implicit associations address distinct aspects of sexual interest associated with sexual offending against children.

The potential contribution of submissive-sexy and child-sex associations in the (risk) assessment of child abusers remains unclear. The non-significant correlations between the IAT measures and recidivism risk actually seem in line with the literature with inconsistent findings for the relationship between child-sex associ-

ations and risk (Babchishin, Nunes, & Hermann, 2013). More generally, the lack of a relationship with risk assessment scores may not be as problematic as it may first appear because risk assessment instruments usually reflect other predictors of recidivism besides sexual interests (e.g., general antisociality) and they do not completely overlap with actual recidivism (e.g., error).

Correlations between the implicit associations and external variables generally did not yield particularly impressive results. We expected to find significant correlations between the implicit associations of child abusers and their risk of recidivism and interpersonal anxiety, but this was only the case for child-sex associations and interpersonal anxiety. Child abusers with stronger child-sex associations reported higher levels of anxiety during various types of social interactions. This seems to suggest that interpersonal anxiety is related to sexual interest in children. This finding is in line with earlier studies indicating that social anxiety is associated with pedophilia (Eher, Neuwirth, Fruehwald, & Frottier, 2003) and, more generally, sexual offending against children (Nunes, McPhail, & Babchishin, 2012). The hypothesized correlations between submissive-sexy associations and interpersonal anxiety within the child abuser sample were not found. Closer examination of the data revealed there were no significant group differences in interpersonal anxiety between child abusers, rapists and the non-sexual offenders. Recent meta-analytic research by Nunes et al. (2012), however, indicated that child abusers report significantly higher levels of social anxiety on the Social Avoidance and Distress Scale (SADS; Watson & Friend, 1969) than rapists and non-offenders. This suggests that the IIS used in the current study might be less useful than the SADS in assessing interpersonal anxiety in offender samples, consequently resulting in the absence of the expected correlations.

The finding that child abusers have a sexual preference for submissiveness appears to be consistent with previous research of Kamphuis and colleagues (2005) who suggested that child abusers associate “sex” with “power.” In the current study the “submissiveness” was conceptualized as a characteristic of the child, while in the Kamphuis study “power” was conceptualized as a characteristic of the perpetrator. This suggests that child abusers associate themselves in a powerful position during sexual activities and children in a submissive position. However, it should be noted that the sample in the Kamphuis et al. study may have been more sexually aggressive toward adults than our sample, as suggested by their findings that the child abusers reported greater interest in and likelihood of forcing a woman to do something sexual than did the comparison groups of violent non-sexual offenders and university students. Thus, these child abusers may have indeed had stronger associations between “sex” and “power” than the comparison groups, but this may have had more to do with their propensity for sexual aggression against adults than their sexual offending against children.

In terms of measures, it is not uncommon to find poor agreement between different implicit measures (e.g., Fazio & Olson, 2003). Our pilot study indicated that the associations in the current study reflect a specific sexual preference for submissiveness. In contrast, the lexical decision task of the Kamphuis et al. study may have reflected a more general link between sex and power, such as an association between sex and dominating others. Moreover, IAT measures are thought to primarily reflect associations between the superordinate categories (e.g., submissive and sexy), whereas lexical decision task measures would reflect associations between the individual words because the superordinate categories (e.g., sex and power) to which they are assumed to belong are not presented (e.g., Fazio & Olson, 2003). Given these issues and the different stimuli and categories (implied in the lexical decision task), it is possible that these measures are assessing different constructs altogether. These issues could be explored in future research by administering both measures to the same sample.

This study provides evidence that submissive-sexy associations are relevant to sexual offending against children, but what exactly is being assessed by IAT measures remains unclear. We have interpreted our IAT measures as reflecting sexual interest in submissiveness versus dominance and children versus adults. However, the minimalist nature of the categories and stimuli (e.g., one or two words rather than complete sentences) required for these and many other implicit measures often creates ambiguity, which leaves responses open to multiple interpretations. For example, some researchers conceptualize the child-sex and similar IAT meas-

ures as assessing sexual interest in children (e.g., Babchishin, Nunes, & Hermann, 2013; Banse et al., 2010; Brown et al., 2009; Gray et al., 2005; Nunes et al., 2007), whereas others conceptualize them as assessing one of the implicit theories (or schemas) identified by Ward (2000) in which children are viewed as wanting and enjoying sexual contact with adults (e.g., Gannon & Polaschek, 2006; Gannon et al., 2007; Mihailides, Devilly, & Ward, 2004). Our results are consistent with both perspectives. Future research should address questions about the constructs assessed by these and similar implicit measures as well as larger issues regarding the overlap, distinctions, and relationship between sexual interests and beliefs supportive of sexual offending against children, such as implicit theories, schemas, cognitive distortions, and attitudes (e.g., Ó Ciardha, 2011).

One of the limitations of the current study concerns the operational definition of the patient samples. Because file data were used to define the different offender groups, it must be recognized that some patients might have been misclassified. That is, some patients may have committed a sexual offense for which they were not convicted, and/or some non-sexual convictions (e.g., burglary) might actually be sexually motivated (e.g., attempt to rape). Furthermore, it should be noted that this study was conducted with patients with severe Cluster B personality disorders, who were convicted of serious offenses, and stayed in a highly secure environment, and without care or treatment relapse would be deemed very likely. Nearly all child abusers (92.6%) had a sexual deviation often in combination with an extensive history of sexual and/or aggressive offenses, consequently resulting in a high risk of recidivism. This lack of variation may have attenuated some correlations between IAT effects and recidivism risk and therefore our findings might not be applicable to sex offenders in general.

This study explored the extent to which a sexual preference for submissiveness is complementary to a sexual preference for children in identifying sexual offenders against children. Results indicated that child abusers are sexually attracted to both children and submissiveness. This finding provides more insight into the origin of child sexual abuse, because not all child abusers have a sexual interest in children (Seto, 2008). Some child abusers do have an exclusive preference for children, but others are also sexually interested in adults or have a preference for adults. However, a better understanding of the construct validity of these IAT measures is required before they are used in the supervision, risk assessment, and treatment of child abusers. Although IAT measures may allow for a relatively easy, low-cost, quick and complementary method of assessing sexual interests, more research into the relation between IAT scores and sexual recidivism is required for a better understanding about its predictive validity.

CHAPTER FIVE

Development of a cognitive-behavioral group treatment program for child abusers and rapists in forensic psychiatric institutions

This chapter has been submitted.

ABSTRACT

Detailed descriptions of cognitive-behavioral therapy (CBT) interventions for forensic psychiatric sexual offenders are scarce. This article describes the development of a group intervention for rapists and child sexual abusers who are detained under hospital order. Based on the literature regarding dynamic risk factors of sexual violence and effectiveness studies for sexual offender treatment, we developed a CBT-based group program for forensic psychiatric sexual offenders. This treatment program consists of (risk) assessment and treatment plans, a separate basic training for rapists and child sexual abusers, specific group training, which includes modules for psycho-education, cognitive distortions, and prosocial skills. Hereafter, our first clinical experiences with this program are discussed, together with recommended conditions for its implementation. With this public treatment program, we hope to initiate research on a protocolled and evidence-based treatment program for forensic psychiatric sexually violent inpatients in the Netherlands.

INTRODUCTION

The Dutch center of Expertise for Forensic Psychiatry (EFP) provides general guidelines for the treatment of forensic psychiatric sexual offenders (Expertisecentrum Forensische Psychiatrie, 2014). These guidelines are based on forensic experts' opinion and offer comprehensive overviews of state-of-the-art (risk) assessment, treatment interventions, and resocialization measures. However, the professionals differed on the best approach, resulting in different practical applications of these guidelines in the various forensic psychiatric institutions in the Netherlands. Because of the relatively small number of sexual offenders admitted to Dutch forensic psychiatric hospitals (in total between 430 and 540 in 2013, Van Gemmert & Van Schijndel, 2014), it is virtually impossible for the individual institutions to evaluate empirically their own adaptation of the aforementioned guidelines. Consequently, Dutch research on the effectiveness of sexual offender treatment interventions is scarce and collaboration between the various institutions is needed to evaluate treatment effects. This article describes a cognitive-behavioral therapy (CBT) based treatment protocol for forensic psychiatric sexual offenders that can be used for a national outcome study.

The Risk-Need-Responsivity principles (RNR; Andrews, Bonta, & Hodge, 1990; Andrews & Bonta, 2010) are generally regarded as a leading guideline for the assessment and treatment of (sexual) offenders (Ward, Mesler, & Yates, 2007). The risk principle implies that the intensity of treatment interventions should be matched to the offender's recidivism risk: offenders with a high risk of recidivism should receive more intensive treatment than offenders with a low risk of recidivism. Although static risk factors (i.e., historical/highly stable risk factors), such as prior (sexual) offenses, stranger victims, and antisocial personality disorder, are generally regarded as the best predictors of sexual recidivism (e.g., Hanson & Bussière, 1998; Hanson, Harris, Scott, & Helmus, 2007), static risk factors are unchangeable and therefore cannot be targeted during treatment. As a consequence, the need principle states that, in order to reduce the risk of (sexual) recidivism, treatment interventions should focus on criminogenic needs (i.e., changeable/dynamic risk factors), such as antisocial cognitions, personality features, and interpersonal skills (Andrews & Bonta, 2010). Finally, the responsivity principle determines that treatment interventions are most effective when they are adapted to the abilities, skills and learning styles of the offender.

The Good Lives Model of offender rehabilitation (GLM; Ward, 2002; Ward & Gannon, 2006; Ward & Stewart, 2003) was developed several years ago as an alternative approach for interventions that mainly focus on the reduction of risk factors (i.e., the RNR principles). This strength-based treatment framework is based on the belief that people offend because they are trying to obtain primary human goods. According to the GLM approach, sexual offending is merely an inadequate, inappropriate attempt to obtain these human goods. Improving the capabilities and strengths of offenders by teaching them to obtain their life goals in socially acceptable, personally satisfying, and sustainable ways will reduce the risk of reoffending. Within this treatment framework, offenders formulate their life goals within several

areas (i.e., life, knowledge, excellence in play, excellence in work, excellence in agency, inner peace, relatedness, community, spirituality, pleasure, and creativity). All obstacles and steps towards fulfilment of these life goals become treatment targets, which involve not only reducing risk factors (i.e., criminogenic needs) but also improving protective factors. To date, there has hardly been any empirical research on the effectiveness of GLM-based treatment interventions (Marshall & Marshall, 2014), although there seems to be consensus on a balanced treatment approach which focusses on both negative risk and positive protective behaviors (Marshall et al., 2005).

Empirical research provided us with a good understanding of the risk and criminogenic need factors of criminal behavior. Andrews and Bonta (2010) formulated eight factors, the Central Eight, that are associated with general recidivism. That is, history of antisocial behavior, antisocial personality pattern, antisocial cognition, antisocial associates, family/marital circumstances, school/work, leisure/recreation, and substance abuse. A meta-analysis by Hanson and Morton-Bourgon (2005) demonstrated that deviant sexual interests and antisocial orientation/lifestyle instability are the primary risk factors associated with sexual recidivism. Other empirically supported risk factors for sexual recidivism are self-regulation problems, poor problem solving skills, and offense-supportive cognitions (Hanson & Harris, 2000, 2001; Mann, Hanson, & Thornton, 2010), whereas several variables commonly addressed in sexual offender treatment (e.g., motivation for treatment, denial of sexual offense(s), psychological distress, victim empathy) have little or no relationship with sexual recidivism (Hanson & Morton-Bourgon, 2005; Mann et al., 2010).

