



# **Resource-oriented Risk Assessment and**

# **Intervention in Sexual Offenders**

by

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## **Abbreviations**

- CI Confidence Interval
- Ed. Edition
- Ed. or Eds. Editor(s)
- e.g. exempli gratia, for example
- et al et alii, et aliae, and others
- ICC Intraclass-Correlation Coefficient
- i.e. id est, which means, in other words
- M Mean
- n Sample size
- No. Number
- p Value of statistical significance
- p. or pp. Page(s)
- *r* Pearson product-moment correlation coefficient
- SD Standard Deviation
- SE Standard Error
- StGB Strafgesetzbuch
- Vol. or Vols. Volume(s)

## **Eidesstattliche Erklärung**

Hiermit erkläre ich, an Eides statt gegenüber dem Institut für kriminologische Sozialforschung der Universität Hamburg (UHH) sowie dem Instituts für Sexualforschung und Forensische Psychiatrie des Universitätsklinikums Hamburg-Eppendorf (UKE), dass ich die vorliegende Dissertation selbstständig und ausschließlich mit Hilfe der im Quellen- und Literaturverzeichnis aufgeführten Texte angefertigt habe. Alle Ausführungen, die anderen Schriften wörtlich oder sinngemäß entnommen wurden, wurden kenntlich gemacht. Für diese Dissertation wurde keine kommerzielle Promotionsberatung in Anspruch genommen. Alle Probanden wurden hinsichtlich der Forschung und dessen Recht aufgeklärt. Die Arbeit ist nicht in gleicher oder ähnlicher Fassung Bestandteil einer anderen Studien- oder Prüfungsleistung.

### **Declaration on oath**

I hereby declare, on oath, to the Institute for Criminological Research at the University of Hamburg (UHH) and the Institute for Sex Research and Forensic Psychiatry at the University Medical Center Hamburg-Eppendorf (UKE), that I have finished this dissertation by my own and exclusively by means of the references listed. All citations or quotations from other manuscripts were marked. This dissertation was not a part of a significant financial arrangement or affiliation. All the participants were informed about the research and their right by an informed consent. This work was not published in the same or similar version in any other previous coursework or examination.

Hamburg, June 2013, Dahlnym Yoon Dahlymph Yoon

## **Acknowledgment**

As I've started to work on my dissertation in 2010, I was fascinated by the Good Lives Model, and in the past years, I've learned not only what it means academically but also what it means to me.

I've learned what living a good life means to me but life is not always good. I've learned so much throughout the research projects I've worked on but realized how much I do not know at the same time. I've learned in which play and work I'm excellent in and in which I'm not. I've learned to be autonomous but to accept rules that I do not always want. I've learned how to get my inner peace and that it does not always work. I've learned how much love and friendship I'm allowed to have but I cannot keep everyone as I wish. I've learned to belong to certain communities and not to the others. I've learned how to find the meaning and purposes of my life but to accept that I don't understand everything yet. I've learned how happy I am about so many things but not about everything. I've learned to create and discover my own projects but I cannot do everything.

Above all, I've learned how to do my job, to love my job, and to love other important things in my life. I am happy, and I am thankful, and even if sometimes I'm not, I think I'm still living a good life and it's OK to have deficits sometimes, because I know my risk and protective factors and I'm motivated to learn more about them. I think this has been the second step of achieving my dreams come true.

I don't think I can mention all the names I want to on this one page.

But I hope that you, when you are reading this, know how thankful I am and how much I love you.

Thank you, and I love you.

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## **General Introduction**

Despite the great development in the field of sex offender rehabilitation in the last two decades, the effectiveness of intervention programs is still a controversially discussed issue. Starting with a meta-analysis on the efficacy of rehabilitation services (Andrews, Bonta, & Hoge, 1990), the most influential theory of offender rehabilitation has been developed over the next years: the Risk, Need, Responsivity Principles. Whereas the RNR model has been focused on the effectiveness of the intervention by matching the level of risk and service, a recent development has been influenced by positive psychology (Seligman, 2002). Constructs related to pro-social behavior such as resilience (Rutter, 1985) or protective factors (Costa, Jessor, & Turbin, 1999; Jessor, 1991) were adapted to forensic mental health research. The next rehabilitation theory has been suggested as consequence: the Good Lives Model (see Chapter 1 for detailed description of these theories). Forensic questions used to focus primarily on prediction of recidivism. However, with the improvements in research and practice, those questions have become more sophisticated requiring a more detailed view on individuals and their possibility to be reintegrated into the society. Although the field consensus on the importance of applied forensic assessment as an integral part of the intervention process is given, the status quo in the clinical practice does not seem to be mature enough to reflect the theoretical development (see Chapter 6 for elaboration of current state of research regarding offender rehabilitation). In spite of the changes in the paradigm, the most standardized assessment tools commonly used are merely focused on risk factors. If both recidivism prevention and offender rehabilitation should be the goal of the penal system, a risk-only assessment is not sufficient. This type of assessment can lead to a biased assessment and distorts the view of resources that may be important for the intervention (de Vogel, de Ruiter, Bouman, & de Vries Robbé, 2009; Rogers, 2000). However, empirically based researches on protective factors in adult sexual offender populations are

rare. Moreover, most studies are missing a clear operational definition of protective factors but have been investigating the factors with negative links to recidivism risk, though empirical data on the relationship between risk and protective factors in adult sexual offenders is not much available (Brown, Harkins, & Beech, 2011; Ullrich & Coid, 2011; Willis & Grace, 2008). There are two currently developed assessment tools for protective factors in adult forensic psychiatric population; the START (Short-Term Assessment of Risk and Treatability; Webster, Martin, Brink, Nicholls, & Middleton, 2004) and the SAPROF (Structured Assessment of PROtective Factors for violence risk; de Vogel, de Ruiter, Bouman, & de Vries Robbé, 2007; 2009), though they follow very different concepts of protective factors. The 20 START factors can be considered either as vulnerability or as strength, and the result refers to an acute risk for endangerment to self or others, whereas the existence of 17 SAPROF items need to be considered as strength against mid-term risk for violent behavior. The variety of the terminological use of protection needs a differentiated conceptualization for a better clinical risk communication and further research. Furthermore, these factors identified are not well investigated in terms of their reliability and validity. The need for improving theoretical background and empirically investigating those factors is undeniable.

The main purpose of this dissertation is to bridge the gap between the theories and practices in the field of applied forensic assessment. Chapter 1 provides an overview on the theories of offender rehabilitation and suggests the critical importance of risk assessment especially in sexual offenders. Chapter 2 describes the status quo and further perspectives in the forensic assessment practice by presenting the most commonly used assessment tools for sexual recidivism risk. Critical aspects on the recent progress of assessment procedures are discussed in this chapter as well. In Chapter 3, factors suggested to have protective effect are elaborated. Chapter 4 provides the operational definitions of the instruments and their items used in the empirical part of this dissertation. A conceptual model on the relationship between risk and protective factors related to sexual recidivism and its prevention is presented in Chapter 4 as well. Chapter 5 analyzes the reliability and validity of the German version of the SAPROF in a retrospective study with incarcerated male sexual offenders. A descriptive risk profile of offenders with different actuarial recidivism risk for sexual recidivism measured by the Static-99 (Hanson & Thornton, 1999) is reported in the Chapter 6. The protective factors measured by the SAPROF in those groups are explored. Finally, implications of the findings are summarized to indicate possible benefits for clinical practice. Suggestions for future research and optimization of the accuracy and comprehensiveness of applied forensic assessment are made.

## **Chapter 1 Offender Rehabilitation**

Offender rehabilitation has been controversially discussed at least in the last four decades. Against the background that the history of applied forensic risk assessment is short, even considering that the first official acceptance of an expert's testimony in the court was in 1962 in the United States (Marczyk, DeMatteo, Kutinsky, & Heilbrun, 2007), this discourse has been dominating the field of forensic mental health. After Martinson's declaration with the catchphrase, "nothing works (1974)," juridical policymakers have tried to restore the fallen reputation of correctional services. Policing strategies have become more aggressive about fixing broken windows (Wilson & Kelling, 1982), and zero-tolerance policies have been enforced to keep "law and order" in society (Bratton & Knobler, 1998). This punitive turn of criminal justice had also a great influence to Germany. The government launched a repressive policy against sexual offenders in 1998 and new correctional measures for sex offenders legislated. such as preventive detention/incapacitation were order: Sicherungsverwahrung), in accordance with article 66 in the criminal codes (StGB). This change led to a reform of the preventive detention to an unlimited, potentially life-long confinement beyond the length of the offender's prison sentence determined by the conviction (Merkel, 2010). Another development in the German criminal law was, however, that article 9 in the prison acts (StVollzG) was reformed in 2003 to transfer all prisoners convicted for sexual offenses with sentences more than two years to the socio-therapeutic unit (SOTHA) in the prison system. The main goal for this transfer is, according to this article, to let the inmates achieve a life in social responsibility without committing criminal offenses. The discrepancy in the parallel development of the repressive sanction through the criminal law and the rather humanitarian prison acts reflects the controversy of the issue regarding offender rehabilitation.

The importance of offender rehabilitation has been suggested gaining more support rather in the field of forensic mental health research and practice than in the law enforcement system. Almost two decades after the punitive turn under the "nothing works" paradigm has been started, Andrews and his colleagues (1990) published a meta-analysis against these agendas. They suggested that rehabilitation services seemed ineffective because those services do not reflect the Risk, Need, and Responsivity of the offenders. The authors pointed out in strong terms that a correctional program can only work when it is appropriate (Andrews & Bonta, 2010; Andrews, Bonta, & Hoge, 1990; Bonta & Andrews, 2007). These three core principles can be summarized as follows:

- ✓ **Risk:** match the program intensity to the offender's recidivism risk
- Need: identify criminogenic needs that are functionally related to criminal behavior and target them in treatment
- Responsivity: maximize the offender's ability to learn from treatment by tailoring the intervention program to the learning style, motivation, abilities and strengths of the offender

This so-called RNR model has become the most predominant and influential theoretical basis for the most offender intervention programs, such as Relapse-Prevention (RP) programs (Dowden, Antonowicz, Andrews, 2003). One of the underlying premises of the RNR model is that criminal behavior is a consequence of social learning through implicit or explicit rewarding and punishment. The General Personality and Cognitive Social Learning (GPCSL) perspective of criminal behavior in the RNR model reflects the complexity of factors with needs for consideration in the assessment and treatment procedures. The RNR model suggests eight major risk/need factors based on the GPCSL: history of antisocial behavior,

antisocial personality pattern, antisocial cognition, antisocial associates, family/marital circumstances, school/work, leisure/recreation, and substance abuse (Andrews & Bonta, 2006; Andrews, Bonta, & Wormith, 2011). RP understands sexual offenses as a behavioral pattern and assumes that the process related to recidivism can be prevented by effectively coping with the above mentioned factors (Ward & Hudson, 2000; Ward, Louden, Hudson, & Marshall, 1995). Though the RNR model was developed as a rehabilitation theory referring to general offender population, the empirical evidence seems to confirm the contribution of the principles to the treatment of sexual offenders (Hanson, Bourgon, Helmus, & Hodgson, 2009).

Almost three decades after the commencement of the punitive turn, Ward and colleagues (Ward, & Brown, 2004; Ward, Mann, & Gannon, 2007; Ward, & Stewart, 2003) suggested a new rehabilitation model driven from positive psychology, which set the goal of a treatment as supports to an offender achieving a better life. The underlying idea was also related to recent implications in empirical findings that approach goals in intervention might lead to greater treatment engagement of clients than avoidance goals, which are the primarily targets in RP based programs (Mann, Webster, Schofield, & Marshall, 2004). The Good Lives Model (GLM) of offender rehabilitation premises that all human beings, regardless of their behavioral differences, have similar core values and follow an implicit or explicit rudimentary good life plan. These values, which they conceptualized as "primary goods" are global values and life priorities for any human being's own sake. Ward and colleagues have proposed 11 primary goods (Ward & Gannon, 2006; Ward, Yates, & Willis, 2012):

#### a) Life: physical needs for healthy and well-functioning life

b) Knowledge: needs to understand certain things about self, other people or natural environment

- c) Excellence in play: needs for leisure activities and improvement in skills related to those
- d) Excellence in work: needs for a professional occupation and a continuous development of vocational skills to achieve possible mastery experiences
- e) Excellence in agency: needs to determine their own goals autonomously and pursue those in a self-directed manner without being affected by others
- f) Inner peace: needs to deal with own feelings and to reach a psychological balance without stress and emotional turbulence
- g) Friendship: needs to build and maintain warm and loving friendships and intimate, romantic, or family relationships
- h) Community: needs to belong to social groups and to share similar values, concerns, and interests

i)Spirituality: needs to find meaning and purpose in life

- *j*)*Happiness:* needs for satisfaction including sexual satisfaction, pleasure, and appreciation of own life
- *k) Creativity:* needs for novelty, initiative approaches for discoveries, and creating artistic or inventive works

These primary goods are secured by concrete means of "secondary goods." The GLM interprets criminal offenses as an outcome of a misbalance between the primary and secondary goods. There can be several routes towards criminal behavior. In some cases, the primary goods could be internally imbalanced when one goal is overrated or if certain goals are simply omitted in the life plan. In other cases, an offender might implement inappropriate secondary goods, even lack secondary goods, or try to use conflicting secondary goods at

the same time to achieve the primary goals. The GLM has a specific implication in sexual offender treatment programs by explaining sexual offending as an attempt to fulfill the intimacy need with inappropriate means, for instance, sex with children or extremely controlling toward partners (Ward et al., 2004; 2012). Comparing to the RNR's problem-based approach, this GLM intervene in offenders strength-based and consider the treatment as a rehabilitation measure, with which the offenders could reach the primary goods; a healthy, fulfilling, and satisfying life, with the right secondary goods.

Though these theories are not primarily focused on sexual offenders, both theories emphasize their applicability in assessment and treatment of sexual offenders and provide guidelines for the application. The RNR theory advocates assessment as the fundament for decision-makings regarding the level of risk and service. Moreover, they recommend clinicians not to be short-sighted implementing risk assessment solely for differentiating the risk level of offenders but to adhere to changeable nature of offenders through intervention and to use assessment as a mean of monitoring the client's changes (Bonta & Andrews, 2007). The GLM recommends personalization and prioritization of treatment goals next to these RNR principles for assessment procedures, assuming that understanding clients' own goals and life priorities is helpful motivating them to be more engaged in their own progress (Ward & Mann, 2004). Despite several differences in theoretical arguments and practical approaches, both schools seem to agree on the importance of a comprehensive and accurate assessment of risk factors, moreover, of strengths, to optimize the treatment efficacy. Building and reinforcing strengths and rewarding non-criminal alternatives or secondary goods, which represents approach goals in treatment, is considered to be as essential as the identification of risk factors and coping with them, which represents avoidance goals.