Sexual offenders constitute a heterogeneous group, with each subgroup being subject to specific risk factors (Ward & Steward, 2003). For practical reasons, and in line with many theories (e.g. Simon, 1997), forensic psychiatric sexual offenders are generally divided into two subgroups: child sexual abusers and rapists (e.g., De Vogel, De Ruiter, Van Beek, & Mead, 2004). Child sexual abuse is defined as sexual contact with victims under the age of 16 years, whereas rape concerns non-consensual sexual contact with a person of 16 years or above. The Central Eight are mainly applicable to rapists, as rapists commit more non-sexual offenses than child sexual abusers (Wilson, Mouilso, Gentile, Calhoun, & Zeichner, 2015). As a consequence, treatment interventions for rapists should also focus on reducing risk factors of general antisociality (e.g., lack of coping skills in conflict situations and in relation to women, substance abuse) in addition to risk factors of sexual violence (e.g., paraphilic disorders). For child sexual abusers, treatment programs should be focused especially on deviant sexual interests, cognitive distortions (e.g., children are sexual beings) and limited prosocial skills, particularly in intimate relationships.

International meta-analyses have consistently demonstrated that treatment programs for sexual offenders are associated with significantly but modestly lower rates of both general and sexual recidivism (e.g., De Ruiter, Veen, & Greeven, 2008; Grossman, Martis, & Fichtner, 1999; Lösel & Schmucker, 2005; Schmucker & Lösel, 2015), for which cognitive-behavioral interventions produced the largest decrease in recidivism. These interventions are primarily inspired by the Self-regulation model of the sexual offense (Ward, Hudson, & Keenan, 1998), a revision of the Relapse prevention model (Pithers, Marques, Gibat, & Marlatt, 1983). The self-regulation model contains a nine-stage process towards sexual offending, and addresses both goals of the offending behavior (avoidance vs. approach) and the way these goals are achieved (passive vs. active), resulting in four hypothesized pathways that lead to sexual offending: (a) avoidance/passive: the sexual offender loses self-control, (b) avoidance/active: the sexual offender initially tries to avoid an offense, but eventually loses self-control, (c) approach/passive: the sexual offender commits the offense without conscious planning, and (d) approach/active: the sexual offender wishes to commit and consciously plans the offense and feels satisfied afterwards. Hanson (2000a), however, stated that treatment interventions should focus on risk factors that initiate and maintain sexual offenses (e.g., deviant sexual interests) and factors that could prevent relapse (e.g., self-regulation strategies), rather than strategies that could lead to sexual offenses. The explicit aim of treatment is preventing reoffending by addressing the risk factors of sexual reoffending and meta-analytic research has identified various predictors that may be criminogenic needs, but it still remains unclear which *method* is (most) effective to rehabilitate sexual offenders (Hanson, 2014).

Examining the treatment effects of individual interventions is difficult because of the relatively low *base rate* of sexual recidivism. The average rate of observed sexual recidivism among previously convicted sexual offenders is approximately 13% after a follow-up period of 5 years (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2009). To demonstrate significant effects, treatment interventions need to be powerful and include a large number of participants (Hanson, 2014; Prentky, 2003). A study by Marques, Wiederanders, Day, Nelson, and Van Ommeren (2005) is one of the few large controlled researches that explored the effects of an individual CBT program for sexual offenders. The results indicated that the sexual and violent recidivism rates of treated sexual offenders did not significantly differ from that of untreated sexual offenders. However, it should be noted that a subgroup of treated high-risk sexual offenders who achieved specified treatment goals recidivated at significantly lower rates than offenders who failed to achieve those treatment goals. Another CBT-based treatment program for high-risk sexual offenders was evaluated by Olver, Wong, and Nicholaichuk (2009). After a follow-up period of 20 years, the treated sexual offenders recidivated significantly less than the untreated comparison group. Overall, high-risk sexual offenders seem to benefit more from treatment programs than sexual offenders with a medium or low recidivism risk (Beggs & Grace, 2011; Olver, Nicholaichuk, Kingston, & Wong, 2014; Olver, Wong, Nicholaichuk, & Gordon, 2007; Smid, Kamphuis, Wever, & Van Beek, 2014b), presumably because high-risk offenders have more room to show improvement. Unfortunately, treatment manuals are usually not publicly available, which hinders large-scale effectiveness research. Additionally, effect studies hardly report on the issue of treatment integrity, with the exception of Friendship, Mann, and Beech (2003). Treatment integrity means that treatment programs should be performed by trained and supervised professionals in accordance with the manual (Mann, 2009).

Although there is no evidence for the effectiveness of group therapy above individual therapy, group therapy is almost universally regarded as the preferred treatment option for sexual offenders (Jennings & Sawyer, 2003; Serran, Marshall, Marshall, & O'Brien, 2013). The benefits of group therapy relate to cost effectiveness, an environment of participants with similar problems, a wide range of cognitive distortions and experiences, and less pressure on the participants (Stinson & Becker, 2013). According to Marshall, Anderson, and Fernandez (1999), group therapy is more effective than individual therapy because other participants are regarded as more credible than therapists, especially when addressing cognitive distortions. Advantages of closed treatment groups in comparison with open treatment groups are that all participants receive the same treatment, the group process is not disturbed by the arrival of new participants, and therapists (and participants) become better informed about the specific problems of all participants (Stinson & Becker, 2013), whereas open groups should be considered when new participants are regularly admitted to shorten the waiting list period for treatment.

The current article describes the development of a cognitive-behavioral group treatment program for forensic psychiatric sexual offenders. The content and form are the result of a review of the literature and clinical experience with this population and aims to improve the quality of Dutch studies on the effects of sexual offender treatment programs (Hornsveld, Kanters, Gijs, et al., 2015) by focusing on: (1) up-to-date (risk) assessment, (2) modules for both reducing dynamic risk factors and strengthening protective factors, (3) a manual for therapists and a work book for patients, (4) quality requirements for therapists, and (5) project management for treatment integrity.

TARGET GROUP

According to the Dutch Entrustment Act (TBS: Terbeschikkingstelling), offenders who have committed an offense for which a maximum imprisonment of four or more years applies (such as child sexual abuse, rape, manslaughter or murder) and who cannot be held (fully) responsible for their actions can be detained under hospital order. This diminished accountability is defined as a causal relation between a diagnosis of mental illness and the offense committed (e.g., Van Marle, 2000, 2002). To determine such relationship, suspects are extensively examined

by a multidisciplinary team consisting of psychiatrists, psychologists, and nurses on the ward in specialized assessment facilities of the Dutch Ministry of Security and Justice. These offenders are considered to present such high risk of sexual and violent recidivism that without treatment they would remain a danger to others and/or to the general safety of persons and property. Treatment takes place in a highly secure environment and is primarily focused on dynamic criminogenic needs. That is, (clusters of) changeable problem behaviors associated with increased risk of reoffending after discharge.

VIGNETTE 1: child sexual abuser.
Eric had his first sexual experience when he was 8 years old when an older classmate showed him how to masturbate. At the age of 12, Eric began peeking at adult women. Eric married at the age of 30. Although the sexual contact was very limited during the marriage, the couple conceived a daughter. Initially, Eric only downloaded pornography, but soon he started exposing himself and masturbating in front of adult women. After Eric is arrested and sentenced to outpatient treatment, he is abandoned by his wife. Eric, however, continued to exhibitionate and his sexual interest slowly shifts towards children. Eventually, Eric rapes several underage girls who were friends of his daughter. He is arrested again and sentenced to detention under hospital order.

VIGNETTE 2: rapist.
Troy was born in a large family from the Caribbean. Both parents had several children from previous relationships. When Troy was 12 years old, he was placed in a boarding school because of persistent behavioral problems. In the boarding school, Troy came in contact with soft and hard drugs, and he displayed inappropriate sexual behavior towards his female classmates. Troy had employment problems and he regularly ended up in jail because of burglaries, assaults or robberies. He also conceived five children with three different women. Under the influence of drugs, Troy decided to kidnap a woman. He threatened a random stranger with a knife and forced her to get into the trunk of his car. Once home Troy realized he made a mistake and tried to correct this by having sex with her. Troy is sentenced to detention under hospital order for kidnapping and rape.

TREATMENT PROGRAM

Based on the literature and our clinical experience with forensic psychiatric sexual offenders, two heuristic models were formulated, containing psychological risk factors for the maintenance of sexual offending that are eligible for treatment, and factors that should be taken into account during treatment (see also Hornsveld, Kraaimaat, Zwets, & Kanters, in press). For child sexual abusers, the focus of treatment should be primarily on cognitive distortions regarding sex with children and limited social skills in general and in intimate relationships in particular (see Figure 1). For rapists, treatment needs to focus primarily on antisocial norms and values, especially during contact with women, and the lack of coping skills in conflict situations (see Figure 2). Based on these models, we developed a cognitive-behavioral group treatment program for sexually violent forensic psychiatric inpatients with the following components: individual *(risk) assessment* and *treatment plans*, followed by two group therapies that are the heart of the program: the *basic training* and *specific training*.

(Risk) assessment and treatment plans
Risk assessment is a method of determining the (statistical) probability that an offender will reoffend, which is needed to determine the intensity of treatment for forensic psychiatric patients and the likelihood of relapse after discharge (Bonta & Andrews, 2007; Prentky, Brabaree, & Janus, 2015). However, most sexual offenders

FIGURE 1

Model of factors that result in de maintenance of deviant sexual behavior of child sexual abusers.