It is indisputable that an effective intervention in sexual offenders is primarily a preventive action against the recurrence of sexual crime, since the effects of sexual offenses on victims are extensive, long lasting, profoundly damaging to various aspects of a person's life, and can lead to various psychological disturbance. Society necessitates a law enforcement system that can provide security to the community and safety of the community members from being victimized by sexual offending. On the other hand, a long-term goal of criminal justice should aim at rehabilitation of offenders by intervening in them properly. A successful intervention should lead the offender to become a valuable member in the society and not to remain deviant while no longer sexually offending (Marshall, Marshall, Seran, & Fernandez, 2006). It should not be neglected, therefore, that professionals who deliver assessment and treatment for sexual offenders are at a critical position, in which public safety and offender rehabilitation need to be achieved at the same time (Clarke, 2004; Dean & Barnett, 2011). Against the background of the recent development in the rehabilitation theories, this occupation entails offering paradoxical demands on clients: to contribute to the reduction of their own recidivism risk and to improve their psychosocial well-being though their means to achieve the well-being might have been the criminal behavior. Therefore, the professionals should be aware of this controversy as being the connecting point between the society and the offender in attempts to achieve both goals (Prescott & Wilson, 2011). The role of applied forensic assessment in this procedure is crucial, since it lays the foundation providing the information on probability of recidivism, identifying relevant risk factors, and suggesting intervention possibilities (Heilbrun, Marczyk, Dematteo, Zillmer, Harris, & Jennings, 2003; Heilbrun, Marczyk, & DeMatteo, 2002; Hill, Briken, & Berner, 2008). Forensic mental health professionals conducting risk assessments bear an ethical responsibility to be clear and transparent when delivering their judgment (Boer, 2006; 2008; Rogers, 2000).

## **Chapter 2 Risk-only Risk Assessment**

The first step in providing an appropriate and successful rehabilitation is an accurate and thorough assessment of the recidivism risk, especially according to the RNR principles. The result of a comprehensive assessment should enable to identify the risk factors related to the criminal behavior and intervene in them properly (Bonta & Andrews, 2007). Nonetheless, as elaborated in the Chapter 1, the GLM emphasizes the importance of a comprehensive assessment of static and dynamic risk factors including the visualization of the offender's own life concept and values related to the primary goods (Ward et al., 2012). Therefore, it is necessary to reevaluate and reinterpret the meaning and the role of offender treatment and to consider more effective, balanced, and resource oriented measures integrating the core concepts of both rehabilitation theories in the field of forensic assessment.

The mainstream risk assessment procedures for sexual offenders have been greatly influenced by the theories of offender rehabilitation and vice versa. In the last two decades, there has been a remarkable development in the risk assessment as a discrete field, and a large number of instruments have been designed and validated. Hanson and Bussiere (1998) differentiated the following three approaches of risk assessment:

- Pure actuarial approach: predetermined, numerical weighting of predictors
- Guided clinical approach: expert judgment based on validated risk factors
- Adjusted actuarial approach: an actuarial prediction that can be modified to take into account potentially important factors

Before the risk assessment procedures have been standardized, a judgment of an individual's recidivism risk was based on the unstructured clinical opinion of a field expert without any specialized trainings. The results of those judgments varied from expert to expert since there were no given standards or adequately proved reliability and validity of the judgment methods (Grove & Meehl, 1996; Kozol, Boucher, & Garofalo, 1972; Steadman & Cocozza, 1974).

#### 2.1 Pure actuarial approach

Actuarial assessment of sexual recidivism emerged as one of the first attempts standardizing methodological aspects and providing core risk factors with certain predictive validity. The method originated from mathematical and statistical methods to assess risk in the insurance and finance industries. Risk factors in those actuarial tools were listed based on meta-analyses. The factors are therefore not theoretically related to each other, but the more those risk factors were existent, the higher the probability an offender belongs to a group of recidivists with the same number of factors (Harcourt, 2007). These so-called "base rates" percentage forms refer to certain types of recidivism risk within a specific period (Silver & Chow-Martin, 2002). Several Actuarial Risk Assessment Instruments (ARAIs) leaning on rigidly actuarial methods have been developed, starting with the Rapid Risk Assessment for Sex Offense Recidivism (RRASOR; Hanson, 1997) - later the Static-99 (Hanson & Thornton, 1999) -, and the Sex Offender Risk Appraisal Guide (SORAG; Rice & Harris, 1997).

#### 2.1.1 Rapid Risk Assessment for Sex Offense Recidivism

Hanson (1997) used a meta-analysis in seven cross-validation studies on over 20,000 sex offenders and sorted out several factors predicting sexual re-offending to develop the RRASOR. Four factors (number of prior sex offenses, offender's current age,

gender of the offender's victims, and offender's familial relationship to the victim) were included to the RRASOR for a rating on a 0-6 scale. Hanson advised to consider the RRASOR as a screening tool for the risk level rather than as a comprehensive assessment tool. Thus, the risk level measured by the RRASOR can be adjusted via consideration of further factors, such as sexual preference disorders and treatment motivation.

#### 2.1.2 Static-99

Along with the revised version, Static-2003 (Harris, Phenix, Hanson, & Thornton, 2003), Static-99 is probably the best-validated and most used actuarial tool for prediction of sexual reconviction in adult male sexual offenders among forensic practitioners in North America (Archer, Buffington-Vollum, Stredny, & Handel, 2006). The authors combined the Rapid Risk Assessment for Sexual Offenders (RRASOR; Hanson, 1997) and the Structured Anchored Clinical Judgment scale (SACJ; Grubin, 1998) for better predictive power than either original scale, which assess related but not identical factors. The ten items (age, relationship, index non-sexual violence, prior non-sexual violence, prior sex offenses, prior sentencing, any convictions for non-contact sex offenses, any unrelated victims, any stranger victim, any male victims) compounded from these two instruments are strictly static and the summation of each item score is assigned to corresponding risk categories: Low (0-1), Moderate - Low (2-3), Moderate -High (4-5), and High (6 or up to 12). A detailed description of the instrument is provided in Chapter 4.

In contrast to the way the predictive validity of this instrument out-performed others when evaluated in many countries, cross-validations in German speaking countries have shown moderate to good predictive validity of the Static-99 (Rettenberger & Eher, 2006; Stadtland, Hollweg, Kleindienst, Dietl, Reich, & Nedopil, 2005). However, it is yet

the most commonly implemented actuarial tool in German speaking countries (Rettenberger & Eher, 2006).

#### 2.1.3 Sex Offender Risk Appraisal Guide (SORAG)

Table 1: Items of the SORAG

ltems	
1	Lived with both biological parents to age 16 (except for death of parent)
2	Elementary school maladjustment (up to and including Grade 8)
3	History of alcohol problems
4	Marital status at time of index offense
5	Criminal history score for convictions and charges for non-violent offenses prior to the index offense
6	Criminal history score for convictions and charges for violent offenses prior to the index offense
7	Number of convictions for previous sexual offenses (pertains to convictions for sexual offenses that occurred prior to the index offense)
8	History of sex offenses against girls under age 14 only
9	Failure on prior conditional releases
10	Age at index offense (at most recent birthday)
11	Meets DSM-III criteria for any personality disorder
12	Meets DSM-III criteria for schizophrenia
13	Phallometric test results
14	Hare Psychopathy Checklist - Revised score

The VRAG (Violence Risk Appraisal Guide), the predecessor of the SORAG, was first introduced in the report on a 25-year research program at the Oak Ridge Division of

the Mental Health Care Centre in Penetanguishene, Ontario, a maximum-security forensic psychiatric facility in Canada (Quinsey, Harris, Rice, & Cormier, 1998).

The instrument was developed as an actuarial tool for risk appraisal based on the evaluation of offenders participated in this program. The Ontario researcher group measured the predictive validity of the VRAG with regard to sexual offenders and distinguished 14-items for assessment of sexual recidivism. The items (see Table 1) include broader spectrums of factors also with psycho-physiological measures (Quinsey, Harris, Rice, & Cormier, 2006).

The SORAG seems to have lower predictive accuracy than other actuarial devices (Craig, Browne, & Stringer, 2003). The German version of the SORAG revealed however at least good predictive validity with higher accuracy for violent recidivism than sexual recidivism (Rettenberger & Eher, 2007).

#### 2.2 Guided clinical approach

The third generation development flew over two different paths, but the core need underlying the development was very similar. Though the actuarialism was greatly contributed to the first core principle of the RNR - the risk principle - by providing clear standards for matching risk and service level, clinicians did not lose their hold on their clinical impression for judging recidivism risk (Hilton, Harris, & Rice, 2006). Therefore, the demand to standardize clinically relevant factors aside from actuarial risk factors aroused: the Structured Professional Judgment (SPJ; Douglas, Cox, & Webster, 1999; Hart, 1998; Hart & Boer, 2009) approach. It led to the development of risk assessment instruments that contained risk factors with clinical utility and possibly changeable nature. SPJ-risk assessment tools such as the Historical-Clinical-Risk Management-20 (HCR-20; Webster, Douglas, Eaves, & Hart, 1997), the Sexual Violence Risk-20 (SVR-20; Boer, Hart, Kropp, & Webster, 1997), and the Risk for Sexual

Violence Protocol (RSVP; Hart, Kropp, Laws, Klaver, & Watt, 2003) claim to include factors relevant for risk reduction and risk management efforts. SPJ instruments are not psychological tests with internally consistent subscales validated to represent the same construct, but checklists containing items with empirical bases and attempted to bridge the gap between actuarial risk prediction and clinical risk prevention (de Vogel et al., 2009). Thus, sum scores in these instruments do not necessarily indicate the severity of risk in certain cases, since one single factor could have significantly stronger impact for recidivism risk than multiple factors. For instance, a major mental illness (Historical item 6 in the HCR-20) with sadistic homicidal ideations and its active symptoms (Clinical item 3 in the HCR-20) could represent more immanent risk factors than history of violence (Historical items 1, 2 in the HCR-20) in combination with antisocial personality traits (Clinical items 2, 4 in the HCR-20) and treatment resistance (Risk management item 4 in the HCR-20). The authors of these instruments recommend using multi-dimensional judgment scheme rather than total scores for clinical decision-makings (Boer, et al., 1997; Webster, et al., 1997). Clinical criteria for assessing the risk should include information regarding frequency and imminence of possible recidivism under specific circumstance and duration for the validity of the assessment result (Boer, 2008; Friendship, Beech & Browne, 2002; Beech, Fisher & Thornton, 2003; Litwack, 2001).

#### 2.2.1 Historical-Clinical-Risk Management-20

The HCR-20 was originally developed in 1995 by a group of Canadian researchers (Webster, Eaves, Douglas, & Wintrup, 1995) at the Simon Fraser University. The revised version, the present HCR-20, was created after two years. The HCR-20 is probably the most widely used SPJ-risk assessment tool for (sexual) violence (Archer et al., 2006).

#### Table 2: Items of the HCR-20

#### **Historical Scale**

H1	Previous violence
H2	Young age at first violent incident
H3	Relationship instability
H4	Employment problems
H5	Substance use problems
H6	Major mental illness
H7	Psychopathy
H8	Early maladjustment
H9	Personality disorder
H10	Previous supervision fail
Clinica	Scale
C1	Lack of insight
C2	Negative attitudes
C3	Active symptoms of major mental illness
C4	Impulsivity
C5	Unresponsive to treatment

### **Risk Management Scale**

- R1 Plans lack feasibility
- R2 Exposure to destabilizers
- R3 Lack of personal support
- R4 Noncompliance with remediation attempts
- R5 Stress

It consists of 20 risk factors in three categories: historical, clinical, and risk management factors. The items in the historical domain are basically static, whereas

the items in the clinical and risk management domains have a larger scope for modifications. Each item is scored on a three-point scale (0-2). The German HCR-20 has been validated in several settings yielding in good predictive validity for violent recidivism (Dahle, 2006, Stadtland et al., 2005).

#### 2.2.2 Sexual Violence Risk-20

The SVR-20, which was developed at the same Canadian Institute as the HCR-20 (Boer, et al., 1997), assesses the risk of sexual violence in adult sexual offenders. Sexual violence in the SVR-20 is defined as any sexually offending behavior or attempt against an identifiable victim. Thus, the so called "hands-off" offenses without any specific victim, such as (child) pornography related offenses or disturbance due to sexual activities in public are not the primary target of the SVR-20 risk assessment. The instrument consists of 20 items and is divided into 3 subsections (see Appendix for the coding sheet in German and English): psycho-social adjustment factors primarily related to criminal history and psycho-social functioning level, sexual offenses items regarding characteristics of past (including the current) sexual offenses, and future plans items related to the person's manageability. A detailed description of the items is provided in Chapter 4. According to the survey of Archer et al. (2006), the SVR-20 is one of the most frequently used instruments for adult sexual offender risk assessment in North American countries and Europe. In the German-speaking part of Europe the SVR-20 has been commonly used for many years in different forensic settings. There are recent cross-validation studies in German speaking countries. A German retrospective study with 134 male sexual offenders revealed a good predictability of the SVR-20 sum scores regarding sexual violent reconviction (Stadtland et al., 2005). Prospective studies in Austrian prison system showed a good predictive validity of the SVR-20 sum scores regarding reconvictions of sexual offenses including hands-off offenses (Rettenberger, Boer, & Eher, 2011; Rettenberger, Hucker, Boer, & Eher, 2009).

It is still debatable if factors in SPJ-instruments actually cover dynamic factors and the ARAIs solely static, since the definition of being "dynamic" is still an ongoing discourse. A dynamic variable should demonstrate changes over two points of measurement time by themselves and relevance for changes in recidivism risk (Olver, Wong, Nicholaichuk, & Gordon, 2007). Besides, the changes should be able to take both positive and negative direction (Mills, 2005).

The answer to the question, whether these factors incrementally add predictive validity beyond and above ARAIs, differs from experts to experts. Some experts equate the clinical importance in treatment process of risk reduction with the statistical effect size (Olver et al., 2007), while the others do not (Harris et al., 2003). Regardless, even in the most widely used SPJ-tools, such as the HCR-20 and the SVR-20, the numbers of dynamic items in any kinds are few.

#### 2.3 Adjusted actuarial approach

The other path of development, thus, tried to integrate dynamic factors in actuarial assessment of recidivism risk. Hanson and Harris (2001), as the initiatives of the actuarialism, conducted a study including dynamic risk factors as well and developed Sex Offender Need Assessment Rating (SONAR; Hanson & Harris, 2001). The SONAR was the first instrument with potentially changeable dynamic risk factors for sexual offenders. Further improvements were pursued within the Dynamic Supervision Project conducted by the same researcher group and the SONAR was modified into the STABLE-2000 and the ACUTE-2000. The items were revised for higher predictive accuracy through a further evaluation project and the

STABLE-2007 and the ACUTE-2007 were published (Hanson, Harris, Scott, & Helmus, 2007).

#### 2.3.1 STABLE-2007 & ACUTE-2007

STABLE factors are personality, preference or behavioral aspects with changeability through a process of intervention. These 13 items are scored according to a manual using a three-point rating scale (0 = no problem, 1 = some problem, 2 = definite problem) and build sum scores up to 26.