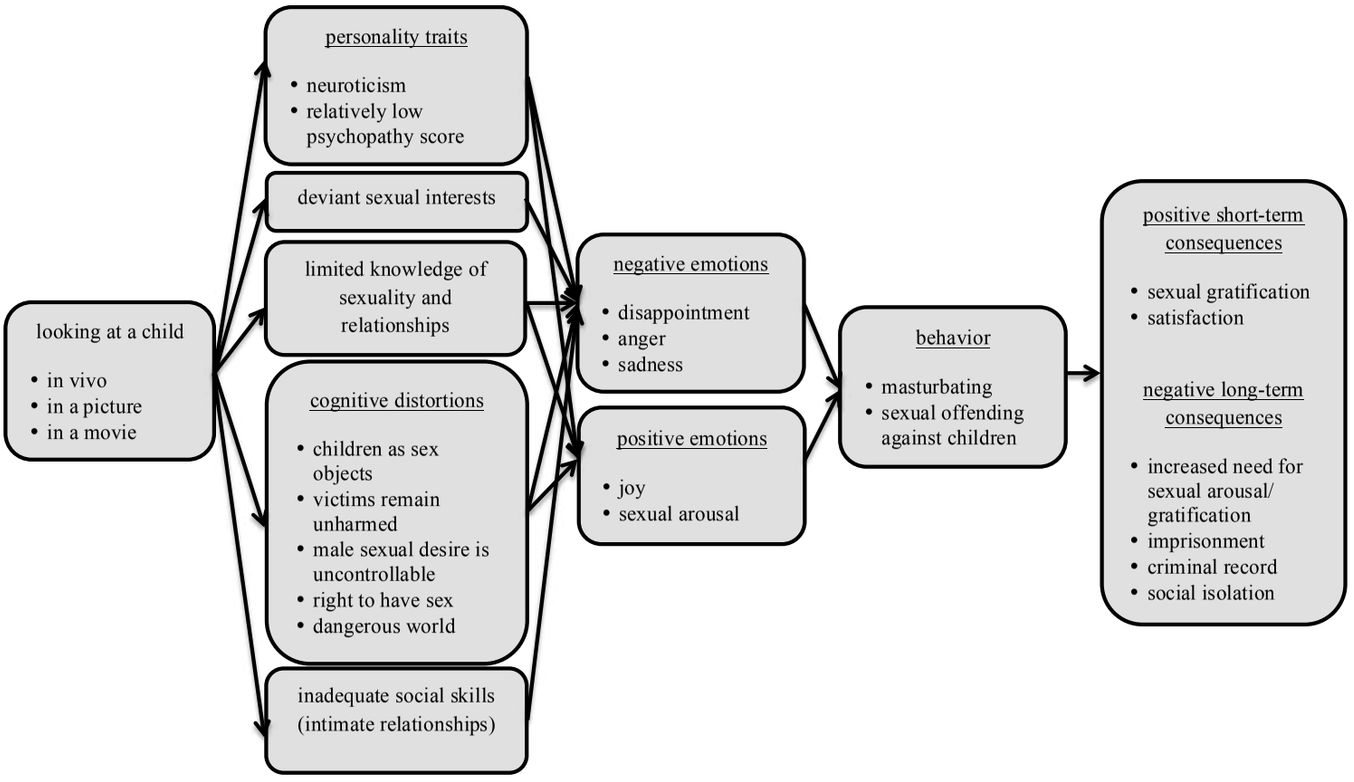
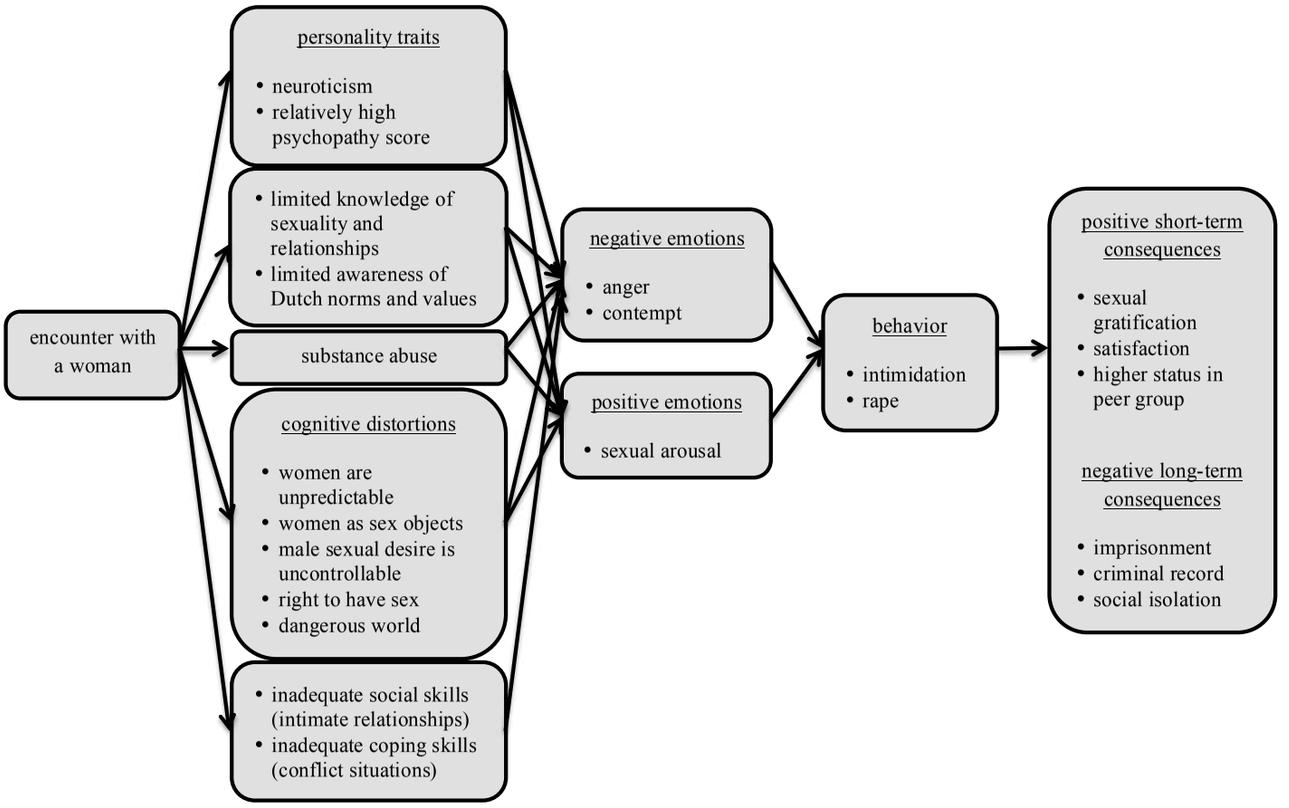


FIGURE 2

Model of factors that result in de maintenance of deviant sexual behavior of rapists.



do not reoffend. Approximately 10% of all treated, and 20% of all untreated sexual offenders are reconvicted after a follow-up period of 10 years (Hanson, Bourgon, Helmus, & Hodgson, 2009; Schmucker & Lösel, 2008). A large meta-analysis by Hanson and Bussière (1998) revealed that rapists have a higher risk of sexual recidivism after an average follow-up period of 5 years (18.9%) than child sexual abusers (12.7%). This increased risk of recidivism was also found for violent recidivism, with base rates of 22.1% for rapists and 9.9% for child sexual abusers, and general recidivism, with base rates of 46.2% for rapists and 36.9% for child sexual abusers, respectively. Smid, Kamphuis, Wever, and Van Beek (2013) examined to what extent treatment referrals of forensic psychiatric sexual offenders are related to risk levels and found that rapists received treatment of lesser intensity than indicated by their risk levels, whereas child sexual abusers generally received overly intensive treatment. Altogether, these findings suggest that rapists should generally receive a more intensive treatment than child sexual abusers.

The available risk assessment methods can be categorized into two main approaches: professional judgment and actuarial assessment (Hanson, 2000a). The professional judgment approach determines risk levels with subjective evaluations from forensic professionals, which can be solely based on personal experience (unstructured professional judgment) or guided by a list of relevant risk factors associated with sexual recidivism (structured professional judgment). With actuarial risk assessment, risk levels are determined by the presence/absence of empirically well-supported factors that differentiate (sexual) recidivists from non-recidivists. Risk levels can be calculated by solely using a statistical scoring algorithm (pure actuarial approach), which can be adjusted afterwards based on potentially important considerations not addressed in the standardized assessment (adjusted actuarial approach). Individual risk scores are compared to recidivism rates of large offender groups with similar risk levels, indicating the probable rate of (sexual) recidivism for that individual. Although almost all risk assessment methods emphasize the use of various risk factors for determining recidivism, there is general consensus for the superiority of structured approaches over unstructured approaches (Grove, 2005; Hanson & Morton-Bourgon, 2009). (Risk) assessment is done prior to treatment intervention. To promote treatment motivation, the use of risk assessment instruments of so-called protective factors can be considered, although its contribution to the assessment of recidivism risk is unclear (Tharp et al., 2012; Thornton, Kelley, & Nelligan, 2017; Klein, Rettenberger, Yoon, Köhler, & Briken, 2014).

The dynamic items of risk assessment instruments provide important information regarding the problem behaviors of the patient, but these items often lack situation specificity or refer to very broad domains. Impulsivity, for example, can manifest itself in various different ways, such as sensation-seeking behavior, a lack of premeditation, or a lack of perseverance, whereas History of employment problems could refer to conflicts with colleagues, frequently being fired, or the inability to find employment. Consequently, relatively high scores on the dynamic items require further analysis: what does impulsivity or history of employment problems exactly mean? In which situations did the problem behavior occur? What emotions and cognitions played an important role? And what were the consequences in the short and long term? We believe that dynamic risk items alone provide insufficient starting points for an individual treatment plan. Self-report measures, clinical observations, and interviews with the patient can provide additional insight into the situations in which the specific problem behavior occurred. After the assessment of recidivism risk and criminogenic needs, a functional analysis is needed to establish a treatment plan with specific treatment goals (Hart, Sturmey, Logan, & McMurran, 2011). Figure 3 and Figure 4 demonstrate examples of a functional analysis for a child sexual abuser (Eric, see vignette 1) and for a rapist (Troy, see vignette 2).

Basic training

Because child sexual abusers often contend with a limited repertoire of social skills in intimate relationships and rapists often have hostile attitudes against women (e.g., Mann et al., 2010), the treatment program begins with a separate basic training for each of the two subgroups. For the rapists, the basic training consists of the modules *anger management*, *social skills* and *moral reasoning* (see Hornsveld, 2004), supplemented by the modules *prosocial thinking* and *consequences of behavior in the short- and long-term* (see Hornsveld & De Vries, 2009). Each module

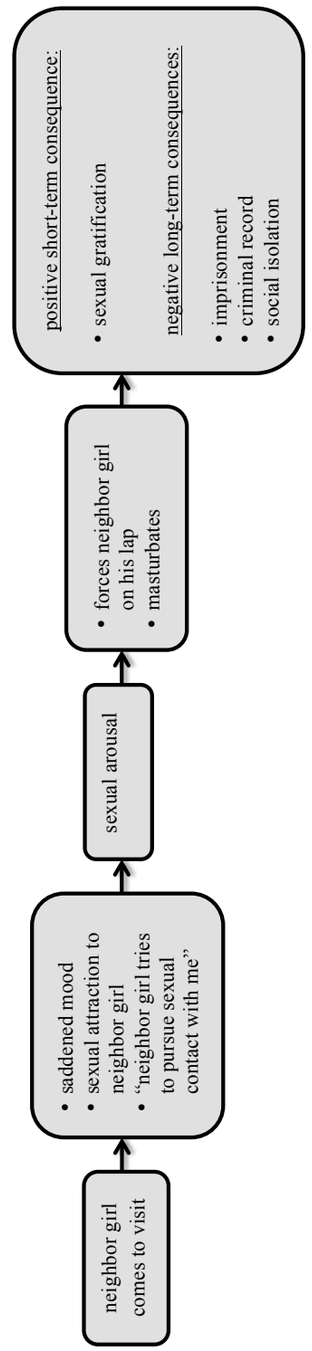


FIGURE 3

Functional analysis of Eric's problem behavior (Vignette 1).

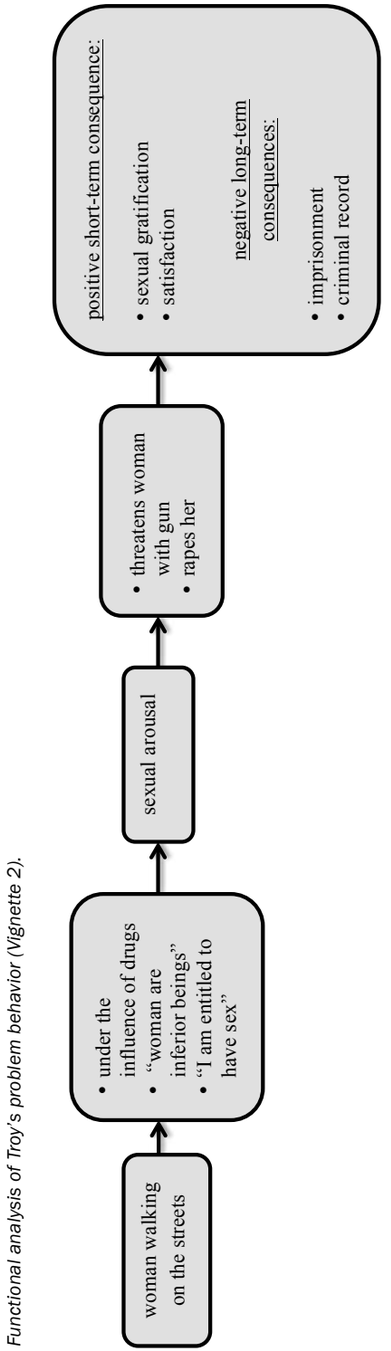


FIGURE 4

Functional analysis of Troy's problem behavior (Vignette 2).

consists of 5 sessions of one and a half hour. The basic training for child sexual abusers is a variant in which, besides anger, both fear and gloom are discussed. For the child sexual abusers, the module *social skills* consists of 15 sessions of one and a half hour, so that all important skills for initiating and maintaining intimate relationships with adult partners can be practiced.

Specific training

After their separate basic training, both the child sexual abusers and rapists receive a group training with three modules, namely *psycho-education*, *cognitive distortions*, and *prosocial skills*.

The module *psycho-education* (Hornsveld, Kanters, Van der Wal, & Zwets, 2015) consists of 14 sessions of one and a half hour and aims to improve the knowledge and experience of the participants on various aspects of sexuality and intimate relations and informing them about the Dutch values and standards. The topics that are covered include gender roles, sexual anatomy, sexual arousal, sexually transmitted diseases, contraception, sexual diversity, sexual deviation, pornography and sexual violence. Each session starts with information on these topics, followed by a debate with the participants. Therapists correct the participants when they express an opinion which is factually incorrect or contrary to Dutch legislation. Finally, the participants are given homework assignments that they have to answer in writing.

The module *cognitive distortions* (Hornsveld & Kanters, 2016a) consists of 20 sessions of one and a half hour and aims to change antisocial cognitions into prosocial cognitions. The most common cognitive distortions are discussed: four cognitive distortions relate to rapists (e.g., women are sexual objects; Ward & Keenan, 1999) and four on child sexual abusers (e.g., children are sexual beings; Polaschek & Ward, 2002). Each session starts with a case about a child sexual abuser or a rapist, after which the participants discuss questions from the portfolio. If a participant has a cognitive distortion-based opinion, he is asked to explicate the cognitive distortion. Next, the opinion of the other participants is discussed and the therapists also provide comments. The participant is then asked to convert

his distorted cognition into a prosocial cognition. At the end of the session, the participants receive homework assignments to change cognitive distortions into prosocial cognitions.

The module *prosocial skills* (Hornsveld & Kanters, 2016b) contains at least 26 sessions of one and a half hour and aims to teach participants the necessary skills for their return to society. Topics that are covered include: building a social life, finding (and keeping) employment or daily occupation, and developing (and maintaining) an intimate relationship with a partner. Participants practice prosocial behavior through role play, using video equipment and an actress. The video recordings ensure that participants evaluate their behavior and the actress increases the realism of the situations practiced. Before the role play, the participant is asked to demonstrate how he would behave in the given situation. After the role play, the other participants, the actress, and the therapists give the participant constructive feedback on his performance and the video recording is viewed. Finally, the participant practices the alternative behavior several times until a good result is achieved. Therapists determine beforehand which participant should practice the given situation. Sometimes other participants are asked to demonstrate how they would behave in the same situation. Therapists must ensure that all participants are equally addressed to practice their skills.

VIGNETTE 1: child sexual abuser.

During the module *psycho-education*, it was emphasized that pedophilia is not a socially accepted sexual interest and that sexual contact with minors is prohibited. During the module *cognitive distortions*, Eric's cognitions that initiated and justified his deviant sexual behavior were addressed. That is, "I am entitled to have sex", "my victims have suffered no physical pain", and "I did not ejaculate inside my victims". Eric received homework assignments in which he had to memorize situations where he had these thoughts. Then, Eric had to visualize (and write down) appropriate alternative behavior for that given situation. When discussing his homework assignments, we noticed Eric's tendency to minimize his deviant sexual behavior. During the module *prosocial skills*, Eric had to role play a casual meeting with an adult woman (played by an actress) and a job interview for voluntary work. In both cases, he demonstrated his limited social skills by mentioning unexpectedly that he was a convicted sexual offender, but they should not be afraid of him.

VIGNETTE 2: rapist.

During the module *psycho-education*, Troy regularly made sexist statements. He stated, for instance, that some women get sexually aroused by forced sexual contact. Troy learned that, in the Netherlands, women are equal to men and that several of his behaviors towards women are unacceptable. Noteworthy is that Troy sees his former partner(s) solely as the mother of his children rather than his wife or partner. During the module *cognitive distortions*, Troy indicated that his misogynistic behavior could be explained by cognitions such as: "I am entitled to have sex", "women like sex all time", and "we live in a dangerous world". Troy's homework assignments consisted of describing alternative thoughts and behavior for past situations in which he acted condescending and/or aggressive towards women. During the module *prosocial skills*, Troy demonstrated he already possessed good social skills. His initial contact with women is adequate, but Troy gets intrusive when relationships become more intimate. Therefore, Troy was thought to consider both the short- and long-term consequences of his behavior. Troy also learned to interpret the signals of women more adequately, so he can better assess whether or not they are interested in him. In addition to treatment for his deviant sexual behavior, Troy also received treatment for his drug addiction.

Final training

The last six sessions of one and a half hour are devoted to adequately managing high-risk situations that were identified during the (risk) assessment procedure and previous treatment sessions. During these final sessions, participants get the opportunity to demonstrate their improved insight in deviant behavior by demonstrating alternative behavior during role play of personalized high-risk situations. If the participant shows insufficient improvement at the end of the six scheduled sessions, the number of sessions can be extended or it can be decided that the participant should re-attend some modules of the treatment program. Especially for participants with a combination of sexual deviance and psychopathy, re-attending modules may be indicated (Harkins, Beech, & Thornton, 2012; Hawes, Boccaccini, & Murrie, 2013).

Treatment evaluation

At the end of the treatment program, some sessions are dedicated to treatment evaluation. The same risk assessment instruments as at the beginning of the treatment program are administered to re-evaluate the risk of (sexual) recidivism. An evaluation report for each participant is made on the basis of the risk assessment and clinical impressions of the therapists during the treatment. This report describes the participant's treatment goals, his motivation during the program, clinical impressions of the progress made by the participant, and the risk assessment at the end of the treatment program. If the participant has made insufficient treatment progress, it is advised to offer him additional treatment. If the risk of recidivism remains consistently high even after several treatment attempts, care in a long-stay institution should be considered. The evaluation report is discussed with the participants before it is sent to the relevant officials, such as the primary treating physician.

Additional interventions

Preferably, participants attain the modules as described above. However, sometimes it may be necessary to conduct individual conversations, for example, because a participant threatens to quit the treatment program or because further explorations of specific problem behaviors are needed. This treatment program can be combined with almost any other treatment protocol, individually or group-based, such as trauma, depression, and/or substance abuse.

FIRST CLINICAL EXPERIENCES

At the start of the module *psycho-education*, participants generally know little about sexuality and intimate relationships. Most were raised in an environment in which women and homosexuals are discriminated against. Some participants even believed that sexual violence is allowed in certain situations. Various participants were sexually abused during childhood. Child sexual abusers tended to give socially desirable answers, but sometimes they expressed that sexual contact with a minor should be allowed. Rapists often expressed sexist views on sexual diversity and interacting with women. Therefore, therapists should regularly emphasize that sexual contact with children and violence against women and men are unacceptable and prohibited.

During the module *cognitive distortions*, therapists must ensure that the rapists do not continuously criticize the child sexual abusers and making their own sexually deviant behavior become under-addressed. Noteworthy is that child sexual abusers often gave comprehensive answers to the homework assignments in order to emphasize that they are not sexually attracted to children. Some group sessions can turn out to be strenuous for the participants. When the fatigue increases and self-control decreases, participants are more likely to make sexist comments that reflect their cognitive distortions. When participants are not confronted with their cognitive distortions in a constructive way, the atmosphere could easily become unpleasant. Therefore, therapists need to proceed in such a way that an open and safe therapeutic environment is guaranteed. Too much stress among the participants impedes addressing cognitive distortions. For participants who repeatedly disrupt the group process (generally participants with a high score on psychopathy

and sexual deviation), exclusion from further participation in the treatment program can be considered. In that case, the excluded participant could again participate in the next treatment group.

During the module *prosocial skills*, we noticed significant differences in skills between child sexual abusers and rapists. Rapists generally appeared to have a good repertoire of social skills and they often learn to quickly replace inadequate and/or antisocial behavior with prosocial behavior. Noteworthy are their hostile attitudes against women. Therapists must ensure that hostile attitudes against women are explicitly addressed during role play. Rapists can act on impulse (e.g., because they are under the influence of drugs) and are prone to giving insufficient attention to the possible negative consequences of their behavior. The child sexual abusers generally behave rather awkwardly and they initially struggle to change their inappropriate social behavior. When, after several sessions, the child sexual abusers become more at ease, they are able to make better use of the given feedback, especially by reviewing the video recording of the role play.

During the final training, in which *managing high-risk situations* is addressed, most participants are further informed about the mandatory aftercare program in an outpatient treatment facility. Some child sexual abusers appear to have learned remarkably little of the clinical program and they hardly seem to realize the difficulties that await them in the community. When they return to the community, it is expected of them to control their sexual desires while they have to survive in a hostile environment. Some child sexual abusers seem to persist in justifying sexual contact with minors such that admission in a long-stay institution seems almost inevitable.

CONDITIONS FOR IMPLEMENTATION

Therapists

Effects of treatment are largely determined by the knowledge and experience of therapists. For group treatments, it is important that therapists closely monitor the group process to prevent participants from exchanging effective strategies for deviant (sexual) behavior (Emmelkamp, Emmelkamp, De Ruiter, & De Vogel, 2002). Treatment for forensic psychiatric sexual offenders should be performed by qualified therapists with experience in group therapy, preferably a combination of a man and a woman. The female therapist can provide feedback about the interaction with women, whereas the male therapist can act as a role model. Both of them can provide feedback on interacting with the opposite sex. It is important that therapists always realize that sexual offenders need an effective treatment and no punitive comments (Abracen & Looman, 2016; Prescott & Levenson, 2010; Ward, 2010). Marshall and colleagues (2005) suggested that a more empathic, respectful but also critical therapeutic style should be used and that an aggressive, confrontational treatment approach is less effective. The therapists should be able to quickly create functional analyses when the behavior exhibited by the participants is inadequate and role play situations should be adjusted accordingly. Qualified staff on the ward can increase the impact of the treatment program by validating desired alternative behavior and by ignoring (or possibly punishing) unwanted deviant behavior. In order to respond appropriately to the participants' behavior on the ward, staff members must be aware of the objectives and methodology of the treatment program. Participants can inform staff during patient-staff meetings about their participation in the program. In addition, the treatment policy is regularly discussed between therapists and staff.