Victim Access
/ Hostility
dren Sexual Pre-occupation
Rejection of Supervision
Emotional Collapse
Collapse of Social Supports
Substance Abuse
2

Table 3: Items of the STABLE-2007 and the ACUTE-2007

ACUTE factors, on the other hand, are highly transient conditions that would change within days or even hours by interpersonal or environmental stressors. The first four items are considered to be specifically relevant for sexual recidivism, and all factors for general and violent recidivism.

The STABLE-2007 and the ACUTE-2007 are recommended to be used with the Static-99 since it seems to add predictive power above and beyond the Static-99 results alone (Hanson et al., 2007). The clinical concept of the combination is to assess the baseline risk with the Static-99, to combine treatment effects by changes of dynamic variables with the STABLE-2007, and to prioritize the intervention need with the ACUTE-2007.

The STABLE-2000 and the STABLE-2007 are validated also in a German-speaking adult male sexual offender sample. The STABLE-2007 performed better predicting recidivism than the STABLE-2000 in the validation study and incrementally contributed to the predictive power above the Static-99 scores (Eher, Matthes, Schilling, Haubner-MacLean, & Rettenberger, 2012).

The changes in the risk assessment procedures are evident. A number of researchers has been recognizing the shortcomings in the risk assessment mainstream and trying to deliver empirical findings for the improvement of the field. This gradual change seems to be finding its way from punitive and economically predictive approach to humanitarian and individually preventive approach. Figure 1 summarizes the pathways of development in the risk assessment in the last two decades.

There is no doubt that a convergent method, which includes further potentially important factors based on clinical judgments and other information sources, can have advantages over either purely actuarial or purely clinical approaches (Hanson & Bussiere, 1998).

Whereas the adjusted actuarial approach attempts to combine these aspects in one instrument, i.e. the STABLE-2007, the convergent approach suggests using a combination of actuarial and clinical instruments, e.g. the Static-99 and the SVR-20 (Boer, 2006; 2008).



Figure 1. Development of Risk Assessment Procedures

Craig, Brown, & Beech (2008) suggested a multi-axial actuarial risk appraisal, in which nomothetic and idiographic aspects are integrated and which can estimate likelihood of frequency, imminence, and severity of re-offending. A holistic approach to risk appraisal, which includes a wider range of methodological aspects – such as actuarial and clinical, quantitative and qualitative –, and consideration of both risk and protection above all, is vital

for an accurate assessment of recidivism and its prevention (e.g., de Vogel, et al., 2009; DeMatteo, Heilbrun, & Marczyk, 2005; Gagliardi, Lovell, Peterson, & Jemelka, 2004; Haggård-Grann, 2005; Salekin & Lochman, 2008).

Reflecting this consensus among researchers and practitioners, the development in the mainstream risk assessment tools has been spent with the changes in the mainstream rehabilitation theories. Beside the SPJ-approach of risk assessment, which emphasize more clinically relevant factors than static risk factors alone, a recent development in the field of risk assessment suggests that the recidivism risk is changeable over time and the adjusted actuarial or convergent approach have been gaining more support (Boer, 2006; 2008; Hanson & Harris, 2001). Thus, as the traditional goal of risk assessment, prediction based on retrospective analyses, was challenged, and numerous experts started to support the new point of view; prevention based on prospective considerations of possible changes (Hart, 1998, 2001).

Douglas and Kropp (2002) pointed out that clearly, regardless of the objective a practitioner is dealing with, the primary purpose of assessment is to reduce the probability of an adverse outcome. Therefore, identifying risk and protection related to the objective, in this case, future recidivism is the first step in carrying out such a reduction, using the identified factors as resources.

The paradoxical point in this development is, however, factors with preventive effect towards recidivism have been neglected until recently. The risk assessment procedures have been one-sided including solely risk factors. These risk-only types of evaluations yet inherently and implicitly biased (Rogers, 2000). If the desired outcome of a process is positive, it is a logical error to assume that only negative factors would affect the process when positive factors are not considered. A strength-based approach has been argued to be important repeatedly but ignored constantly again. Even in the General Theory of Crime by Gottfredson and Hirschi

(1990), which was suggested almost at the same time as the RNR, it is clearly mentioned that even strong risk factors with direct link to antisocial behavior would not guarantee an actual occurrence of a crime. After all, a crime is a consequence of criminogenic needs being achieved in a certain situation when the opportunity is given (Pratt & Cullen, 2000). Somehow, nonetheless, the clinical practice was overriding with the Risk principle, trying to identify the risk level, but ignoring the Responsivity principle, neglecting resources to maximize the treatment effect. As this fundamental loophole was discovered, several researchers have stated the problematic issue of ignoring protective factors in forensic clinical practice (Miller, 2006; Rogers, 2000). The field of risk assessment began to accept the importance of treatment-related factors as the counterforce towards recidivism risk (Gendreau, Little, & Goggin, 1996; Quinsey, Jones, Book, & Barr, 2006; Stouthamer-Loeber, Wei, Loeber, & Masten, 2004).

Understanding risk alone is insufficient for either identifying motivational aspect for criminal behavior or intervening in individuals in terms of prevention or treatment (Jessor, 2013). Moreover, the mere focus on risk factors in applied forensic assessment could result in inaccurate and biased predictions of recidivism. Considering the recent debate between the above mentioned two schools (Andrews et al., 2011; Ward et al., 2012), the field consensus tends to accept the importance of both risk-need matching and improvement of life quality of offenders, who should become a valuable member of the society and not remain deviant but recidivism-free (Marshall, Marshall, Serran, & Fernandez, 2006; Marshall, Marshall, Serran, & O'Brien, 2011). Therefore, an evaluation of recidivism risk should take not only risk factors but also modifiable intervention related factors, in other words, protective factors into account (de Vogel et al., 2009; Miller, 2006; Rogers, 2000, Ullrich & Coid, 2011).

## **Chapter 3 A Review on Protective Factors**

#### 3.1 Introduction

The terminology referring to protective factors is still diverse among researchers. There has been no clear consensus in the literature about the terminology or the definition of those terminologies. Terms such as resilience, protective factors, promotive factors or resources were mentioned, which seem to be related to the similar outcome: a prevention of risk behaviors. The concept of risk and protective factors drives from the field of classic health researches and prevention science. Thus, those factors are commonly defined as predictors of occurrence or prevention of an adverse outcome (Coie et al., 1993; Rutter, 1985). Protective factors in mental health studies have been usually defined as factors in personal, social, and external support system which modify, ameliorate, compensate, or alter a person's response to risk factors for any maladaptive life event and thus reduce the probability of those outcomes (Fitzpatrick, 1997; Masten & Garmezy, 1985; Rutter, 1985). In the field of offender or violence studies, researchers began to emphasize changeable, treatment-oriented factors as the counterforce to recidivism risks (Clayton, Leukefeld, Denohew, Bardo & Harrington, 1995; Gendreau et al., 1996; Quinsey et al., 2006; Stouthamer-Loeber et al., 2004).

The field of juvenile intervention has been developing its own trajectories predominantly driven from the developmental psychological point of view. The focus of desistance models in youth criminal behaviors is rather on identifying the factors helping youths 'growing out' from the criminal career. Since physical and mental maturity in adolescents change over time, most of the adolescents desist from criminal behavior over developmental life courses due to changes in personal or social contexts, either being passively influenced by those or actively

calculating costs and benefits (Laub & Sampson, 2001; Moffitt, 1997; Sampson & Laub, 1993). The terminology is more differentiated in risk assessment of children and adolescents than in adult assessment. Protective factors would present in individual, environmental, and social settings either buffer or mediate the negative impact of risk factors or mediate in risk factors help individuals responding to risk, though the empirical findings support rather the moderation model than the mediation model (Fitzpatrick, 1997).

Also cultural aspects could have influence on sexual aggression (Hall & Barongan, 1997). Recent investigations defined variable that predict a low probability of violence in the general youth population as preventive promotive factors, for instance, good neighborhood. Variables that predict desistance from offending such as good supervision were defined as remedial promotive factors. Besides, they suggested reserving the term protective factors for those which buffer or nullify the effects of risk factors (Loeber & Farrington, 2008), though in their own researches both of the term promotive and protective used interchangeably (Loeber & Farrington, 2012). Some researchers recommended considering protective factors as the absence of risk factors (Busch, Zagar, Grove, Hughes, Arbit, Bussell, et al., 2009; Costa et al., 1999; Zagar, Busch, Grove, & Hughes, 2009).

The concept of protective factors in adult offenders is even lesser crystallized than in young offenders. The discussion between the independent protective factors regardless of risk factors and those as the absence of risk factors finds its parallel in the practice. Similar to the adolescents' developmental approach, most of the suggested definitions cover a broader spectrum from individual to system-related factors (de Vogel et al., 2009). In addition to the protective factors as contributors in reduction of violence, other factors influence treatability were also suggested as being protective (von Franqué, 2012). Another point of view is to consider the protective factors as the opposite end of risk factors (Webster et al., 2004; 2009).

The only common point in all juvenile and adult studies is that they investigated predictors of either reduction of recidivism or desistance. However, there is still no consensus over the nature of protective factors and their effect on recidivism, if they buffer the impact of risk factors and recidivism or if they are directly linked to the recidivism regardless of risk factors or if they are absence or the opposite end of risk factors (Ullrich & Coid, 2011).

Though researchers are beginning to agree on the importance of information concerning protective factors and the fact that these factors and their risk-reducing effects have been unfairly ignored, the relationship between risk and protective factors are not yet empirically proved. The primary purpose of this chapter is therefore to descriptively review the literature and assessment tools on protective factors to summarize the current state of research and identify possible gaps and inconsistencies in the literature regarding this topic. Though the search was conducted systematically, the diffusion in terminology might have led to exclusion of certain studies that investigated protective factors but did not define the object as protective factors. In several identified studies, the appraisal of the level of effect sizes was possible only to a limited extent due to the lack of information provided in the studies. Therefore, this review does not claim completeness or exhaustiveness.

#### 3.2 Methods

#### 3.2.1 Operational definitions and search strategy

Since the main purpose of the review is to identify protective factors as topic of empirical research, studies were included to the review if they concerned explicitly protective factors or recidivism reducing factors. Recidivism was defined as any criminal behavior during or after

any intervention measures (e.g. mere incarceration, intra- or extramural treatment), regardless of its legal consequences. Databases used for the search were: Web of Knowledge (incl. Web of Science, BIOSIS Citation Index, Medline, Current Contents Connect) and PubMed. Keywords entered were: "protective factors," OR "reduce recidivism," OR "recidivism prevention" OR "desistance" AND "offender" AND "violence". Due to the rarity of investigations on those factors and defuse terminologies regarding those factors, any article, book, conference paper or report concerned either of those research questions was included at the beginning. The search was limited to the publications from the period beginning with 1990 to 2012, considering that most commonly risk assessment tools are developed after 1990. In fact, all the search results were published after 1991. 246 publications were identified in the database. The search results were filtered by sorting out studies with solely health-compromising behaviors without any criminal or violent element as outcome measures (e.g. tobacco use), factors related to victimization, sexual offender legislation, merely female offenders, and psychiatric patients with non-person related violent behavior. Studies suggested protective factors hypothetically without empirical examination were also excluded.

44 studies remain for the review. Nine studies, which have identified risk assessment or treatment as protective factor without specifying those contents, were excluded. 14 replication studies on the same sample with the same hypotheses were also excluded. For instance, in the American Journal of Preventive Medicine (Vol. 43, No. 3, supplement), a series of publications have replicated the results of Stouthamer-Loeber, Loeber, Stallings, & Lacourse (2008), these studies were not included to this review. 21 studies were reviewed for the demonstration in the final step.

#### 3.2.2 Instruments

The second part of the review concerns primarily the studies using assessment tools for protective factors. Published and presented papers regarding reliability and validity of those assessment tools are summarized. Five studies and four instruments were identified in the first part of the review: the SAVRY, the START, the SAPROF, and the IORNS. Since the IORNS is a self-report measure, it was excluded from the review since the purpose of this review is to state the findings for assessment tools. Thus, the three following instruments were included into the analyses as the only existing assessment measures for protective factors. Authors of the instruments were personally contacted for inclusion of further available studies. Cross-referencing was used to add studies that were related to the topic but not identifiable in the databases.

#### 1) SAVRY

The Structured Assessment of Violence Risk in Youth (SAVRY; Borum, Bartel, & Forth, 2003) contains not only risk factors but also protective factors. The instruments six protective factors next to 24 risk factors differentiated in four domains (see Table 4). The SAVRY is also an SPJ-instrument and is specifically designed to examine risk and protective factors in young violent offenders. Similar to other SPJ-tools therefore, each risk factor and protective factor is coded for its degree on a three-point scale from 0-2, but the final appraisal of risk level is determined by the clinician's judgment.
Table 4: Items of the SAVRY

Historical items	Social/ contextual items	Individual items	Protective items
History of violence	Peer delinquency	Negative attitudes	Prosocial involvement
History of non- violent offending	Peer rejection	Risk taking/ impulsivity	Strong social support
Early initiation of violence	Stress and poor coping	Substance use difficulties	Strong attachments and bonds
Past supervision/ intervention failures	Poor parental management	Anger management problems	Positive attitude towards intervention and authority
History of self-harm or suicide attempts	Lack of personal/ Social support	Low empathy/ remorse	Strong commitment to school or work
Exposure to violence in home	Community disorganization	ADHD	Resilient personality
Childhood history of maltreatment	Peer delinquency	Poor compliance	
Parental/ caregiver criminality		Low interest/ commitment to school or work	
Early caregiver disruption			
Poor school achievement			

## 2) START

The START (Short-Term Assessment of Risk and Treatability; Webster, Martin, Brink, Nicholls, & Middleton, 2004) follows the conceptualization of protective factors as the opposite of risk factors and put them in contrast to each other. The START was developed in an interdisciplinary team with psychologists, psychiatrists, and nurses.

	Key Strengt		ths	ltomo	Vulnerabilities			Critical	
	item	2	1	0	items	0	1	2	item
1	0				Social skills				0
2	0				Relationships				0
3	0				Occupaional				0
4	0				Recreational				0
5	0				Self-care				0
6	0				Mental state				0
7	0				Emotional state				0
8	0				Substance use				0
9	0				Impulse control				0
10	0				External triggers				0
11	0				Social support				0
12	0				Material resources				0
13	0				Attitudes				0
14	0				Med adherence				0
15	0				Rule adherence				0
16	0				Conduct				0
17	0				Insight				0
18	0				Planning				0
19	0				Coping				0
20	0				Treatability				0

Table 5: Structure of the START item rating

As the name indicates, the START aims to contribute to short-term decision-makings in forensic mental health system, in which assessment tools target mid- or long-term outcome prediction. The START was revised into the Version 1.1 with minimal changes (Webster, Martin, Brink, Nicholls, & Desmarais, 2009). 20 items in the START can be

coded as strength or vulnerability simultaneously (see Table 5). The evaluator can make risk estimates (i.e., low, moderate, or high) for seven adverse outcomes (violence to others, suicide, self-harm, self-neglect, unauthorized absence, substance use, being victimized).

The development purpose was to inform and assist in intervention efforts. Reflecting this purpose, the START offers several unprecedented features which are special and meant to be helpful for clinical practice. "Signature Risk Signs" provide possibility to mark behavioral patterns which are seemingly unrelated to the risk per se but might increase the risk by functioning as an unstabilizer of individuals' psychosocial status. "Threat box" offers to check the impending risk for acute specific behavioral occurrence. "Risk Formulation" offers possible risk scenarios based on the chain of risk factors.

## 3) SAPROF

The SAPROF (de Vogel et al., 2007; 2009; 2010) is a structured assessment guideline concerning protective factors against the risk of future violence or sexual violence. It was developed at the Van der Hoeven Kliniek in the Netherlands to be used in combination with an SPJ-based risk assessment tool, such as the HCR-20 or the SVR-20. The protective factors in the SAPROF are defined as personal characteristics, environmental or situational factors that protect the individual offender from falling back into violent behavior. The 17 items of the SAPROF (see Chapter 4 for a detailed description of the items) are categorized into three sub-scales: internal items regarding historical and dynamic characteristics of an individual, motivational items that arise from the motivation to be a positive member of society, and external items referring to beneficial environmental factors that offer protection from outside of the individual.

All of the SAPROF items are dynamic except for the first two internal items. The SAPROF is intended to balance the risk assessment of violent recidivism with the compensating effect of protective power towards risk factors. Furthermore, these factors may give a more comprehensive view of individuals and provide clearer guidelines for risk management. Repeated assessments of both risk and protective factors would also provide more extensive views on treatment progress. Similar to the START, one of the most significant features of the SAPROF is a standardized guideline for marking critical items based on the presence and need of the items. The developers implemented the concept of "Key" and "Goal" items. Key items are higher-score items (1 or 2) considered to be essential for the prevention of future violence, and Goal items are lower-score items (0 or 1) the improvement of which could provide effective protection. Since assigning these critical items and prioritizing the intervention needs is the first step of the treatment plan, the assessor is to use this option after careful consideration, as a part of the whole intervention process.

## 3.3 Results

### 3.3.1 Results regarding protective factors

Table 6 summarizes the results of search on the literature within 13 studies, which have identified protective factors with effect of predicting reduction or absence of violent behavior, delinquencies, or criminal recidivism in juveniles. Most of the studies have conducted correlation or regression analyses with protective factors as independent and outcome measures as dependent variables. In case of studies with both male and female sample, only the results regarding the male sample were reported when the study provided the

differentiated the analyses. Blum & Ireland (2004) had conducted the analyses separately for male and female but did not provide the subsample size, the results in the table refers to the analyses of male sample. Effect sizes were put into parentheses. Except for the last study by Calley (2012), all the other factors showed at least partially significant link to the outcome variables. Whereas the most studies used the occurrence of violence as dependent variable and investigated the decreases of the outcome, Stouthamer-Loeber et al. (2004; 2008) investigated the increase of desistance, therefore, the odds ratios are into the opposite direction. Several studies were not accessible as a full article via online. In those cases, the results elaborated in the abstract are listed (Reyes et al., 2004).

# Table 6: Studies with Young Participants

References (Year)	Participants	Identified Factors	Outcome Measures
Hoge, Andrews, & Leschied (1996)	n = 338 Canadian juvenile offenders (270 males and 68 females)	positive peer relations $(.2955^*)$ positive response to authorities $(.0138^*)$ effective use of leisure time $(.4048^*)$	recidivism according to the official criminal record
Fitzpatrick (1997)	n = 1,308 US-American school youths	connections or bonds to parents (.07) teacher attention (.04)	fighting
Resnick, Bearman, Blum, Bauman, Harris, Jones et al. (1997)	n = 12,118 US-American school adolescents	family connectedness (.1321**) parental expectations (.07**) school connectedness (.2627**) grade point average (.03**)	violent behavior
Borowsky, Hogan, & Ireland (1997)	n = 1,674 US-American male school youths	emotional health (.43**) connectedness to the community (.53**)	sexually aggressive behavior
Blum & Ireland (2004)	n = 15,695 Caribbean male and female school youth	family connectedness (.76*) school connectedness (.31**) religiosity (.72**)	violence involvement, sexual inter-course, tobacco use, alcohol use
Resnick, Ireland, & Borowsky (2004)	n = 6,913 US-American male school adolescents	parental expectations (.03**) grade point average (.03**) discuss problems with parents (.02**) other adult connectedness (.03*)	violent behavior

(continued on p.34)

References (Year)	Participants	Identified Factors	Outcome Measures
Reyes, Moscoso, Velez, Rodriguez, Colon, Robles, et al. (2004)	n = 2,385 Puerto Rican school adolescents	participation in family decisions (n/a)	violent behavior
Stouthamer-Loeber, Wei, Loeber, & Masten (2004)	n = 506 US-American school boys	low physical punishment (3.30) being employed or in school (2.61) believes likely to be caught (3.14) good relationship with peers (4.23)	persistent serious delinquencies
Stouthamer-Loeber, Loeber, Stallings, & Lacourse (2008)	n = 1,009 US-American school boys	high perceived likelihood of getting caught (2.6*) good (parental) supervision (2.7**-4.0) low physical punishment (2.1*) low antisocial attitude of parents (2.9*) low parental stress ( $2.9^{**}-5.7^{**}$ ) two biological parents in home (2.3*) positive attitudes toward school (4.0*) high academic achievement ( $5.7^{*}$ ) good neighborhood impression (2.5-4.1*) good housing quality ( $6.1^{*}$ ) high socioeconomic status ( $2.6^{**}$ ) low substance use or dealing ( $1.8^{*}-8.1^{**}$ ) no gang membership ( $2.4^{*}-4.0$ ) no gun carrying ( $2.7^{**}-3.8^{**}$ ) never running away ( $6.0^{*}$ ) no depressed mood ( $2.0^{*}-2.3^{**}$ ) low violence victimization ( $2.2^{**}-2-4^{*}$ ) low level of serious injury ( $3.3^{*}$ ) no behavioral problem of the father ( $2.0^{*}$ ) low peer delinquency ( $2.4^{**}-4.6^{**}$ )	desistance from violence and serious theft

(continued on p.35)

References (Year)	Participants	Identified Factors	Outcome Measures
Hemphill, Smith, Toumbourou, Herrenkohl, Catalano, McMorris, et al. (2009)	n = 3,818 US-American and Australian male and female school students	female gender (.50**51**) emotional control (.48**51**) attachment to mother (.51**75**) opportunities for prosocial (.50**68**) recognition for prosocial (.51**85*)	self-reported violent behavior
Zagar, Busch, Grove, & Hughes (2009)	n = 1,269 US-American youths and adults	school behavior, achievement, stable social integration (n/a)	(sexual) violent delinquencies
Salekin, Lee, Schrum-Dillard, & Kubak (2010)	n = 140 US-American child and adolescent offenders (92 males and 48 females)	motivation to change (.75**)	violent recidivism
Calley (2012)	n = 166 juvenile offenders	initial age (.75) child welfare system involvement (.75) termination of parental rights (.58) length of stay in residential treatment (.71)	violent and drug-related recidivism

(\*) p < .10, \* p < .05, \*\* p < .01

Only 8 studies were identified to have examined the resources of adults against re-offending (see Table 7). Moreover, these studies differ greatly in their methodologies and a consistent demonstration of the results was not possible. For instance, Farmer et al. (2011) conducted a qualitative study and compared five desisters and five non-desisters. Bucklen & Zajac compared parole violators and non-violators with a mixture of quantitative and qualitative analyses and identified the listed factors which seem to be relevant for parole success. DeMatteo et al. (2005) investigated a difference between self-reported and collateral evidence of seven hypothetical protective factors (strong family relations, involvement in organized, religion, participation in structured activities, exposure to positive role models, social support, steady employment, reading ability) and identified the two listed factors as the most commonly present protective factors. However, the correlation analysis between the number of protective factors and the number of arrest or sub-arrest due to violence were only found in a high or low psychopathic subsamples and not in the whole sample (r = -.4, p < .05). Otherwise than this, Willis & Grace (2008) conducted a correlation analysis of each factor with the outcome. Case et al. (2009) compared the number of new arrests before and after the enrollment into a jail diversion program in the sample and suggested that living within a jail diversion program in a community program leads to fewer arrests. Brown et al. (2011) also conducted a comparison studies between sexual offenders with and without positive treatment outcome and found significant differences in factors related to victim-specific empathy, such as self-reported view on the impact of their offending on their victims and personal distress when witnessing the distress of others measured after treatment. Harkins et al. (2010), Ullrich & Coid (2011), and Scoones et al (2012) conducted regression analyses.

# Table 7: Studies with Adult Participants

References (Year)	Participants	Identified Factors	Outcome Measures
DeMatteo, Heilbrun, & Marczyk (2005)	n = 54 community participants with and without criminal histories	strong family relations, steady employment	antisocial behavior and violence
Willis & Grace (2008)	n = 81 male child molesters	accommodation (-30**) employment (-23*) GLM secondary goods (-28*) reintegration plan quality (32**)	sexual recidivism
Bucklen & Zajac (2009)	n = 704 male offenders	prosocial attitudes, higher level coping skills	parole failure
Case, Steadman, Dupuis, & Morris (2009)	n = 546 forensic patients in jail diversion programs (267 males and 279 females)	living circumstances	arrests and jail days
Harkins, Beech, & Goodwill (2010)	n = 180 male sexual offenders	denial (.69*)	sexual recidivism
Brown, Harkins, & Beech (2011)	n =105 male sexual offenders	victim-specific empathy	sexual recidivism

(continued on p.38)

References (Year)	Participants	Identified Factors	Outcome Measures
Farmer, Beech, & Ward (2011)	n = 10 male sexual offenders	sense of belongingness increased optimism for the future	sexual recidivism
Ullrich & Coid (2011)	n = 800 male offenders	social support (.27*50*) emotional support (.2150(*)) spare time spent with family/friends (.10*45*) closeness to others (.4144*) place to stay after release (.33*-1.72) working/training/education (.7856*)	violent recidivism
Scoones, Willis, Grace (2012)	n = 196 male child molesters	release planning (.83*)	sexual recidivism

(\*) p < .10, \* p < .05, \*\* p < .01

#### 3.3.2 Results regarding studies with specific assessment tools for protective factors

A gradually growing number of studies have been conducted in the very recent past. Regarding the validity of the START, the predictive validity of the instrument was examined in several different settings. Nonetheless, construct validity data were rarely available for the strength items compared to the vulnerability items. As mentioned before, since the change for separate ratings of strength and vulnerabilities was in 2009, the studies explicitly on strengths were conducted after this time point.

The focus of the investigation with the SAVRY has been primarily was on its risk factors, nevertheless, recent studies resulted in significant association between the lack of protective factors in the SAVRY and higher recidivism (Lodewijks et al., 2010; Rennie & Dolan, 2010). However, the SAVRY itself does not seem to predict sexual recidivism in sexual offenders in Spice et al., 2012. Previous studies on the SAVRY risk factors had also shown evidence that the SAVRY risk factors are less related to sexual recidivism (Quenzer & Dahle, 2010; Viljoen, Scalora, Cuadra, Bader, Chavez, Ullman, et al., 2008).

The SAPROF is showing moderate to large effect sizes in several settings predicting nonrecidivating offenders. Similar to the SAVRY, the SAPROF scores seem to be contributing rather to the prediction of general or violent recidivism than sexual recidivism. Table 8 demonstrates studies tested the validity measures of instruments assessing protective factors. In case of the SAVRY and the START, only those studies demonstrating the validity of protective factors are listed. Unlike the other studies, which tested the predictive validity of protective factors on non-recidivism, a Dutch validation tested the predictive validity on recidivism (Lodewijks et al., 2008). Since the SAPROF is the main focus in this dissertation, the results are demonstrated with more details below Table 9. Though the research section on the SAPROF website (http://www.saprof.com/content/2012 /11/Current-research) refers to numerous projects implementing the SAPROF, published journal articles in empirical nature are only three.

References (Year)	Participants	Outcome Measure	Construct Validity ( <i>r</i> )	Predictive Validity (AUC)
START				
Nicholls, Brink, Desmarais, Webster, & Martin (2006)	n = 51 male forensic psychiatric patients	verbal and physical aggression	-	>.67*
Haque & Cree (2009)	n = 46 male forensic psychiatric patients	general and physical aggression	-	>.76
Wilson, Desmarais, Nicholls, & Brink (2010)	n = 30 male forensic psychiatric inpatients	verbal and physical aggression	-44* outcome	>.71
Desmarais, Nicholls, Wilson, & Brink (2012)	n = 120 male forensic psychiatric patients	verbal and physical aggression	-	>.65
SAVRY				
Lodewijks, Doreleijers, de Ruiter, & Borum (2008)	n = 66 juveniles offenders	institutional violence	41** outcome	.13***
Rennie & Dolan (2010)	n = 135 juvenile delinquents	general recidivism	28** outcome	.71*

# Table 8: Validation Studies with Assessment Tools for Protective Factors

Spice, Viljoen,<br/>Latzman, Scalora<br/>& Ullman (2012)n = 193 juvenile sex<br/>offendersno significant<br/>associations to<br/>the outcome

(continued on p.41)

References (Year)	Participants	Outcome Measure	Construct Validity ( <i>r</i> )	Predictive Validity (AUC)
SAPROF				
de Vries Robbé, de	n = 105 Dutch male	violont regidivier		.71**82** (FPJ)
Vogel, & de Spa (2011)	violent offenders	violent recidivism		.74**85** (Sum)
Yoon Spehr &	n = 30 German		46* –59** (SVR-20)	
Briken (2011)	male sexual offenders	-	04 –16 (Static-99)	-
Klein, Yoon, Briken, Turner,	n = 66 German		50** –61** (SAVRY risk)	
Spehr, & Rettenberger (2012)	young alleged sexual offenders	-	0.27* –36** (STAYSOR)	-

## Table 9: Validation Studies with Assessment Tools for Protective Factors

(\*) p < .10, \* p < .05, \*\* p < .01

The initial validation study conducted by the developers examined the predictive validity of the SAPROF in combination with the HCR-20 in 105 Dutch male forensic patients. Both the SAPROF post-treatment total scores and the Final Protection Judgment (FPJ) predicted the absence of violent recidivism significantly after up to three years after discharge (see Table 9). The combination of the HCR-20 and the SAPROF predicted violent recidivism (.72\*\*-.85\*\*) and the integrated final risk judgment (.65\*-.80\*\*) as well.

The German SAPROF is still in a primary validation phase. The above listed pilot study by Yoon et al. (2011) conducted within an n = 30 male sexual offender sample. The participants were living in the community on probation or under parole supervision undergoing aftercare treatment program at the Institute for Sex Research and Forensic Psychiatry (ISF) in Hamburg. Both the SVR-20 and the Static-99 sum scores and risk judgment suggested low to moderate risk of recidivism on average, whereas the SAPROF indicated a moderate to high level of protection against recidivism risk. The SAPROF sum scores and final judgment showed a significant negative correlation to the SVR-20 but not to the Static-99.