Treatment manuals

For the execution of the treatment program, treatment manuals are available for the therapists. All participants receive a portfolio for the homework assignments. In addition to the regular therapy sessions, there are separate weekly meetings for completing the homework assignments. According to Mann (2009), a good manual provides a structured treatment program with a stable relationship between therapist and participant. Moreover, public manuals are important for effect studies because they allow for replication.

Treatment integrity

All therapists should be trained in delivering the treatment program. For the sake of treatment integrity (Hollin, 1995), it is important that therapists are supported and supervised by an experienced program leader, for example, a forensic clinical psychologist. The management of the institution must ensure that the treatment program is part of the regular treatment policy so that all sexual offenders complete the treatment program. The program leader reports regularly to management on the experiences with the treatment program and is also responsible for managing the data during the assessment phase.

DISCUSSION

The cognitive-behavioral group treatment program for sexually violent inpatients described in this article meets the previously mentioned criteria for an effective treatment intervention (Hornsveld, Kanters, Gijs, et al., 2015). The content of this treatment program is publicly available and can be used for a national effect study. Treatment effects are preferably measured by randomized controlled trials (RCTs) with a prospective study design and a follow-up period of at least 5 years. For such a large research project, it is essential that the various Dutch forensic psychiatric institutions collaborate on the implementation and evaluation of treatment programs for sexually violent inpatients, which would require large investments of these institutions. Although less desirable, Hanson (2014) proposed an alternative approach to evaluate treatment effects. That is, dynamic risk assessment instruments may be used to measure treatment outcome when these instruments become more capable of detecting change as a result of treatment. According to Hanson (2014), this alternative "would substantially shorten the necessary follow-up periods from years to mere months" (p. 6).

Although this group treatment program is based on the most recent literature and clinical experience, its effectiveness is not yet empirically examined and it probably needs further future adjustment(s). For example, sexual deviance, one of the most powerful offense-related psychological risk factors (Hanson & Morton-Bourgon, 2005), is not directly addressed in this program. According to several professionals working in the forensic field, pharmacotherapy is indicated for hypersexual and/or paraphilic disordered offenders who have great difficulty controlling their deviant sexual impulses (Assumpção, Garcia, Garcia, Bradford, & Thibaut, 2014; Thibaut et al., 2010) because these offenders have an increased recidivism risk, especially when they meet the criteria for psychopathy (Hawes et al., 2013; Hildebrand, De Ruiter, & De Vogel, 2004). Despite the lack of empirical support for pharmacological interventions (Dennis et al, 2012; Schmucker & Lösel, 2015), integration of pharmacotherapy should be considered in the treatment of sexual offenders (Marshall & Marshall, 2014).

A major challenge in the treatment of sexually violent inpatients is practicing alternative cognitions and skills in a realistic environment. Therapists can struggle to properly evaluate whether the alternative cognitions or skills will indeed be applied outside the closed environment of the institution. Virtual reality is a new technique that may provide support in the treatment of sexual offenders (see Renaud, Rouleau, Granger, Barsetti, & Bouchard, 2002; Renaud et al., 2014). Virtual Reality Exposure Therapy (VRET) is already applied in the treatment of anxiety disorders and a meta-analysis by Powers and Emmelkamp (2008) demonstrated that VRET is equally effective as exposure in vivo. In the treatment of social anxiety, VRET proved to be even more effective than exposure in vivo (Kampman et al., 2016). Virtual exercises may be a promising addition to the residential treatment of sexually violent inpatients, both child sex abusers and rapists. An ambulatory module, in which the focus is more on self-regulation skills, will be added to the program, with the aim of independently displaying adequate behavior in new everyday situations. Further research is needed to demonstrate whether this treatment program will result in a significant reduction of recidivism risk on the long term.

CHAPTER SIX

General discussion

Sexual offending is a widespread international problem (Pereda, Guilera, Forns, & Gómez-Benito, 2009a, 2009b). Identification of relevant risk factors for sexual offending is essential for a better understanding of deviant sexual behavior and to implement the appropriate prevention and treatment interventions (Hanson & Morton-Bourgon, 2005). The general aim of this dissertation was to explore to what extent various risk factors of (sexual) (re)offending are relevant for the (risk) assessment and treatment of sexual offenders detained by TBS-hospital order. In Chapter 1, I provided a general theoretical introduction on sexual offending, including its (legal) definition, prevalence rates, and various models regarding its etiology. The chapter continued with the importance of sexual deviance as a risk factor for sexual offending and the need for solid risk assessment for sexual offenders. Finally, several guidelines for the treatment of sexual offenders, such as the Relapse Prevention model, the Risk-Need-Responsivity principles, and the Good Lives Model of offender rehabilitation, were discussed. In this dissertation, I examined some potential determinants of sexual offending against children (Chapter 2), explored the psychometric properties of the SVR-20 (Chapter 3), investigated child sexual abusers' implicit sexual interest in submissiveness and children (Chapter 4), and I described the development of a CBT group intervention for sexual offenders who are detained under hospital order (Chapter 5).

MAIN FINDINGS

Risk factors of sexual offending against children

While sexual offenders constitute a heterogeneous group, with each subgroup being subject to specific risk factors (Ward & Steward, 2003), meta-analytic studies that examined risk factors of sexual (re)offending were mainly focused on sexual offending in general. As a result, it remains unclear to what extent empirically well-supported risk factors for sexual offending are applicable to child sexual abusers. Chapter 2 investigated whether risk factors of sexual offending, such as aggression, hostility, anger, interpersonal anxiety, and social skills deficits are related to the initiation of child sexual abuse by comparing (self-reported) levels of these constructs between inpatient child sexual abusers, rapists, and violent offenders. Differences between inpatient and outpatient samples of child sexual abusers were explored to provide an initial test of the plausibility that the aforementioned risk factors are associated with an increased risk of reoffending against children.

Results demonstrated that the inpatient child sexual abusers reported significantly more social anxiety than the inpatient violent offenders. This finding is consistent with the existing literature, which generally shows that social anxiety is associated with sexual offending against children (e.g., Nunes, McPhail, & Babchishin, 2012). However, our inpatient child sexual abusers sample on average did not show clinical levels of anxiety in social situations; this could be attributed to contextual differences, especially the high-level security that is available in forensic psychiatric hospitals. Physical aggression, verbal aggression, and anger did not appear to be related to sexual offending against children. Physical aggression was significantly associated with violent offending (and to a lesser extent with rape of adult women), which is in line with previous research. The inpatient child sexual abusers reported lower levels of aggression, anger, hostility, and social anxiety than the outpatient child sexual abusers, which suggests paradoxically that these risk factors are not associated with an increased risk of sexual reoffending against children. This unexpected finding may be attributed to social desirability, treatment effects, or contextual differences. That is, progress in treatment factors means an augmented chance for the return to society. Inpatients in a security hospital reflect the most controlled, dangerous, and disordered population in which either worsening or amelioration of their clinical status would be hardly visible in a comparison with outpatients, which is a common error not always mentioned.

Psychometric properties of the SVR-20

Risk assessment is paramount in forensic psychiatry. It is used to predict the likelihood of recommitting new (sexual) offenses after discharge and serves as a general guideline for the intensity of inpatient and outpatient treatment services. The Dutch Ministry of Security and Justice obligates forensic psychiatric hospitals

to administer the Sexual Violence Risk-20 (SVR-20), a risk assessment instrument used worldwide for assessing the risk of sexual recidivism. The validity of the SVR-20, however, has only been investigated in a limited number of studies (e.g., De Vogel, De Ruiter, Van Beek, & Mead, 2004), and there is tentative evidence that indicates that the SVR-20 domains have differential predictive power for future sexual and nonsexual violence (Rettenberger, Boer, & Eher, 2011). In the meantime, there are some indications that the proposed three-domain structure of the SVR-20 may not be optimal. Overall, the usability of SVR-20 in the (risk) assessment and treatment of sexual offenders is seriously questioned. Chapter 3 investigated an optimal factor structure for the SVR-20, one of the possible areas of improvement for this instrument. In addition, the psychometric properties of the SVR-20 were examined, including its internal consistency, predictive value, and convergent validity.

Results indicated that the original structure of the SVR-20 was indeed not satisfactory. An exploratory principal components analysis and subsequent confirmatory factor analyses suggested three alternative factors, which we labelled Antisociality, Sexual deviance, and Problematic thinking. These alternative factors produced better internal consistency coefficients than the original domains. The validity of the SVR-20, however, was modest and no evidence was found indicating that the alternative factors were better in this regard as compared to the original domains. The predictive accuracy of both the original domains and the alternative factors were similar, with AUC values comparable to those of other studies regarding the predictive accuracy of risk assessment instruments (e.g., Hanson & Morton-Bourgon, 2009). This finding suggests that the modest predictive accuracy of the original domains may not be attributable to its heterogeneous nature. Despite the overall superiority of actuarial measures in predicting (sexual) recidivism, the structured professional judgment (SPJ) of the SVR-20 proved to be more predictive of recidivism than its actuarial scoring method. That is, SPJ significantly predicted sexual, violent, and general recidivism, whereas the actuarial scoring method only attained statistical significance for the prediction of violent recidivism. It remains unclear why SPJ outperformed the actuarial scoring method of the SVR-20 in predicting recidivism.

Implicit attitudes toward submissiveness

The sexual interest of child sexual abusers has typically been studied using self-report questionnaires and physiological measures, but both methods have their limitations. The application of implicit measures, such as the Implicit Association Test (IAT), might obviate some of the concerns raised with regard to the use of the 'traditional' measures of sexual interest (Hempel, 2013; Ward, Hudson, Johnston, & Marshall, 1997), and it may provide complementary information to self-report and physiological measures (e.g., Babchishin, Nunes, & Kessous, 2014). Chapter 4 elaborated on the assessment of deviant sexual interest. More specifically, it explored whether child sexual abusers are, on an implicit level, sexually attracted to submissiveness and whether these submissive-sexy associations have any incremental value over the already well-established child-sex associations in differentiating child sexual abusers from other offenders. This chapter also examined the potential contribution of submissive-sexy and child-sex associations in the risk assessment of child abusers by correlating these associations with measures of sexual recidivism risk and other relevant factors associated with sexually deviant behavior.

The results of the study showed that child sexual abusers had indeed significantly stronger submissive-sexy associations than rapists. This finding appears to be consistent with previous research indicating that child sexual abusers associate "sex" with "power" (e.g., Kamphuis, De Ruiter, Janssen, & Spiering, 2005). The presence of both submissive-sexy and child-sex associations was more strongly associated with sexual offending against children, as compared with rape and non-sexual offending. Together these IAT measures were more effective in identifying child sexual abuser status than either one alone. The predictive value of these implicit associations, however, remains unclear, as no correlation between IAT measures and the SVR-20 attained statistical significance, which is in line with the inconsistent findings for the relationship between child-sex associations and risk (Babchishin, Nunes, & Hermann, 2013). Correlations between IAT measures and external variables of trait anger, hostility, aggression, and interpersonal anxiety/social skills were generally non-significant. This study provides evidence that

submissive-sexy associations are relevant to sexual offending against children, but what exactly is being assessed by IAT measures remains unclear.

The development of a CBT-based treatment program for sexual offenders

There is general consensus that deviant sexual interests and antisocial orientation/lifestyle instability are the primary criminogenic needs of sexual offenders (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005). Other empirically well-supported risk factors are self-regulation problems, poor problem solving skills, offense-supportive cognitions, and negative social influences (Hanson & Harris, 2000, 2001; Mann, Hanson, & Thornton, 2010). Unfortunately, the *method* by which these criminogenic needs are targeted during treatment remains largely unclear because detailed descriptions of interventions for sexual offenders are usually not publicly available. In the Netherlands, the center of Expertise for Forensic Psychiatry (EFP) provided general guidelines for the treatment of forensic psychiatric sexual offenders, but due to the relatively small number of sexual offenders admitted to forensic psychiatric hospitals it is virtually impossible for the institutions to evaluate their own adaptation of the sexual offender guidelines. Disclosure of treatment manuals could lead to more effective treatment methods for these offenders.

Chapter 5 described the development of a CBT-based group intervention for sexual offenders who are detained under hospital order. The contents are the result of literature study and clinical experience with this population, and meets the necessary criteria, formulated by Hornsveld, Kanters, Gijs, et al. (2015), to improve the quality of Dutch studies on the effects of sexual offender treatment. The treatment program consists of (risk) assessment and treatment plans, a separate basic training for rapists and child sexual abusers, specific group training, which includes modules for psycho-education, cognitive distortions, and prosocial skills. In addition, the recommended conditions for the implementation of this treatment program were discussed, together with our first clinical experiences. Although this intervention was based on the most recent literature and clinical experience, its effectiveness is not yet empirically examined. The treatment protocol described in this article could serve as a basis for the implementation and evaluation of a national treatment program for sexual offenders in the Netherlands.

LIMITATIONS

The studies in this dissertation have limitations that deserve attention. First it should be noted that the participants of these studies were all forensic psychiatric inpatients who were detained under TBS hospital order. Patients were convicted of serious offenses for which a maximum imprisonment of four or more years applies (such as child sexual abuse, rape, manslaughter, or murder), for whom the Court has decided that they cannot be held (fully) responsible for their actions. This diminished accountability is defined as a causal relation between a diagnosis of mental illness and/or personality disorder and the offense committed (e.g., Van Marle, 2000, 2002). In addition, forensic psychiatric inpatients are considered to present such high risk of sexual and/or violent recidivism that without treatment they would remain a danger to others and/or to the general safety of persons and property. The relatively small number of sexually violent offenders admitted to Dutch forensic psychiatric hospitals (in total between 430 and 540 in 2013, Van Gemmert & Van Schijndel, 2014) in combination with the specific characteristics of this research population (i.e., high risk offenders and a diagnosis of mental illness) has consequences for the generalizability of the results, such as for the treatment of sexually violent forensic psychiatric outpatients or sex offenders in general.

A second limitation is that the results may have been attenuated by the structure and cohesion of the forensic psychiatric hospitals. The maximum controlled environment, with a high staff-patient ratio, ensures that forensic psychiatric inpatients barely show any deviant behavior after admission and this effect remains stable over time (Hornsveld, Kraaimaat, Bouwmeester, Polak, & Zwets, 2014). The lack of variation in deviant behavior (i.e., low base-rate) complicates the assessment of these patients and it remains unclear whether behavior measured during admission will be continued when patients return to society. A connection between treatment results in the TBS-hospital and diminished reoffending could not be established (Philipse, 2005). In addition, detention under hospital order is re-evaluated annually or once in two years by the court and without treatment progress, this TBS-sentence can be renewed an unlimited number of times. Although all patients

were informed that the data collected during this study would be processed anonymously, the inpatients may, nevertheless, have been under the assumption that their responses could have legal implications.

The third limitation concerns the operational definition of the patient samples. Because file data were used to define the different offender groups, it must be recognized that some patients might have been misclassified. That is, some patients may have committed a sexual offense for which they were not convicted, and/or some other non-sexual convictions (e.g., burglary) might actually be sexually motivated (e.g., attempt to rape). Additionally, the studies were based on voluntary participation, which may have resulted in a sample of patients who were more cooperative than the patients who refused to participate. Furthermore, in three studies, participants received a monetary compensation, varying from 10 to 15 Euros, for their participation. As a result, patients may have been only externally motivated to complete the self-report questionnaires, making it unclear to what extent they were motivated to answer the questions truthfully. However, in order to ensure the quality of these self-reports to a certain degree, three research assistants who were 'blind' for the aim of the research project were present during the completion of the questionnaires. These researchers were instructed to help patients with the questionnaires when questions were unclear and to prevent a hurried completion of the questionnaires.

IMPLICATIONS FOR CLINICAL PRACTICE

The general aim of this dissertation was to explore to what extent various risk factors of (sexual) (re)offending are relevant for the (risk) assessment and treatment of sexual offenders detained by TBS-hospital order. The results of these studies have several implications for clinical practice, which are discussed below.

Risk factors of sexual offending against children

At first glance, the findings presented in Chapter 2 seemed to be inconsistent with the Risk-Need-Responsivity principles. The inpatient child sexual abusers reported lower levels of aggression, anger, hostility, and social anxiety than the outpatient child sexual abusers, which suggests that outpatient child sexual abusers should receive more intensive treatment than the inpatient child sexual abusers. I explained why these unexpected finding may be attributable to contextual influences of the TBS-hospital setting. However, if inpatient child sexual abusers have indeed fewer risk factors of sexual offending than outpatient child sexual abusers, the results of this study could have some important implications. For instance, it may indicate that low-risk sexual offenders are inappropriately allocated to high-risk treatment facilities. Smid, Kamphuis, Wever, and Verbruggen (2015) investigated the distribution of risk levels in high-intensity outpatient sexual offender treatment groups and found clear indications that a substantial amount of treatment referrals was inconsistent with the risk principle of RNR. That is, actuarial risk levels were not significantly related to treatment duration, resulting in a likely over-treatment of low-risk offenders. If this finding is also true for child sexual abusers in forensic psychiatric hospitals, it would imply that the duration of their clinical treatment can be shortened considerably. Additionally, it implies that the selection procedure (and also the re-evaluation by the Court) for imposing detention under hospital order needs further optimization as low-risk child sexual abusers are consistently referred to high-intensity treatment facilities. An area of improvement includes the consideration of high-risk levels as a necessary condition for detention under hospital order in addition to the seriousness of the offense and the presence of a diagnosis of mental illness at the time of the offense.

Psychometric properties of the SVR-20

One of the primary goals of risk assessment is to predict the likelihood of recommitting new sexual offenses after discharge. The study presented in Chapter 3 attempted to improve the predictive accuracy of the SVR-20 and other psychometric properties by reorganizing its risk items into more homogeneous factors. Results indicated that the modest predictive accuracy of the original domains was not attributable to its heterogeneous nature as more homogeneous factors did not result

in an improved predictive accuracy. The study also reconfirmed that the structured professional judgment scoring method of the SVR-20 outperforms its mechanical scoring method in the prediction of sexual, violent, and general recidivism. This finding is consistent with the available literature indicating that the SVR-20 shows the largest average association of all risk assessment instruments between its structured professional judgment and sexual recidivism. Given its insufficient to modest psychometric properties and rather static nature, the SVR-20 by itself seems insufficient as the basis for important management decisions such as leave applications. There are clear indications that a combination of static and dynamic risk assessment instruments (e.g., STATIC-99R, STABLE-2007, and ACUTE-2007) results in an improved prediction of sexual re-offenses (e.g., Eher, Matthes, Schilling, Haubner-MacLean, & Rettenberger, 2012; Hanson, Harris, Scott, & Helmus, 2007), and there are clear indications that this is also true for Dutch sexual offenders (Smid, Kamphuis, Wever, & Beek, 2014a).

Implicit attitudes toward submissiveness

According to Spiering and Everaerd (2007), sexual arousal is comprised of physiological, behavioral and cognitive components, for which the cognitive component can be divided into explicit cognition (e.g., sexual fantasies about children) and implicit cognition (e.g., innate sexual impulses). As such, a more complete understanding of sexual offenders' sexual interest would involve a combination of commonly used methods for assessing sexual interest (Babchishin, Nunes, & Hermann, 2013). Consequently, to assess sexual interest accurately, a multimethod approach that assesses all aspects of sexual interest is advised (Akerman & Beech, 2012). Combined measures of sexual interest proved to be a reliable and valid method of measuring sexual deviance (e.g., Banse Schmidt, & Clarbour, 2010). The available options for measuring sexual interest include physiological measures (e.g., penile plethysmograph, skin conductance, or heart rate), self-reports, and implicit measures. Implicit techniques, such as the Implicit Association Test but also other reaction time-based measures including Eye-Tracking, Startle Eye Response, and the Attentional Blink paradigm show promise in offering complementary information in the assessment of deviant sexuality (Akerman & Beech, 2012). Our study reaffirmed that a combination of implicit measures is indeed more effective in identifying child abuser status than either one alone, which suggests that both types of implicit associations address distinct aspects of implicit sexual cognitions associated with sexual offending against children. However, the submissive-sexy association measure used in this study (or implicit measures in general) is still insufficiently validated to be used individually in the risk assessment of child sexual abusers.

The development of a CBT-based treatment program for sexual offenders

Although I was unable to examine the treatment effects of the program described in this article, I believe that the results of this study point in the direction of some important recommendations for Dutch forensic psychiatry. Approximately 30% of all forensic psychiatric offenders who are detained under hospital order are convicted of a sexual offense (Van Gemmert & Van Schijndel, 2014), with absolute totals ranging from 430 to 540. This relatively small number of sexual offenders divided over eleven forensic psychiatric hospitals in the Netherlands (which is an average of 39 to 49 sexual offenders per institution) makes it nearly impossible for the institutions themselves to evaluate their own adaptation of the sexual offender guidelines provided by the Dutch center of Expertise for Forensic Psychiatry (EFP). Treatment evaluation is further hindered by the heterogeneity of the sex offender population, (Ward & Steward, 2003). In Chapter 5, I presented a detailed treatment intervention for sexual offenders who are detained under hospital order. Large effect studies are needed to examine its treatment effects and, more importantly, to advance our limited knowledge on effective treatment methods for these offenders. By making our treatment protocol publicly available, I hope to initiate a discussion among the Dutch forensic psychiatric hospitals towards a unified treatment method for sexual offenders and hopefully start a national study to examine its effectiveness.

Because the overall evidence for treatment effectiveness is weak at best (Långström et al., 2013) and the primary outcome measure (i.e., sexual recidivism) has a low base rate (typically less than 2% per year), research on treatment effects would require many participants and long follow-up periods. For such a large re-

search project, it is essential that the various Dutch forensic psychiatric institutions collaborate on the implementation and evaluation of treatment programs for sexual offenders. The EFP already initiated a national cooperation between the forensic psychiatric hospital on the risk assessment of forensic psychiatric inpatients: LDR-tbs (Landelijke Databank Risicotaxatie tbs [National Database Risk Assessment]; Van Binsbergen, De Spa, Verwaaijen, Embley, & Van Rooy, 2012). The main aim of this project is to facilitate large-scale research to improve risk assessment instruments. I believe the next step could be a similar collaboration for the implementation and evaluation of effective treatment interventions for forensic psychiatric sexual offenders.