The study within a sample of juveniles who have allegedly sexually offended, the SAPROF showed significant negative correlations with the SAVRY risk factors. However, with the STAYSOR (Screening Tool for the Assessment of Young Sexual Offenders' Risk), a self-constructed risk assessment instrument tool consisting of 11 dichotomous and predominantly static-historical items, which can be understood as an adaptation of the Static-99 for juveniles, the SAPROF yield in a confusing result. The SAPROF and the STAYSOR sum scores were negatively correlated, but the final judgments were even positively correlated.

# 3.4 Discussion

Considering the critical view on the lack of studies on the reliability and validity issues of certain risk assessment tools (Rettenberger et al., 2011), the number of studies regarding these properties of assessment tools for protective factors is even much smaller.

Studies on juvenile violent behavior have been more progressive than that on adult criminal behavior. In the youth studies, most of the samples were driven from non-criminal populations, especially school students. Though the studies were conducted in very large scales with representative sizes, a recognizable part of the listed studies drives from the same project, for example, the National Longitudinal Study on Adolescents Health (Blum & Ireland, 2004; Borowsky et al., 1997; Resnick et al., 1997; 2004) or the Association for Prevention Teaching and Research award funded by Centers for Disease Control and

Prevention (Loeber & Farrington, 2012; Stouthamer-Loeber et al., 2008; Stouthamer-Loeber et al., 2004).

Studies on adult offenders were rather confirmatory than explorative, in which the truenegative hypotheses regarding the link between the absence of well known risk factors from previous large scale meta-analyses and the absences of recidivism were verified. The "what works" series of meta-analyses conducted at the Centre for Criminal Justice Studies, which identified various set of domains related to recidivism (Gendreau, Goggin, & Gray, 2000; Gendreau et al., 1996), seem to have provided the basis for the generation of those hypotheses. Researchers have started to evaluate protective factors related to sexual recidivism very recently. Again, the studies were limited in their methodological variety to explore protective factors and mainly focused on general or violent offenders rather than sexual offender sample.

Growing numbers of studies are validating the utility of all three instruments. Nevertheless, most studies were conducted in violent offender and/or forensic mental health samples and studies in sexual offender and/or correctional samples are still insufficient. The findings from studies on protective factors among sexual offenders suggest that the instruments show lower predictive accuracy regarding sexual recidivism than violent recidivism (Spice et al., 2012). All three instruments are still in an initial validation phase and further cross validation studies are needed. Two German studies with the SAPROF indicated that the SAPROF correspond better with instruments with clinical and at least partially dynamic factors rather than solely static factors. However, the positive correlation between the SAPROF and the STAYSOR final judgment seems to align with the so-called "clinical override," which reflects a possible distortion of accuracy of the clinical judgment when sum scores are ideographically changed.

The need for further examinations of these instruments in various settings and offender groups are necessary to support improvement of clinical implementation and utilization of structured assessment of protective factors. Several juvenile longitudinal studies have been showing long-term preventive effect of resource against multiple risk factors (Jessor, 2013; Yoshikawa, 1994). This effect needs to be cross-validated in offender samples especially in prospective longitudinal settings. Comparing the annotated bibliography on the HCR-20, where over 40 studies are listed as an update between 2008 and 2010, there are 19 studies listed on the SAPROF homepage (Douglas, Blanchard, Guy, Reeves, & Weir, 2010; The SAPROF team, 2013). The area of protective factor researches might have a potential to provide additional elucidation in the complex procedural influence of risk factors on the occurrence of recidivism. Therefore, differentiated theses on the functional aspects of protective factors on the recidivism need to be suggested and examined throughout methodologically sound investigations to verify those hypotheses. The next chapter illustrates a trial suggesting a conceptual model on the relationship between the risk and protective factors and their influences on recidivism and its prevention.

# **Chapter 4 Relationship between Risk & Protection**

As elaborated in the Chapter 2, even though these two important theoretical approaches are both widely accepted in sex offender treatment, the assessment of protective factors, which could be important for the intervention, has been neglected until recently (de Ruiter & Nicholls, 2011; de Vogel et al., 2009). Despite these improvements of risk assessment measures and their accuracy in the last 20 years, mainstream risk assessment and related studies are in fact still one-sided in their enumeration of risk factors with partial or total exclusion of protective factors (Rogers, 2000). As long as risk assessment procedures include this fundamental loophole by neglecting protective factors, recidivism prevention and rehabilitation – as the main goal of any offender intervention programs – will remain limited in its effectiveness. Therefore, this chapter aims at providing a differentiated view on the factors of representative assessment tools mentioned in previous chapters: the Static-99, the SVR-20, and the SAPROF, and clarify the relationships between these factors.

# 4.1 Description of the instruments

### 4.1.1 Static-99

As demonstrated in Chapter 2, the items of the Static-99 are solely static. The only possible changes in item scores are in case of an aging of the individual over the critical value (Item 1), a change in relationship status over the critical period (Item 2), or a new conviction (Item 3-10). The English coding manual is obtainable without charge at: http://www.static99.org. The German coding manual can be obtained with training at the Institute for Violence Research and Prevention in Austria (http://www.igf.or.at). The following item description is

according to the revised manual published by Harris et al. in 2003. Most of the items are dichotomous, except for Item 5 (See Appendix for the coding sheet in German and English).

## Item 1) Young

Research (Hanson, 2001) shows that sexual recidivism is more likely in an offender's early adult years than in an offender's later adult years. Therefore, offenders over ages of 25 are considered to be at lower risk of sexual re-offending.

## Item 2) Ever lived with an intimate partner

Hanson and Bussiere (1998) suggested that risk to sexually reoffend is lower in men who have had intimate relationship in the past. Therefore, this item refers to an absence of longer intimate partnerships - regardless of sexual orientation - over two years as a risk factor.

#### Item 3) Index non-sexual violence - Any convictions

The above mentioned meta-analysis (Hanson & Bussiere, 1998) identified the presence of a separate conviction of non-sexual violence as an indicator for future (overt) violence. A separate conviction of non-sexual violence within the same sentencing occasion as the index sexual offense is considered as a risk factor in this item.

#### Item 4) Prior non-sexual violence - Any Convictions

Following the same rationale of the Item 3, this item appraises any conviction of nonsexual violence, however, prior to the index offense in this item.

## Item 5) Prior sex offenses

This item considers history of sexual offenses as a risk factor based on a firm foundation in the behavioral literature (Andrews & Bonta, 2003; Hanson & Bussiere,

1998; Thorndyke, 1911). This is the only item in the instrument that is not coded dichotomously. The number of charges and convictions prior to index crime need to be counted and summed up to 3.

#### Item 6) Prior sentencing dates

This item follows the same rationale as the Item 5, this item consider previous criminal convictions more than three as a risk factor. Regardless of the type of the offense, all sentencing dates are counted.

### Item 7) Any convictions for non-contact sex offenses

This item measures indicators of an offender's paraphilic interests expressed in noncontact sexual offenses, e.g. exhibitionism, voyeurism, (child) pornography related offenses, or sexual harassment. It is not relevant if previous or index conviction reveals these indicators.

#### Item 8, 9, & 10) Any unrelated, stranger and male victims

A study mentioned in the coding manual but not listed specifically by Harris & Hanson (unpublished manuscript) indicates that intra-familial sexual offenders are less likely to recidivated than those with extra-familial victims. Thus, the victimology is considered as risk factors in these three items. These items can be scored when a specific victim of a sexual offending is identified, no matter what type of sexual offense (contact or noncontact) is referred to.

## 4.1.2 SVR-20

As a clinical checklist for risk factors related to sexual violence, the SVR-20 contains 20 items in three subsections: 1) 11 psycho-social adjustment (PSA) items, 2) 7 sexual offenses (SO) items, and 3) 2 future plans (FP) items. As same as the HCR-20, each item is scored

on a three-point scale: 0 (not present), 1 (partially/possibly present), and 2 (clearly present) (See Appendix for the coding sheet in German and English). The Canadian original manual is obtainable at Psychological Assessment Resource (www.parinc.com) and the German translation is available at the Institute for Forensic Psychiatry Haina (http://www.forensic-haina.de/verlag/svr-20/index.html). The following item description is according to the unpublished draft of the revised Canadian manual (Boer, Hart, Kropp, & Webster, 2010).

#### PSA Item 1) Sexual deviation

Regardless of whether sexual deviation is inferred from an individual's observed or self-reported history of sexual behavior or results of plethysmographic assessments, a strong link between sexual deviance and sexual violence is suggested in literature (Craig, Browne, Stringer & Beech, 2005; Hanson & Morton-Bourgon, 2004). Paraphilia related disorders can be an indicator rating this item.

## PSA Item 2) Victim of child abuse

Experiences of physical and sexual child abuse are considered as a strong common denominator of youth and adult offenders committing non-sexual violence, and sexual violence, even if not everyone with abusive experience eventually offends (Hanson & Morton-Bourgon, 2004). Moreover, experiences of sexual abuse can have particular influence on the development of deviant sexual interests (Laws & O'Donohue, 1997; Marshall, Laws, & Barbaree, 1990). Therefore, victimization in the childhood is considered as a risk factor for sexual violence in the SVR-20.

#### **PSA Item 3) Psychopathy**

Psychopathy according to Hare (1991) is a robust risk factor for criminality and violence. For the coding of this item, PCL-R scores of 30 and higher can be interpreted as present; scores of 21 through 29 as possibly present; and scores of 20 and lower as absent.

#### **PSA Item 4) Major mental illness**

Major psychiatric disorder such as psychosis or intellectual deficits can be a causal factor that may lead to impulsive or irrational decisions to act in a sexually violent manner (Hanson & Morton-Bourgon, 2004; Craig et al., 2005). A diagnosis of a severe psychiatric disorder is required to code this item.

## PSA Item 5) Substance use problems

Substance use has been shown to be associated with increased risk for sexual violence (Quinsey, Lalumiere, Rice, & Harris, 1995) via indirect link to sexual violence (associated with personality disorder) or via causal link (behavioral disinhibition). A diagnosis of substance related disorder is not a requirement, but the criteria of "serious problems" include substantial impairment of an individual's health or social functioning, which is a partial requirement to diagnose a substance related disorder.

## PSA Item 6) Suicidal/homicidal ideation (ideas)

Despite the lack of empirical evidence, this factor was included in the SVR-20 as is it commonly addressed in mental health legislation to constitute grounds for involuntary psychiatric admission. Desire to self-harm appears commonly in the post-offense guilt reaction or sexually deviant behavior, e.g. in autoerotic asphyxiation. Therefore, the inclusion of this item could be understood as an attempt to cover deviant or harmful ideation to such an extreme extent.

## **PSA Item 7) Relationship problems**

This item refers to the same issue in the Static-99 covered by Item 2. The failure to establish and maintain stable intimate relationships is considered as a risk factor for sexual violence. For a comprehensive view on the relationship, it is recommended to obtain the information also from the partners.

#### **PSA Item 8) Employment problems**

Though a direct link to sexual violence has been recently proven, based on the similar rationale as Item 7, failure to establish and maintain stable employment has been considered as a clinical risk factor for sexual violence for a long time. Since the employment is also strongly related to the socioeconomic status of a person, it is considered as a factor with critical relevance to the recidivism in general (see Chapter 3).

#### PSA Item 9) Past non-sexual violent offenses

This item refers to non-sexual violent offenses prior to the index offense as same as Item 4 in the Static-99. A history of non-sexual violent offending is considered to be a strong predictor of sexual violence as well (Hanson & Bussiere, 1998).

#### PSA Item 10) Past non-violent offenses

A history of general criminality is a risk factor for violence and sexual violence among criminal offenders and forensic patients (Monahan & Steadman, 1994). General criminality appears to be a risk marker that reflects the presence of personality disorder, as well as sexual deviation and attitudes that support or condone sexual violence.

## PSA Item 11) Past supervision failure

Parole violation may also be a risk factor for non-sexual and sexual violence in sex offenders (Rice & Harris, 1997; Quinsey et al., 1995). This item follows the similar rationale as Item 10 and considers the supervision failure as a possible expression of personality traits or attitudes condone sexual violence.

#### SO item 12) High density sex offenses

Similar to Item 5 in the Static-99, this item concerns the number of past sexual offenses as one of the most reliable predictors of sexual violence among correctional offenders and forensic patients (Craig et al., 2005; Hanson & Morton-Bourgon, 2004; Quinsey et al., 1995). However, not only the number of convictions but also the actual numbers of the offending behavior can be taken into account.

#### SO item 13) Multiple sex offense types

This item follows the same rationale as the victimology items in the Static-99. Persons who reveal diversity in their victimology and modus operandi in sexual offending are considered to be at increased risk for sexual recidivism. This is a risk factor that likely reflects the presence of sexual deviation and attitudes that support or condone sexual violence.

#### SO item 14) Physical harm to victim(s) in sex offenses

There is no clear empirical evidence for this item, indeed there is some evidence to the contrary, that persons who have harmed their victims to a greater degree, are at increased risk for sexual recidivism (Epperson, Kaul, & Huot, 1995). Therefore, severe harm to victims is considered as a risk factor.

#### SO item 15) Uses weapons or threats of death in sex offenses

Death threats as a type of psychological coercion per se may not predict sexual violence according to meta-analyses (Craig et al., 2005; Hanson & Morton-Bourgon, 2004), but there is some evidence that supports the link between such tactics and sexual recidivism (e.g., Scalora & Garbin, 2003).

## SO item 16) Escalation in frequency or severity of sex offenses

This risk factor lacks empirical evidence but was included to the SVR-20 due to the clinical importance. Escalations in previous sexual offenses can be interpreted as a

manifestation of sexual deviance and an indicator for an increased likelihood, frequency, severity, and imminence of future sexual violence.

## SO item 17) Extreme minimization or denial of sex offenses

The predictability of denial is debatable according to recent research (e.g., Hanson & Morton-Bourgon, 2004; Lund, 2000). In a clinical context, a strong denial can be related to antisocial attitudes or cognitive distortions and influence compliance towards treatment programs. Therefore, minimizing the consequences of own behavior is considered as a risk factor.

#### SO item 18) Attitudes that support or condone sex offenses

People who engage in criminal conduct frequently endorse socio-political, religious, (sub-) cultural, and personal attitudes (i.e., beliefs or values) that support or condone their behavior (e.g., Andrews & Bonta, 1994). Such attitudes may influence the decisions made by individuals, reducing the perceived likelihood or severity of harm to self and others caused by sexual violence.

#### SO item 19) Lacks realistic plans

Realistic plans regarding discharge from an institution can provide a firm base for the reintegration of an individual (Andrews & Bonta, 2010). Those who fail to devise plans tailored to the individual's needs such as residence, employment, and relationship can be considered to be at increased risk for criminality after release in general.

#### SO item 20) Negative attitude towards intervention

Rejecting or negative attitudes towards correctional or mental health support are indicators for increased risk of recidivism (Andrews & Bonta, 2010; Olver et al., 2011; Webster et al., 1997). Moreover, these may decrease chances of proper intervention in

sexual deviance and increase chances of psychological distress or destabilizing factors in risk situations for offenders in community settings.

## 4.1.3 SAPROF

The 17 SAPROF items consist of factors in three subsections: 1) 5 Internal items, 2) 7 Motivational items, and 3) 5 External items. Each item is coded as same as the other SPJ-instrument from 0 to 2 (See Appendix for the coding sheet in German and English). All the original and translated manuals of the SAPROF can be obtained at: http://www.saprof.com. The description of the items is according to the English manual published by de Vogel et al. in 2009. A more detailed description of the instrument is provided in the thesis of Yoon (2009).

#### Internal item 1) Intelligence

Numerous studies have shown that there is a significant negative correlation between IQ score and delinquency (Kandel, Mednick, Kirkegaard-Sorensen, Hutchings, Knop, Rosenberg et al., 1988; White, Moffitt, & Silva, 1989). An IQ above average (M = 100, SD = 15) is considered as a clear protective factor in the SAPROF.

## Internal item 2) Secure attachment in childhood

A close bond to a prosocial role model can lead to decreases in deviant behavior (Fitzpatrick, 1997; Fonagy, Target, & Steele, 1997; Hawkins, Catalano, & Miller, 1992). This item does not concern primarily the attachment type according to Bowlby (1969; 1973) but a presence of at least one prosocial role model in childhood.

## Internal item 3) Empathy

Experts have diverse opinions on the definition of empathy as a static or dynamic characteristic of a person. This item follows the dynamic concept of empathy given by

Eisenberg & Miller (1987) and Cohen & Strayer (1996) and defined empathy as the cognitive and emotional disposition that makes individuals understand and identify with other's situation or emotional state.

## Internal item 4) Coping

Effective coping skills are the primary target of forensic cognitive behavioral treatment programs such as relapse prevention. Both self-reported strategies and observed behavior can be an indicator to rate this item.

## Internal item 5) Self-control

The general theory of crime (Gottfredson & Hirschi, 1990) and its empirical support (Pratt & Cullen, 2000) suggested low self-control as one of the predispositions that increases the likelihood of committing criminal behaviors ubiquitously across life course. Both the level of self-control and the maintenance of self-disciplines should be included to rate this item.

## Motivational item 6) Work

Numerous studies have identified a stable job situation as a predictor of recidivism reduction (see Chapter 3). This item considered a stable and suitable occupation as a protective factor regardless of the payment, providing an individual a daily structure and a possible intrinsic reward through the achievement of personal ambitions.

## Motivational item 7) Leisure activities

This item follows the similar rationale as Item 6. Leisure activities in the SAPROF refer to organized group activities on a regular basis, which generate social contacts and control.

## Motivational item 8) Financial management

Gendreau et al. (2000) identified several studies indicating correlations between financial difficulties and recidivism. Finance seems to be a discriminator between recidivists and non-recidivists as well (Serin & Mailloux, 2001). This item refers not only to a steady income but also to a responsible management of one's own finance.

#### Motivational item 9) Motivation for treatment

There is a general consensus among clinicians about treatment motivation as a good predictor of treatment efficacy (Melnick, De Leon, Thomas, Kressel, & Wexler, 2001; Schneider & Klauer, 2001; Van Beek & Mulder, 1992). A general motivation to change own behavior, both intrinsically and extrinsically is rated in this item.

## Motivational item 10) Attitudes towards authority

This item is certainly with the greatest overlap with the attitude items in risk assessment tools since its rationale is at least partially based on a meta-analysis on risk factors (Hanson & Morton-Bourgon, 2004). Acceptance and tolerance of external influences such as intra- or extramural conditions and rules, as well as a general, positive attitude toward authority is considered to be protective.

## Motivational item 11) Life goals

This item reflects the GLM-orientation of the instrument the most. Following the suggestion of the GLM, the SAPROF considers the existence of a prosocial life goal and a strong and realistic motivation to achieve this goal to be protective.

## Motivational item 12) Medication

Aside from the effectiveness of medication reducing aggression psychiatric patients (Krakowski, Czobor, Citrome, Bark, & Cooper, 2006; Torrey, 1994), medications in sexual offenders have been gaining more attention in the forensic practice. Antiandrogen medication (Briken, Hill, & Berner, 2003) or selective serotonin reuptake inhibitors (SSRIs; Beech & Mitchell, 2005; Hill, Briken, Kraus, Strohm, & Berner, 2003) seem to be helpful in treatment of paraphilia. This item concerns the medication itself as well as the patient's compliance.

#### External item 13) Social network

The strong protective effects of social networks have been demonstrated in studies on adolescents (see Chapter 3). However, social contact with the community through visitation seems to have risk reducing effect in adult inmates as well (Bales & Mears, 2008). The quantity and quality of support from social networks is evaluated within this item.

### External item 14) Intimate relationship

A stable quality relationship can provide a person with protection from deviant behavior on a personal as well as social level. Whereas the Static-99 rates partnership ever lasted longer than two years and the SVR-20 rates problematic issues in relationships or relationship maintenance, the SAPROF rates the stability and satisfaction in partnerships.

## External item 15) Professional care

Various types of care including in- & out-patient therapeutic intervention by mental health professionals can be considered when rating this item. However, the item concerns the actual presence and the intensity of the treatment based on the RNR principles, i.e. appropriately tailored program corresponding with the risk level. This item does not take the compliance of the patient into account, which is rated in Item 9.

## External item 6) Living circumstances

As demonstrated in Chapter 3, living situation is a significant indicator for recidivism risk. This item defines protective effect of living circumstances in terms of housing and

cohabitants but not of residential area itself. Therefore, a professionally supervised living circumstance is considered to be most protective rating this item.

## External item 17) External control

One of the most effective ways to prevent recidivism is unfortunately to restrict the individual's freedom to a great extent. Especially for offenders who have just been released recently, proper parole supervision can serve as a beneficial measure of monitoring. Therefore, this item considers incarceration or hospitalization as the most protective factor, and community supervision as a partial presence of protection.

# 4.2 Relationship between risk and protective factors

There are often observable confusions in communicating research implications into clinical practice, primarily based on a circular reasoning error. The SPJ manuals suggest to work with the clinical risk estimates based on the result of SPJ tools rather than to conclude the risk level based on the quantity of factors (Boer, et al., 1997; Webster, et al., 1997). Despite this recommendation, validation studies often include total scores rather than risk judgment. The phenomena, that the clinicians tend to predict worse than total scores, is even called clinical override and criticized by several experts (Hanson & Morton-Bourgon, 2009; see Chapter 3 for an empirical indicator of this phenomena). The main reason of conducting validation researches on assessment measures is to ensure the reduction in error rates within clinical decision-makings. Stated differently, the usage of certain instrument should not deteriorate the risk management procedure. However, it does not mean that the circular reasoning is possible that the risk estimates are useless. Though the simple rule "the more the risk factors the higher the risk" is valid in the majority of offenders, there are cases in clinical practice, in which the number of risk factors are less meaningful for predicted outcome. For instance, a person suffering from acoustic hallucinations with sadistic or

homicidal contents would be rated with higher scores in items such as major mental illness (Historical item 6 in the HCR-20 and Psychosocial adjustment item 4 in the SVR-20) and its active symptoms (Clinical item 3 in the HCR-20 and Psychosocial adjustment item 6 in the SVR-20). However, the risk of reactive violence in such a case is much higher than in the case of a pessimistic offender (possible related items: Clinical items 2 and 5 and Risk management items 1 and 4 in the HCR-20; Future plans items 19 and 20 in the SVR-20) with a history of deviant behavior (possible related items: Historical items 1, 2, and 8 in the HCR-20; Psychosocial adjustment items 8 and 9; and any of the Sexual offenses items in the SVR-20). The authors of the several SPJ instruments therefore recommend not using a cut-off score (Boer et al., 1997; De Vogel et al., 2009; Webster et al., 1997).

Given the fragmentation of opinions and empirical bases in the field, difficulties in communications regarding clinical cases or research findings occur also frequently. A multiaxial and convergent approach integrating nomothetic actuarial and idiographic clinical factors is becoming more common in the field of applied forensic risk assessment (Boer, 2006; 2008; Craig et al., 2008). The current paradigm in the assessment is, however, typically dominated by using either a single assessment tool or one-time assessment (Beggs & Grace, 2011; McGrath, Lasher, & Cumming, 2011; Olver & Wong, 2011; Thornton, 2002). An ideal risk assessment should not only predict future recidivism but also provide useful information about relevant risk factors, which might be changed in the course of therapeutic intervention (Hanson & Morton-Bourgon, 2009).

Nevertheless, as much as the empirical base supporting this integrative approach is missing, there is still no clear consensus among clinicians and researchers regarding how the terminology should be operationalized and communicated, or what should be how converged in the procedure. This chapter aims to summarize the suggested concepts regarding risk and protective factors among the field of applied forensic risk assessment and to draw up a conceptual model on the relationship between those two domains.

The following diagram demonstrates the exemplary factors related to sexual recidivism, which are mentioned in several research and risk assessment tools as a set (see Figure 2). The factors are partially sampled from research on juveniles (Borowsky et al., 1997; Hall & Barongan, 1997; Worling & Långström, 2003; Zagar et al., 2009), on adults (Miller, 2006), and the instruments themselves; e.g. the PCL-R (Hare, 1991), the SVR-20 (Boer et al., 1997), Static-99 (Hanson & Thornton, 1999), and the SAPROF (de Vogel et al., 2009).



# **Protective factors**

# **Risk factors**

Figure 2. Set of Risk and Protective Factors

Factors identified in Chapter 3 are also included in to the diagram. First of all, the factors are divided into risk and protective factors; however, there seems to be an overlap between those two categories. These factors, on which researchers appear to have ambiguous opinion, are marked in the intersection (cf. Yoon, 2009).

# 4.3 Development of a conceptual model

In the second step, the factors were sorted again based on their modifiability into static and dynamic categories. The factors in the intersection appeared to be dynamic in nature, and it seems that certain factors are beneficial for recidivism prevention when increased and some rather preventive when decreased. In particular, factors related to family, school, and community context showed both positive and negative contributions to recidivism behavior (Youngblade, Theokas, Schulenberg, Curry, Huang, & Novak, 2007). De Vogel and her colleagues (2009) also indicated that many of the factors in the SAPROF could also be risk factors under certain circumstances. It seems that the diffusion regarding the definition of protective factors drives from the terminology, to which factors the researches are referring. For instance, factors predict decrease or absence of recidivism would both be considered as protective, moreover, risk factors, of which decreases are predictive of recidivism reduction, would also have protective effect regarding recidivism (Loeber & Farrington, 2012). Therefore, it could be more beneficial to categorize any recidivism related factors on a large spectrum between recidivism and its prevention. Particularly, distinguishing these factors from one another should be clinically rational in terms of an appropriate intervention planning corresponding to the risk. Therefore, concerning actual intervention in clients in a clinical context, the factors should be differentiated in their modifiability and relevance to recidivism to clarify how much and what kind of effort should be invested.

Thus, this model is generated on the basis of the assumption that the purpose of identifying and assessing offense-related factors is to intervene in them effectively (cf. Yoon, 2009). The factors are therefore placed on a continuum in which progress could be protective and regression could predispose to a higher risk of re-offense. Therefore, the spectrum points its lower end at relapse and the upper end at prevention. More stable features belong therefore to the outer categories, and changeable factors stand in inner categories, sharing a part of factors belong to both categories. Some characteristics, which can function as risk or protection depending on their quality, intensity, or case specific circumstances, are located in the common part of the two dynamic categories.

Taking the example of the SAPROF and the START, it is visible that there is a great overlap of factors. This should not be interpreted as a deficit of one or the other tool. These tools are developed for different purposes in terms of the immanence of the estimated outcome and the setting of the implementation. The START is for a short-term assessment (e.g. 3 months) of acute possible outcomes whereas the SAPROF is an addition to other risk tools for a mid-term assessment (e.g. 1 year) of stable possible outcomes. The important point is that as several items in the SAPROF show similarities to the HCR-20 or SVR-20 items, the START items can be coded as vulnerabilities and strengths simultaneously. These tools might be showing evidence that the overlap between the risk and protective factors is greater than previous studies suggested. This bilaterality could be considered as a valuable reason in changes of one-side risk paradigm into multi-sided comprehensive assessment since it illustrates the consensus in the field that an unignorable number of risk factors have potential to be transformed into protective factors.



Figure 3. Spectrum of Risk and Protection

This model is aiming to imply that any factor should be understood on a large spectrum and each category needs a different level and type of intervention process (Figure 3). When intervention is successful, each cluster could be altered into a protection regardless of its nature at the beginning. However, different clusters need different approaches and intensities depending on their distances from protection, in terms of the prevention of possible recidivism. The next diagram demonstrates the model, showing an example with risk and protective factors in the SVR-20, Static-99, and SAPROF (cf. Yoon, 2009). The factors are categorized into possible allocations in the figure based on characteristics concerning their modifiability. Each arrow beside a triangle suggests appropriate intervention methods for that category.



Figure 4. Risk-Protection Model for Successful Intervention

When intervening in static risk factors that are already present and not changeable in nature, it is essential that both treatment providers and offenders understand the etiology of these features to intervene effectively in those. In case of sex offenders, the offense and its characteristics should be reframed as a turning point in one's life. Deviant traits such as paraphilia need to be framed in a new structure, in which the individual can recognize one's own risk and counterbalance the risk with other protective factors.

Dynamic risk factors need to be constantly reappraised for the examination of the need for intervention. The overlapping part of the figure indicates factors, which could be either risk or protection depending on the person and/or situation. The most important characteristic of these factors is that they could always fall back into the risk category in a crisis, because of
their flexibility. The task of the forensic practitioner is to help the client use these factors as protection and prevent them from transforming into risk.

In the case of protective factors, it is important to strengthen and stabilize them in the client's life so that the individual can live life in a personally fulfilling and socially accepted way.

This model could offer a broader overview on individual's constellation of risk factors from risk to protective factors when used in a clinical practice for individual risk assessment. One of the benefits differentiating recidivism-related factors using this model would be the lesser probability of double-weighting several factors (Beech, Friendship, Erikson, & Hanson, 2002). Due to the simultaneous usage of numbers of instruments, the risk variables could be over rated though one factor might influences the increase in other factors. When the value of all factors in a single device tends to move into the same direction, there could be a possibility of the summation of these values becoming exaggerated. On the other hand, an idiographic change of actuarial tools could also be problematic influencing predictive accuracy (Hanson & Morton-Bourgon, 2009). Thus, it could be helpful in treatment settings to visualize the factors using this model to gain a balanced view on the individual. Furthermore, the factors with higher relevance to the offense-scenario could be identified more clearly. The chain of risk factors could be demonstrated in accordance with a possible prevention strategy demonstrated by protective factors providing a counterbalance against the effect of those risk factors. Besides, a number of SPJ-instruments suggest the rating of those with crucial relevance to higher risk or protection as critical or key items (de Vogel et al., 2009; Douglas, Ogloff, & Hart, 2003; Webster et al., 2009). Applying these features in a continuous assessment procedure could also be effective in getting an overview for the treatment planning and examination of the treatment progress. Furthermore, it could provide a structured base for the risk communication between different institutions involved in the intervention program.