DIRECTIONS FOR FURTHER RESEARCH

The studies of this dissertation have demonstrated that social anxiety and sexual attraction to submissiveness are significantly associated with sexual offending against children, that aggression and anger are related to violent offending (and to a lesser extent to rape of adult women), and that the SVR-20 may be insufficient as the sole basis for important management decisions given its modest psychometric properties. In addition, I presented the design of a treatment program for sexually violent forensic psychiatric offenders. However, several important questions that concern sexual aggression and related constructs remain unanswered. Therefore, future studies on these topics are needed and should be encouraged.

Risk factors of sexual offending against children

I found that child sexual abusers detained under TBS-hospital order reported themselves as lower on the aggression-related measures and higher on social anxiety than nonsexual violent offenders, which is consistent with various theories about the etiology of sexual abuse. In contrast with the existing literature, results also indicated that the inpatient child sexual abusers reported lower levels of aggression, anger, hostility, and social anxiety than the outpatient child sexual abusers. I assumed that these unexpected findings were attributable to a number of methodological limitations of this research, including contextual differences. Future research should examine the extent to which prolonged confinement in a forensic psychiatric hospital has impacts on the inpatients, for instance by focusing on topics such as involuntary hospitalization, staff presentation, length of stay, having a good lawyer, waiting lists, and government's policy on sexual offenders. Moreover, assuming that our findings are already replicable prior to treatment, these unexpected differences could also reflect a more alarming situation: a structural error in the referral procedure for inpatient or outpatient treatment. In order to rule out such an error, we need to examine whether the intensity of the treatment interventions imposed by the Court corresponds with the sexual offenders' risk level. Following the RNR principles (Andrews & Bonta, 2010; Andrews, Bonta, & Hodge, 1990), high risk sexual offenders should be referred to high risk treatment facilities, while low risk sexual offenders should receive less intensive outpatient treatment (or no treatment at all).

Psychometric properties of the SVR-20

I investigated the psychometric properties of the SVR-20 and reaffirmed that the structured professional judgment of the SVR-20 is more predictive of sexual, violent, and general recidivism than its actuarial scoring method. I also found that the SVR-20 items cluster in a somewhat different way than hypothesized by its developers, but the alternative factors did not offer much of a practical advantage compared to the original domains. However, I believe that reorganizing empirically validated risk factors from various risk assessment instruments into more clinically useful scales could still be worth closer examination. Despite the lack of significant change in terms of psychometric properties, reorganization into homogeneous and more clinically useful scales could provide practitioners with a better overview of the criminogenic needs that should be targeted during treatment, potentially resulting in more effective use of the available treatment resources for sexual offenders. In addition, the SVR-20 is based on the literature surrounding the characteristics of sexual offenders who recommitted a sexual crime after being previously con-

victed. However, although the SVR-20 may be predictive of the nature, severity, or imminence of sexual re-offenses, this instrument was originally developed to guide management decisions and to prevent sexual reoffending (Boer & Hart, 2009). Its SPJ scoring method allows for the inclusion of case-specific risk factors that are considered crucial for the estimation of recidivism risk. The dialogue between scientific research and clinical experience could provide an explanation why SPJ of the SVR-20 outperforms actuarial scoring methods in predicting sexual, violent, and general recidivism. However, the SVR-20 also consistently outperforms other SPJ-based risk assessment instruments in predicting recidivism (see Hanson & Morton-Bourgon, 2009). It remains unclear why the SVR-20 performs better than other SPJ-based instruments. Answering this question will further advance the predictive accuracy of sex offender risk assessment in general.

Implicit attitudes toward submissiveness

I found that child sexual abusers are, on an implicit level, sexually attracted to submissiveness. Stronger child-sex associations proved to be characteristic of child abusers and the presence of both submissive-sexy and child-sex associations was more strongly associated with sexual offending against children, as compared with rape and non-sexual offending. Together these IAT measures were more effective in identifying child abuser status than either one alone. However, although IAT measures may allow for a relatively easy, low-cost, quick and complementary method of assessing sexual interests, more research is required for a better understanding of what exactly is being assessed by these measures. For instance, the potential contribution of submissive-sexy and child-sex associations in the (risk) assessment of child abusers still remains unclear. Calculating point-biserial correlations and Areas Under the Curve (AUC) in Receiver Operating Characteristic (ROC) analyses between IAT scores and *actual* recidivism rates will provide more insight into the predictive value of IAT measures, which will help to determine the relevance of the constructs being assessed by these IAT measures. Future research should also address questions about the constructs assessed by these and similar implicit measures as well as larger issues regarding the overlap, distinctions, and relationship between sexual interests and beliefs supportive of sexual offending against children, such as implicit theories, schemas, cognitive distortions, and attitudes (e.g., Ó Ciardha, 2011).

The development of a CBT-based treatment program for sexual offenders

I described a CBT-based treatment program for sexual offenders detained under hospital order. The primary goal of treatment is preventing reoffending by addressing dynamic risk factors (Hanson, 2014), and although there are clear indications that interventions following the RNR principles are more effective than other treatment approaches (Hanson, Bourgon, Helmus, & Hodgson, 2009), it remains unclear which treatment approach is most effective for which type of sexual offender. Treatment effects are preferably measured by randomized controlled trials (RCTs) with a prospective study design and a follow-up period of at least 5 years. Although less desirable, Hanson (2014) proposed an alternative approach to evaluate treatment effects. That is, dynamic risk assessment instruments may be used to measure treatment outcome when these instruments become more capable of detecting change as a result of treatment. According to Hanson (2014), this alternative "would substantially shorten the necessary follow-up periods from years to mere months" (p. 6).

CONCLUSIONS

The general aim of this dissertation was to explore to what extent various risk factors of (sexual) (re)offending are relevant for the (risk) assessment and treatment of sexual offenders detained by TBS-hospital order. I examined determinants of sexual offending against children, explored the psychometric properties of the SVR-20, investigated child sexual abusers' implicit attitudes toward submissiveness, and described the development of a CBT group intervention for sexual offenders who are detained under hospital order. Our findings indicate that a multimethod approach for measuring sexual interest and risk estimates resulted in more accu-

rate assessment of these variables. The combination of actuarial risk and clinical experience (i.e., SPJ) outperformed actuarial risk alone when predicting sexual, violent, and general recidivism, while both child-sex and submissive sexy associations together were more predictive of child sexual abuser status. Assuming that our findings are not attributable to contextual factors, the findings of this dissertation also imply that the Dutch judicial system should take greater consideration of risk of (sexual) recidivism when imposing detention under hospital order to prevent the consistent overtreatment of low-risk child sexual abusers. The inpatient child sexual abusers examined in this dissertation substantially differed from other sexual offender samples. That is, inpatient child sexual abusers consistently reported less criminogenic needs in comparison with rapists, violent offenders, and their outpatient counterparts. Smid, Kamphuis, Wever, and Van Beek (2013) already demonstrated that Dutch treatment referrals are only moderately related to the risk principle. Fortunately, the overall treatment effects achieved by the Dutch forensic psychiatric institutions is more than satisfactory. Despite the aforementioned shortcomings in risk assessment and unclear treatment methods, the recidivism rates found in this dissertation were substantially lower than the international recidivism rates for sexual, violent, and general recidivism after a follow-up period of 5 years (e.g., Hanson & Bussière, 1998). Taken together, the findings of this dissertation argue for a multimethod measuring approach for the (risk) assessment of sexual offenders, a better assignment of high-risk sexual offenders in forensic settings, and closer collaboration between the Dutch forensic psychiatric institutions. Dutch forensic psychiatry is arguably among the best in the world, but there is still room for improvement in the supervision, (risk) assessment, and treatment of sexual offenders.

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Appendices

APPENDIX A

Original three domains and alternative three-factor solution of the SVR-20

Original domains		Alternative factors	
Psychosocial adjustment		Antisociality	
Item 1	Sexual deviance	Item 15	Uses weapons or threats of death
Item 2	Victim of child abuse	Item 14	Physical harm to victim(s)
Item 3	Psychopathy	Item 9	Past nonsexual violent offenses
Item 4	Major mental illness	Item 3	Psychopathy
Item 5	Substance use problems	Item 10	Past nonviolent offenses
Item 6	Suicidal/homicidal ideation	Item 5	Substance use problems
Item 7	Relationship problems	Item 8	Employment problems
Item 8	Employment problems	Item 2	Victim of child abuse
Item 9	Past nonsexual violent offenses	Item 11	Past supervision failure
Item 10	Past nonviolent offenses	Sexual deviance	
Item 11	Past supervision failure	Item 12	High density sex offenses
Sexual offending		Item 16	Escalation in frequency/severity
Item 12	High density sex offenses	Item 1	Sexual deviance
Item 13	Multiple sex offense types	Item 13	Multiple sex offense types
Item 14	Physical harm to victim(s)	Problematic thinking	
Item 15	Uses weapons or threats of death	Item 17	Extreme minimization/denial
Item 16	Escalation in frequency/severity	Item 20	Neg. attitude toward intervention
Item 17	Extreme minimization/denial	Item 19	Lacks realistic plans
Item 18	Attitudes that support offenses	Item 18	Attitudes that support offenses
Future plans		Rest items	
Item 19	Lacks realistic plans	Item 4	Major mental illness
Item 20	Neg. attitude toward intervention	Item 6	Suicidal/homicidal ideation
		Item 7	Relationship problems

APPENDIX B

Submissive-sexy IAT

Submissive	Dominant	Sexy	Not sexy
Weak	Destroy	Beautiful	Yuck
Scrawny	Fight	Love	Disgusting
Quiet	Loud	Attractive	Impotent
Delicate	Powerful	Kiss	Stink
Gentle	Confident	Smile	Gross
		Orgasm	Ugly

APPENDIX C

Child-sex IAT

Child	Adult	Sex	Not sex
		Sex	Laugh
		Fuck	Eye
		Lick	Toe
		Cum	Elbow
		Cock	Run
		Kiss	Smile
		Lust	Walk
		Suck	Knee

APPENDIX D

Flower-unpleasant IAT

Flower	Insect	Pleasant	Unpleasant
		Beautiful	Accident
		Good	Cancer
		Health	Disaster
		Honest	Pollution
		Laugh	Poverty
		Joke	Sickness
		Happy	Ugly
		Lucky	Vomit

Summary

AIM OF THIS DISSERTATION

Sexual offending is a widespread international problem. Deviant sexual interests and antisocial orientation/lifestyle instability are identified as the primary criminogenic needs of sexual offenders. As a consequence, a proper understanding of these constructs is required for the supervision, (risk) assessment, and treatment of sexual offenders. The general aim of this dissertation was to explore to what extent various risk factors of (sexual) (re)offending are relevant for the (risk) assessment and treatment of sexual offenders detained by TBS-hospital order.

CHAPTER SUMMARIES

In Chapter 1, we provided a general theoretical introduction on sexual offending, including its (legal) definition, prevalence rates, and various models regarding its etiology. The chapter continued with the importance of sexual deviance as a risk factor for sexual offending and the need for solid risk assessment in sexual offenders. Finally, several principles for the treatment of sexual offenders, such as the Relapse Prevention model, the Risk-Need-Responsivity principles, and the Good Lives Model of offender rehabilitation, were discussed.