In the context of research purposes, this model could offer further benefits clarifying the characteristics of certain factors. For instance, the frequent debate regarding the definition of protective factors could be resolved by treating factors of protective nature and factors with possible protective effect differently, which aligned with the suggestion of Loeber and colleagues to differentiate protective factors depending on their functioning (Loeber & Farrington, 2008; 2012).

The field agreement on the goal of the offender treatment as a social rehabilitation with constructive suggestions for a better life rather than to figure out deficits of an individual leads to an inevitable question, why do forensic professionals identify and categorize the risk and protection. In the end, a successful intervention is only possible through a flawless process from assessment to treatment program and when its constant progress evaluation take place (Hill et al., 2008). With regard to these considerations, this model is the first attempt to embrace the empirical and clinical findings and suggestions from the last two decades and to provide an integrative approach of a comprehensive and balanced risk assessment.

# Chapter 5 Relevance of Protective Factors for Recidivism in Sexual Offenders

## **5.1 Introduction**

As demonstrated in the previous chapters, although standardized assessment has made a great progress during the last two decades, most forensic risk assessment tools mainly focus on risk factors, thereby neglecting possible protective factors, which might be important for risk management. Rogers (2000) argued that an enumeration of risk factors alone would be insufficient and biased since it ignores the counterforce of resources. Miller (2006) stated that solely focusing on risk factors would likely result in an over-prediction of recidivism risk, which would be dangerous for both, the offender in unnecessarily detaining him, as well as the society in terms of causing high costs. A successful treatment or risk management should result in helping the clients to function within the community without reoffending and in improving their own quality of life (Marshall et al., 2006).

Recently, researchers have started to agree on the importance of protective factors for risk assessment. Also, they agreed that these protective factors and their risk-reducing effects had been ignored over the years. Starting with Clayton and his colleagues (1995), researchers empirically evaluated changeable and treatment-oriented factors as an additional and opposite pole to the well-known risk factors, calling them "protective factors" (Quinsey et al., 2006; Rogers, 2000). Studies on protecting factors, since then, have focused mainly on juvenile offenders. Most studies on adolescent offenders identified school achievement, the presence of a positive peer group, psychosocial health, residential treatment, and the social integration level as protective factors predicting desistance from criminal behavior (e.g., Borowsky et al., 1997; Calley, 2012; Hall & Barongan, 1997; Hoge et

al., 1996; Stouthamer-Loeber et al., 2004; Zagar et al., 2009; see Chapter 3 for a detailed review on these studies).

The number of studies investigating resources against re-offending in adults is small as presented in Chapter 3. However, factors such as prosocial self-regulation, empathy, coping skills, compliance with supervision, employment status, living situation, and quality of the social network are suggested to be personal and environmental resources against recidivism (e.g., Brown et al., 2011; Case et al., 2009; DeMatteo et al., 2005; Gendreau et al., 2000; Miller, 2006; Stübner, Groß, & Nedopil, 2006; Ullrich & Coid, 2011). Recent studies regarding protective factors found risk reducing effects for treatment programs (Beggs & Grace, 2011; Marques, Wiederanders, Day, Nelson, & van Ommeren, 2005), for the reintegration plan quality and a positive relationship to correction officers (Kennealy, Skeem, Manchak, & Eno Louden, 2012; Olver, Stockdale, & Wormith, 2011; Scoones et al., 2012; Willis & Grace, 2008).

The lack of instrument measuring protective factors for adult offenders in a structured way led to the acknowledgment of the need in the clinical practice. In cooperation with the Van der Hoeven Kliniek in the Netherlands, the SAPROF was translated into German at the Institute for Sex Research and Forensic Psychiatry of the University Medical Center Hamburg-Eppendorf (UKE) in 2010. Preliminary results of the German SAPROF version in a pilot study with 30 clients, revealed a significant negative correlation between the SAPROF and the SVR-20 but no correlation between the SAPROF and the Static-99 (Yoon et al., 2011). In a sample of alleged juveniles, the SAPROF showed negative correlations with the STAYSOR and the SAVRY (Klein et al., 2012). More details on these studies are demonstrated in Chapter 3.

Although the predictive validity of the SAPROF is being tested in a hospitalized sexual offender sample in the Netherlands by the developers, currently, there exist no data about the influence of protective factors on the risk of re-offense in sexual offenders. Moreover, most studies conceptualize protective factors as risk factors, which are not present. In other words, although there is some conceptually protective and risk reducing effect inherent to some items of risk assessment instruments, the existence of them in a distinct offender can only be expressed by the absence of a certain risk factor.

The current study aims at testing the applicability und prospective validity of protective factors captured by the SAPROF in a sample of sexual offenders in an early stage of imprisonment. The underlying hypothesis was that the SAPROF would not only be related to the recidivism risk but also inversely to the total score of risk assessment instruments. Due to the lack of empirical evidence on the relationship between risk and protective factors, methodological difficulties in conducting analyses occur frequently. Though the interaction between risk and protective factors has not been empirically investigated yet, field consensus considers protective factors as a countermeasure for recidivism risk. Therefore, it can be hypothesized, that the SAPROF would have additional value in risk appraisals.

## 5.2 Method

#### Sample

The sample of the current study is part of a larger sample of an on-going research project using inmate evaluation reports of the Federal Evaluation Centre for Violent and Sexual Offenders (FECVSO; Eher, Schilling, Graf, Frühwald, & Frottier, 2006) in the Austrian Prison System, a department subordinated to the Austrian Ministry of Justice. The FECVSO collects and evaluates data of all incarcerated sexual offenders in the Austrian Prison System. The SAPROF was coded retrospectively in 467 sexual offenders. However, since the SAPROF was originally developed to assess protective factors regarding violent recidivism, 17 handsoff offending cases (e.g. exhibitionism, child pornography abuse) were excluded. After excluding another 10 cases with more than five missing values in the SAPROF, a final count of 440 cases was included in the further analyses.

	М	SD	min	Max	
Age at time of release (in yr)	42	12.7	16	72	
Imprisonment duration (in mth)	34	22.6	4	156	
Follow up period (in yr)	6	1.4	3	10	
		n	%		
Index crime					
Rape, sexual assault	2	:01	44.7		
Child molesting	2	49	55.3		
Previous crime					
Any conviction	2	27	50.4		
Any conviction of non-sexual violent crime	1	61	35.8		
Any conviction of sexual offense	Ę	59	13.1		
Recidivism					
General recidivism	1	54	34	1.2	
Non-sexual violent recidivism	7	76	16.9		
Sexual recidivism	:	38	8.4		
Violent (incl. sexual) recidivism	1	00	22	2.2	

#### Table 10. Sample description

All offenders have been assessed for clinical diagnoses and risk assessment between 2001 and 2007 at the FECVSO (see Table 1). Most offenders in the sample were evaluated at the beginning of their prison sentences, but 44 offenders (9.8% of the whole sample) were tested during the incarceration.

#### Measures

To guarantee the objectivity of the outcome measure, recidivism was defined as any official reconviction after discharge. Reconviction data were collected in four different recidivism categories: general, non-sexual violent, sexual, and violent (incl. sexual) recidivism. These recidivism categories were generated adopting the definitions of the most commonly used risk assessment tools, such as the HCR-20, the SVR-20 or the SORAG. In the present study general recidivism refers to any conviction of a new criminal offense, non-sexual violent recidivism to those causing physical harm or threat to a person with no sexual intention, sexual recidivism to those with any sexual contact with a non-consenting person, and violent (incl. sexual) recidivism to both non-sexual and sexual violent recidivism. To clarify, while the sexual recidivism category contains only crimes with a sexual component, the violent (incl. sexual) recidivism category consists of any violent crime with or without a sexual component. The follow-up period refers to the time after release and not to the time after the assessment.

#### Instrument data collection

The total scores are recommended to be used primarily for research purposes. In a clinical context, after all items are rated and weighted concerning their relevance for the treatment planning process, a final judgment for protection can be made. An integrative judgment about the recidivism risk counterbalanced by the protective factors should be made as the final step. These two clinical judgment measures were not included into this study, since the file

analyses did not provide sufficient information to make an overall clinical judgment. In the present study, the SAPROF rating was conducted retrospectively based on the assessment reports of the FECVSO. The case files with approximately 15-20 pages were evaluated by three of the authors (D.Y.; D.T.; V.K.) all coming from different disciplines (criminology, medicine, and psychology) and with experience in risk assessment and treatment of sexual offenders. All the raters were blind from the outcome, i.e. the recidivism.

At the beginning of the study, the item definitions were slightly expanded from the manual. Though the items are defined to consider the current status of a person (e.g., the last year), for the purpose of the present study, biographical information was also included to score some items due to in some cases limited information within the assessment reports about the actual situation of the offenders. For instance, if a person has a good vocational history but did not hold an employment during the remand custody for the last year, the information from the past was also taken into account. However, this ideographical change led to a great inconsistency in the ratings especially regarding the Item 16 and 17, which assess the external influences within the imprisonment. These items always need to be coded with "2 (definitely present)" for an incarcerated person by item definition, but taking previous incarcerations into account, the actual protective function of the operational definition by the manual. Therefore, after the analyses on the inter-rater reliability, the items were recoded according to the original item operationalization. Item 12 Medication was excluded from the item level: analyses due to the rarity of medication in this prison sample.

The SVR-20 was part of the initial diagnostic and risk assessment process and was rated prospectively during the offenders' stay at the FECVSO. The final judgment data were not available, since they were not included in the reports from the beginning (Rettenberger et al., 2011). An excellent inter-rater reliability on the SVR-20 for this sample was reported in the above-mentioned manuscript (Rettenberger et al., 2011; ICC = .84, p < .001).

#### Statistical Analyses

The first part of analyses was conducted to offer descriptive information concerning the distribution of SAPROF ratings within the present sample of incarcerated male sexual offenders. Since the missing values varied on the item level, the sum score of the instruments were adjusted through an imputation procedure at the beginning. However, this did not lead to any changes in the results of further analyses, so the imputation was reversed and cases with more than five missing items were excluded as mentioned above. To measure inter-rater reliability Intraclass Correlation Coefficients (ICC) were calculated. Three independent raters coded 30 randomly selected cases. These 30 cases were included into the further analyses after being recoded with the average scores of the three raters. Predictive accuracy of the SAPROF and its items was analyzed by calculating the area under the curve (AUC) based on the receiver operating characteristics (ROC; Hanley & McNeil, 1982). A number of researchers have been suggesting ROC analysis as a standard measure of testing predictive accuracy in the field of forensic research (Hanson, 2008; Mossman, 1994; Rice & Harris, 1995). ROC analysis provides information on the discrimination performance of a test for each possible cut-off score. The level of accuracy of the test performance is revealed by the AUC values. An AUC value of 1 represents a perfect predictive performance, while a value of .5 indicates a prediction at chance level. There are various suggestions for classifying AUC values, however, the most common way to interpret AUC values is to consider values less than .64 (r < .24) as small, AUC values between .64 and .71 ( $r \ge .24$ ) as moderate, and AUC values of .72 or greater ( $r \ge .37$ ) as large effect sizes (Cohen, 1992; Dahle, Schneider, & Ziethen, 2007; Rice & Harris, 2005). It was tested if the SAPROF predicts absence of recidivism. The base-rates for non-recidivism were as follows: 65.8% for general recidivism, 83.6% for non-sexual violent recidivism, 91.6% for sexual recidivism, and 77.8% for violent (incl. sexual) recidivism. Despite the variance in the followup time, we spared a time-dependent ROC analysis, which is supposed to be more appropriate for time dependent outcomes (Heagerty, Lumley, & Pepe, 2000), since the Cox survival analysis would also be conducted in the next step to back up the test on predictive validity of the instrument.

The criterion-related validity of the SAPROF was tested against the SVR-20 and the recidivism categories by Pearson product-moment correlation analyses (see Cohen (1992) for the critical values interpreting the effect sizes calculated by correlation analyses; r = .5 = large; r = .3 = moderate; r = .1 = small).

For the calculation of the incremental predictive validity, sequential regression models are generally the method of choice (e.g., Hunsley & Meyer, 2003). Because of the substantial variability in the follow-up periods due to unequal time-at-risk periods, we calculated Cox regression models. Cox regression estimates relative risk ratios associated with one or more predictor variables from data with unequal follow-up times (Allison, 1984; Hanson, 2006). The Odds ratio -or hazard rate- resulting from Cox regression analysis is an indicator of the strength of the association between predictor and outcome (Eher et al., 2012). For the purposes of the present study, simultaneous Cox regression models with the SAPROF were calculated to see if increases in the SAPROF scores would predict lower probability of recidivism. Stepwise Cox regression models with the SAPROF and the SVR-20 as independent variables, and the dichotomous recidivism criteria as the dependent variable were calculated to observe the effect of the SAPROF protective factors moderating the predictability of the SVR risk factors. The SVR-20 was entered first into the model, followed by the SAPROF. To investigate if there would be specific items of the SAPROF with incremental predictive power, all the SAPROF items were entered into the second block following the SVR-20 in a further step of analyses. All statistical analyses were conducted using IBM Statistical Package for Social Sciences (SPSS) version 20.0.0.

## 5.3 Results

### **Risk and Protection Scores**

The average total score of the SVR-20 was M = 19.01 (SD = 6.78, range = 2-36; possible total sum = 40) whereas the average total score of the SAPROF was M = 10.15 (SD = 4.93, range = 0-26; possible total sum = 34). Similar to the mean value and the final protection judgment of the SAPROF indicated that most offenders were rated low or moderate in their level of protection. The final protection judgment revealed low protection in 53.1% of the sample, moderate protection ratings in 39.8%, and high protection ratings in 6.4%. The average item values are demonstrated in the Table 10.