Chapter 2 investigated whether risk factors of sexual offending, such as aggression, hostility, anger, interpersonal anxiety, and social skills deficits are related to the initiation of child sexual abuse. Differences between inpatient and outpatient samples of child sexual abusers were explored to provide an initial test of the plausibility that the aforementioned risk factors are associated with an increased risk of reoffending against children. Results demonstrated that the inpatient child sexual abusers reported significant more social anxiety than the inpatient violent offenders. Physical aggression, verbal aggression, and anger did not appear to be related to sexual offending against children. Physical aggression was significantly associated with violent offending (and to a lesser extent with rape of adult women). The inpatient child sexual abusers reported lower levels of aggression, anger, hostility, and social anxiety than the outpatient child sexual abusers, which suggests paradoxically that these risk factors are not associated with an increased risk of sexual reoffending against children. This unexpected finding may be attributed to social desirability, treatment effects, or contextual differences.

Chapter 3 explored an optimal factor structure for the SVR-20 and its psychometric properties. Results indicated that the original structure was not satisfactory and suggested three alternative factors, which we labelled Antisociality, Sexual deviance, and Problematic thinking. The alternative factors produced better internal consistency coefficients than the original domains. The predictive accuracy of both the original domains and the alternative factors were similar. This finding suggests that the modest predictive accuracy of the original SVR-20 domains may not be attributable to its heterogeneous nature. The structured professional judgment of the SVR-20 proved to be more predictive of recidivism than its actuarial scoring method. That is, SPJ significantly predicted sexual, violent, and general recidivism, whereas the actuarial scoring method only attained statistical significance for the prediction of violent recidivism.

Chapter 4 examined whether child sexual abusers are, on an implicit level, sexually attracted to submissiveness and whether these submissive-sexy associations have any incremental value over the already well-established child-sex associations in differentiating child sexual abusers from other offenders. This chapter also examined the potential contribution of submissive-sexy and child-sex associations in the risk assessment of child abusers. Results showed that child sexual abusers had significantly stronger submissive-sexy associations than rapists. The presence of both submissive-sexy and child-sex associations was more strongly associated with sexual offending against children, as compared with rape and non-sexual offending. Together these IAT measures were more effective in identifying child sexual abuser status than either one alone. The validity of these implicit associations remains unclear, as correlations between IAT measures and external variables were generally non-significant.

Chapter 5 described the development of a CBT-based group intervention for sexual offenders who are detained under hospital order. The contents were the

result of literature study and clinical experience with this population, and met the necessary criteria to improve the quality of Dutch studies on the effects of sexual offender treatment. The treatment program consists of (risk) assessment and treatment plans, a separate basic training for rapists and child sexual abusers, specific group training, which includes modules for psycho-education, cognitive distortions, and prosocial skills. In addition, the recommended conditions for the implementation of this treatment program were discussed, together with our first clinical experiences. Although this intervention was based on the most recent literature and clinical experience, its effectiveness is not yet empirically examined.

Finally, Chapter 6 concluded with a general discussion of the general findings of the studies described in this dissertation and provided an integration of the results. Implications for clinical practice and suggestions for future research were discussed. Taken together, the findings of this dissertation argue for a multimethod measuring approach for the (risk) assessment of sexual offenders, a better distribution of high-risk sexual offenders in forensic settings, and closer collaboration between the Dutch forensic psychiatric institutions.

Samenvatting

DOEL VAN HET ONDERZOEKSPROJECT

Seksueel misbruik is een wijdverspreid internationaal probleem. Deviante seksuele voorkeuren en een antisociale oriëntatie/instabiele levensstijl worden beschouwd als de voornaamste risicofactoren voor deviant seksueel gedrag. Daarom is een gedegen begrip van deze constructen noodzakelijk voor een adequate begeleiding, risicotaxatie en behandeling van zedendelinquenten. Het doel van deze dissertatie was onderzoeken in welke mate verschillende risicofactoren voor algemeen seksueel misbruik relevant zijn voor de diagnostiek en behandeling van zedendelinquenten in de tbs.

HOOFDSTUK SAMENVATTINGEN

Hoofdstuk 1 gaf een algemene theoretische inleiding op seksueel misbruik, met inbegrip van de (juridische) definitie, prevalentie en verschillende etiologische modellen. Het hoofdstuk ging verder met het belang van deviante seksuele voorkeuren als een risicofactor voor seksueel misbruik en de noodzaak van gedegen risicotaxatie bij zedendelinquenten. Tot slot werden enkele behandelmodellen voor zedendelinquenten besproken, zoals het terugvalpreventiemodel, de risico-behoefte-responsiviteit principes en het good lives model.

Hoofdstuk 2 onderzocht in hoeverre risicofactoren voor algemeen seksueel misbruik, zoals agressie, vijandigheid, woede, interpersoonlijke angst en een gebrek aan sociale vaardigheden gerelateerd zijn aan kindermisbruik. Verschillen tussen kindermisbruikers in de tbs en polikliniek werden onderzocht om te controleren of bovengenoemde risicofactoren geassocieerd zijn met een verhoogd recidiverisico op kindermisbruik. De resultaten lieten zien dat de kindermisbruikers in de tbs aanzienlijk meer interpersoonlijke angst ervaren dan de (niet-seksueel) gewelddadige terbeschikkinggestelden. Fysieke agressie, verbale agressie en woede bleken niet gerelateerd te zijn aan kindermisbruik. Fysieke agressie bleek significant geassocieerd te zijn met gewelddadig delictgedrag (en in mindere mate met het verkrachten van volwassen vrouwen). De kindermisbruikers in de tbs rapporteerden significant minder agressie, woede, vijandigheid en sociale angst dan de poliklinische kindermisbruikers. Dit suggereert paradoxaal genoeg dat deze risicofactoren niet geassocieerd zijn met een verhoogd recidiverisico op kindermisbruik. Deze onverwachte bevinding werden toegeschreven aan sociaal wenselijkheid, de effecten van de behandeling en andere contextuele verschillen.

Hoofdstuk 3 onderzocht de optimale factorstructuur van de SVR-20 en diens psychometrische eigenschappen. De resultaten toonden aan dat de originele factorstructuur niet bevredigend was en wezen in de richting van drie alternatieve factoren, die Antisocialiteit, Seksuele deviatie en Problematisch denken werden genoemd. Deze alternatieve factoren produceerden betere interne consistentieco-efficiënten dan de oorspronkelijke SVR-20 domeinen. De predictieve validiteit van zowel de oorspronkelijke domeinen als de alternatieve factoren was vergelijkbaar. Deze bevindingen suggereren dat de bescheiden voorspellende waarde van de oorspronkelijke SVR-20 domeinen niet verklaard kan worden door diens heterogene aard. Het gestructureerde professionele oordeel van de SVR-20 bleek opnieuw meer voorspellend voor recidive dan de actuariële scoringsmethode. Dat wil zeggen, het gestructureerde professionele oordeel was voorspellend voor seksueel, gewelddadig en algemeen recidive, terwijl de actuariële scoringsmethode alleen statistische significantie bereikte voor de voorspelling van gewelddadige recidive.

In hoofdstuk 4 werd onderzocht of kindermisbruikers zich, op een impliciet niveau, seksueel aangetrokken voelen tot onderdanigheid en of deze onderdanig-sexy associaties een toegevoegde waarde hebben op de reeds bestaande kind-seks associaties in het differentiëren van kindermisbruikers en andere delictplegers. Dit hoofdstuk bekeek ook de potentiële bijdrage van onderdanig-sexy en kind-seks associaties in de risicotaxatie van kindermisbruikers. Resultaten toonden aan dat kindermisbruikers aanzienlijk sterkere onderdanig-sexy associaties hadden dan verkrachters. De aanwezigheid van zowel onderdanig-sexy als kind-seks associaties bleek bovendien sterker geassocieerd te zijn met kindermisbruik dan met verkrachting of het plegen van niet-seksuele delicten. De gecombineerde IAT-metingen waren effectiever in het identificeren van kindermisbruiker-status dan

de individuele metingen. De validiteit van deze impliciete associaties blijft echter onduidelijk omdat de correlaties tussen IAT-metingen en externe variabelen over het algemeen niet significant waren.

Hoofdstuk 5 beschreef de ontwikkeling van een op cognitieve gedragstherapie gebaseerde groepsinterventie voor zedendelinquenten in de tbs. De inhoud van dit behandelprogramma is het resultaat van uitgebreide literatuurstudie en onze klinische ervaring met deze populatie en kan gebruikt worden ter verbetering van de kwaliteit van Nederlandse onderzoeken naar de behandeleffecten bij zedendelinquenten. Het behandelprogramma bestaat uit (risico)taxatie, behandelplannen, een aparte basistraining voor verkrachters en kindermisbruikers en een specifieke groepstraining met modules voor psycho-educatie, cognitieve vervormingen en prosociale vaardigheden. Daarnaast werden de noodzakelijke voorwaarden voor implementatie van dit behandelprogramma besproken, samen met onze eerste klinische ervaringen. Ondanks dat deze interventie is gebaseerd op de meest recente literatuur en onze klinische ervaring is de effectiviteit ervan niet nog empirisch aangetoond.

Hoofdstuk 6 sloot af met een algemene discussie over de belangrijkste bevindingen van de studies die beschreven worden in dit proefschrift en een integratie van de resultaten. Meerdere sterke punten en beperkingen van deze studies werden bediscussieerd, samen met implicaties voor de klinische praktijk en toekomstig onderzoek. Samengevat pleiten de bevindingen van dit proefschrift voor een multi-methodische aanpak bij de (risico)taxatie van zedendelinquenten, een betere verdeling van risicovolle zedendelinquenten over de forensische settingen, en nauwere samenwerking tussen de Nederlandse forensische psychiatrische instellingen.

ABOUT THE AUTHOR

Curriculum Vitae and PhD Portfolio

CURRICULUM VITAE

Thijs Kanters was born on October 16th, 1985 in Geldrop. In 2005 he started to study Psychology at the Erasmus University Rotterdam. He obtained his MSc degree in Clinical Psychology in 2010 on a study regarding treatment progression of forensic psychiatric inpatients with a psychotic disorder. From that moment, he started to work as a part-time research assistant and a part-time psychologist at FPC De Kijvelanden. In 2010, the possibilities to perform a PhD project were discussed within FPC De Kijvelanden and the Erasmus University Medical Center (Erasmus MC). This resulted in a PhD project about determinants of sexual violence and implications for treatment.

As a psychologist, Thijs has almost eight years of experience in the treatment of forensic psychiatric offenders. In 2009, he started his career in the clinical setting of FPC De Kijvelanden, where he was a clinician in group therapies of both violent and sexual offenders. In 2013, he began working with juvenile offenders at Het Dok, an outpatient treatment facility of FPC De Kijvelanden, and later at outpatient treatment facility De Waag. In 2016, he moved from Rotterdam to Breda. Since then he works in a FACT (Flexible Assertive Community Treatment) team for youths at GGz Breburg. Thijs completed several trainings, including the cognitive behavior therapy basic and advanced course. As a PhD candidate, Thijs gave multiple presentations a year on (international) conferences, and was also a guest lecturer on the Erasmus University Rotterdam and several other universities.

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