### Inter-rater reliability

The ICC single measure for the SAPROF total scores was ICC = .87 (CI 95%: .77-.93) and ICC = .95 (CI 95%: .91.-98) for average measure. According to the critical values proposed by Fleiss (1986; ICC  $\geq$  .75 = excellent; .60  $\leq$  ICC < .75 = good; .40  $\leq$  ICC < .60 = moderate; ICC < .40 = poor), these numbers indicate an excellent inter-rater reliability. The ICC values of each item are demonstrated in Table 12.

	n	М	SD
Internal items			
Intelligence	420	.93	.53
Secure attachment	433	.76	.73
Empathy	440	.48	.60
Coping	438	.35	.50
Self-control	440	.39	.52
Motivational items			
Work	440	.88	.79
Leisure activities	235	.38	.56
Financial management	389	.66	.69
Motivation for treatment	438	.79	.74
Attitudes towards authority	440	.76	.54
Life goals	427	.56	.60
Medication	-	-	-
External items			
Social network	327	.41	.53
Intimate relationship	440	.38	.55
Professional care	440	.42	.65
Living circumstances	-	-	-
External control	-	-	-

# Table 11: Overview on the SAPROF Item Values

	ICC Single	CI	ICC Average	CI
Internal items				
Intelligence	.94	.89-97	.99	.9799
Secure attachment	.76	.6286	.93	.8796
Empathy	.42	.2261	.73	.5386
Coping	.11	0432	.33	1865
Self-control	.57	.3874	.84	.7292
Motivational items				
Work	.65	.4880	.88	.7994
Leisure activities	.40	.0382	.73	.1194
Financial management	.74	.5290	.92	.8197
Motivation for treatment	.79	.6689	.94	.8997
Attitudes towards authority	.68	.5381	.90	.8295
Life goals	.65	.4681	.88	.7794
Medication	-	-	-	-
External items				
Social network	.46	.2270	.77	.5390
Intimate relationship	.46	.2766	.77	.6088
Professional care	.46	.2766	.77	.6088
Living circumstances	-	-	-	-
External control	-	-	-	-

# Table 12. Inter-rater Reliability on the SAPROF Items

Several items showed rather weak reliability values. Both singular and average ICC measures for coping were poor. Empathy, self-control, leisure activities, social network, intimate relationship, and professional care showed rather moderate singular ICC values but at least good average ICC values. All the other items showed a good to excellent inter-rater reliability.

## Predictive validity

Table 13 shows the predictive accuracy of the SAPROF total and subscale scores. According to the above mentioned critical values, the results showed rather small to moderate predictive accuracy concerning general recidivism for all the predictor variables except for the SAPROF external factors.

	General recidivism		Non- violent r	-sexual ecidivism	S reci	exual divism	Violent (incl. sexual) recidivism	
	AUC	CI 95%	AUC	CI 95%	AUC	CI 95%	AUC	CI 95%
Internal Items	.57*	.5163	.59*	.5267	.54	.4463	.57*	.5164
Motivational Items	.64**	.58-69	.66**	.6072	.55	.4865	.63**	.5769
External Items	.52	.4658	.52	.4559	.52	.4361	.54	.4760
Sum score SAPROF	.61**	.5566	.63**	.56- .70	.53	.4464	.61*	.55-68

Table 13. Predictive Validity of the SAPROF

(\*) p < .10, \* p < .05, \*\* p < .01

No predictive validity of the instrument or its subscales was found for sexual recidivism. Regarding non-sexual violent recidivism, the predictive accuracy was slightly higher than for violent recidivism including sexual violence. Similar to the non-sexual violent recidivism, internal and motivational items and the total scores showed significant predictive accuracy for violent (incl. sexual) recidivism.

The predictive accuracy of each individual item of the SAPROF is presented in Table 14. There were several items with significant AUC values, such as self-control, work, financial management, and life goals for general, non-sexual violent, and violent (incl. sexual) recidivism. However, only one of the two static items, namely secure attachment in childhood, was significantly linked to sexual recidivism. The item life goals also nearly reached statistical significance (p = .056) for sexual recidivism.

	Ge Rec	eneral idivism	Non- violent r	sexual ecidivism	S	exual idivism	Viole se reci	nt (incl. xual) divism
	AUC	CI 95%	AUC	CI 95%	AUC	CI 95%	AUC	CI 95%
Internal Items								
Intelligence	.52	.4658	.53	.4662	.47	.3757	.50	.4457
Secure attachment	.51	.4657	.50	.4357	.61*	.5570	.54	.4861
Empathy	.55	.5061	.55	.4863	.48	.3857	.54	.4760
Coping	.54	.4859	.55	.4761	.49	.3958	.53	.4759
Self-control	.61**	.5566	.63**	.5770	.49	.3959	.59**	.5366
Motivational Items								
Work	.63**	.5868	.65**	.6072	.57	.4866	.64**	.5870
Leisure activities	.52	.4560	.50	.5060	.52	.4163	.50	.4259

Table 14. Predictive Validity of the SAPROF Items

(continued on p.79)

	AUC	CI 95%	AUC	CI 95%	AUC	CI 95%	AUC	CI 95%
Motivational Item	ıs							
Financial	0.0.44		- 4 + +			47 00	0.0.4.4	
management	.68**	.6474	./1**	.6477	.57	.4768	.69**	.6375
Motivation for	50	17 50	50	45 50	10	20 57	50	12 56
treatment	.52	.4750	.52	.4559	.40	.3037	.50	.4350
Attitudes towards	.56	.5061	.54	.4762	.49	.3959	.54	.4760
authority								
Life goals	.58*	.5263	.59*	.5266	.59	.5069	.60**	.5366
Medication	-	-	-	-	-	-	-	-
External Items								
Social network	.54	.4860	.55	.4763	.51	.4063	.56	.4963
Intimate	53	18- 59	52	<i>45</i> - 59	56	47-65	54	<u> 18- 61</u>
relationship	.00	.4039	.52	.4009	.00	.4700	.54	.4001
Professional	46	41- 52	48	41- 55	46	37- 56	46	40- 52
care	.+0	.+102	.+0	.+100	.+0	.0700	.+0	.4002
Living	_	_	_	_		_	_	_
circumstances	-	-	-	-	-	-	-	-
External	_	_	_	_	_	_	_	-
control								

(\*) p < .10, \* p < .05, \*\* p < .01

# Criterion-related validity

There were significant correlations between both instruments (the SAPROF and the SVR-20) and the recidivism categories (See Table 15). The SAPROF total score was largely

negatively correlated with the SVR-20 total score. The SAPROF total score showed small to moderate correlations to general, non-sexual violent, and violent (incl. sexual) recidivism but not to sexual recidivism. The SVR-20, on the other hand, exhibited a significant correlation with all recidivism types.

|--|

	SVR sum score	General Recidivism	Non-sexual violent Recidivism	Sexual Recidivism	Violent (incl. sexual) recidivism
SAPROF sum score	59**	16**	14**	02	14**
SVR sum score		.33**	.21**	.20**	.25**

\* p < .05, \*\* p < .01

## Incremental validity

A simultaneous Cox regression analysis revealed that the SAPROF scores significantly predict the reduction of general, non-sexual violent and violent including sexual recidivism but again not that of sexual recidivism. A sequential Cox regression analysis was used to examine whether the integration of the SAPROF scores increase the predictive validity of the SVR-20 for the different recidivism categories. The SVR-20 scores were entered into the first block, and the SAPROF scores into the second block. Although the above-mentioned results indicated that the SAPROF scores themselves showed significant predictive power for several recidivism categories, the SAPROF overall sum score did not exhibit any incremental validity beyond the SVR-20 for any of the recidivism criteria (see Table 16). In case of sexual recidivism, the addition of the SAPROF scores even increased the hazard ratio.

	Chi square changes			F	Regression coefficient			Odds ratio		
	change	df	Р	В	SE	Wald	р	Exp(B)	CI 95%	
General recidi	vism									
Simultaneous										
SAPROF	8.47	1	.00	05	.02	8.42	.00	.95	.9298	
Stepwise										
Block 1										
SVR-20	43.99	1	.00	.08	.01	41.57	.00	1.08	1.06-1.11	
Block 2										
SVR-20				.10	.02	37.40	.00	1.10	1.07-1.14	
SAPROF	2.68	1	.10	.04	.02	2.70	.10	1.04	.99-1.09	
Non-sexual vic	olent recid	divism								
Simultaneous	5									
SAPROF	9.14	1	.00	08	.03	9.01	.00	.93	.8897	
Stepwise										
Block 1										
SVR-20	23.56	1	.00	.08	.02	22.20	.00	1.09	1.05-1.12	
Block 2										
SVR-20				.08	.02	14.07	.00	1.09	1.04-1.14	
SAPROF	.01	1	.92	.00	.03	.01	.92	1.00	.94-1.07	
Sexual recidivi	ism									
Simultaneous	S									
SAPROF	.14	1	.71	01	.04	.14	.71	.99	.92-1.06	
Stepwise										
Block 1										
SVR-20	21.53	1	.00	.12	.03	19.49	.00	1.13	1.07-1.19	
Block 2										
SVR-20				.18	.03	31.63	.00	1.19	1.12-1.27	
SAPROF	10.24	1	.00	.15	.04	10.32	.00	1.16	1.06-1.27	

Table 16: Summary of Cox Survival Analysis - Simultaneous and Stepwise at Instrument Level

	Chi square changes			Regression coefficient			Odds ratio			
	change	df	Ρ	В	SE	Wald	р	Exp(B)	CI 95%	
Violent (incl. sexual) recidivism										
Simultaneou	S									
SAPROF	7.25	1	.01	06	.02	7.18	.01	.94	.9098	
Stepwise										
Block 1										
SVR-20	31.42	1	.00	.09	.02	29.58	.00	1.09	1.06-1.12	
Block 2										
SVR-20				.10	.02	24.89	.00	1.10	1.06-1.16	
SAPROF	1.24	1	.27	.03	.03	1.25	.27	1.03	.98-1.09	

In order to test whether particular items of the SAPROF add incremental validity to the SVR-20 total score each SAPROF item was separately entered into the second block of the regression model following the SVR-20. Tables 17, 18, and 19 demonstrate the summary of the analyses with items reaching statistical significance.

The items with stronger predictive validity on recidivism also moderated the predictive power of the SVR-20 in general, non-sexual and (sexual) violent recidivism. Results regarding the sexual recidivism category are not demonstrated since no item reached statistical significance.

	Chi ch	squa ange:	re s	Regr	Regression coefficient			Odds ratio		
	change	df	Р	В	SE	Wald	Ρ	Exp(B)	CI 95%	
Simultaneous										
Self-control	7.90	1	.01	51	.19	7.16	.01	.60	.4287	
Stepwise										
Block 1										
SVR-20	44.72	1	.00	.08	.01	42.20	.00	1.09	1.06-1.11	
Block 2										
SVR-20				.08	.01	35.44	.00	1.08	1.06-1.11	
Self-control	.16	1	.69	08	.20	.16	.69	.92	.62-1.37	
Simultaneous										
Work	24.58	1	.00	53	.11	22.74	.00	.59	.4773	
Stepwise										
Block 1										
SVR-20	45.06	1	.00	.08	.01	42.65	.00	1.09	1.06-1.11	
Block 2										
SVR-20				.07	.02	21.28	.00	1.07	1.04-1.11	
Work	2.14	1	.143	20	.14	2.10	.15	.82	.63-1.07	
Simultaneous										
Financial mng	25.10	1	.00	69	.15	20.85	.00	.50	.3868	
Stepwise										
Block 1										
SVR-20	41.46	1	.00	.09	.01	38.57	.00	1.09	1.06-1.12	
Block 2										
SVR-20				.07	.02	19.54	.00	1.07	1.04-1.11	
Financial mng	6.05	1	.01	41	.17	5.59	.02	.67	.4893	

Table 17: Summary of Cox Survival Analysis - Simultaneous and Stepwise at Item Level for General Recidivism

	Chi ch	squa ange	ire S	Regression coefficient			Oc	lds ratio	
	change	df	Р	В	SE	Wald	р	Exp(B)	CI 95%
Simultaneous									
Self-control	13.21	1	.00	-1.04	.32	10.32	.00	.36	.1967
Stepwise									
Block 1									
SVR-20	23.82	1	.00	.08	.02	22.43	.00	1.09	1.05-1.13
Block 2									
SVR-20				.07	.02	14.08	.00	1.07	1.03-1.11
Self-control	4.51	1	.03	67	.34	3.94	.05	.51	.2799
Simultaneous									
Work	26.18	1	.00	81	.17	22.34	.00	.44	.3262
Stepwise									
Block 1									
SVR-20	25.89	1	.00	.09	.02	24.38	.00	1.09	1.05-1.13
Block 2									
SVR-20				.06	.02	6.82	.01	1.06	1.01-1.11
Work	6.60	1	.01	51	.21	6.21	.01	.60	.4090
Simultaneous									
Financial mng	29.29	1	.00	-1.19	.27	19.71	.00	.30	.1851
Stepwise									
Block 1									
SVR-20	25.66	1	.00	.10	.02	23.57	.00	1.10	1.06-1.14
Block 2									
SVR-20				.06	.02	8.27	.00	1.07	1.02-1.11
Financial mng	10.81	1	.00	85	.29	8.79	.00	.43	.2475

Table 18: Summary of Cox Survival Analysis - Simultaneous and Stepwise at Item Level for Non-sexual Violent Recidivism

	Chi square changes			Regression coefficient				Odds ratio	
	change	df	Р	В	SE	Wald	р	Exp(B)	CI 95%
Simultaneous									
Self-control	5.93	1	.02	55	.24	5.32	.02	.58	.3692
Stepwise									
Block 1									
SVR-20	31.80	1	.00	.09	.02	29.91	.00	1.09	1.06-1.12
Block 2									
SVR-20				.08	.02	24.75	.00	1.09	1.05-1.12
Self-control	.21	1	.65	11	.25	.20	.65	.89	.55-1.46
Simultaneous									
Work	23.61	1	.00	66	.14	21.12	.00	.52	.3969
Stepwise									
Block 1									
SVR-20	33.97	1	.00	.09	.02	31.97	.00	1.09	1.06-1.13
Block 2									
SVR-20				.07	.02	13.07	.00	1.07	1.03-1.11
Work	3.78	1	.05	33	.17	3.64	.06	.72	.51-1.01
Simultaneous									
Financial mng	26.78	1	.00	92	.21	20.29	.00	.40	.2759
Stepwise									
Block 1									
SVR-20	35.53	1	.00	.10	.02	32.55	.00	1.11	1.07-1.14
Block 2									
SVR-20				.08	.02	14.83	.00	1.08	1.04-1.12
Financial mng	8.27	1	.00	62	.23	7.22	.01	.54	.3485

Table 19: Summary of Cox Survival Analysis - Simultaneous and Stepwise at Item Level for Violent (incl. sexual) Recidivism

## 5.4 Discussion

Aside from its initial validation with violent offenders in a forensic mental institution (de Vries Robbé et al., 2011), a pilot study with sexual offenders in a community setting (Yoon et al., 2011), and another study in alleged juvenile sexual offenders (Klein et al., 2012), the present study represents the first empirical evaluation of the reliability and validity of the German SAPROF in a correctional sample of adult male sexual offenders. Since the instrument was originally developed in a forensic hospital population with primarily violent offenders, the results needs to be interpreted with certain caution. The offenders considerably varied from previous researches with respect to the presence of protective factors (M = 11.74, SD = 4.04). Compared with the German pilot study conducted in an outpatient community sample (Yoon et al., 2011), which revealed a higher average protection measured by the SAPROF (M = 17.35, SD = 5.64), the results of the present study – not surprisingly – indicate that offenders in their early stage of incarceration have little resources as measured by the SAPROF. The SAPROF mean scores of our sample were rather comparable to a violent offender sample (M = 11.65, SD = 6.41) of a forensic mental hospital in the Netherlands (de Vries Robbé et al., 2011).

Despite the multi-disciplinary composition of the rater team, the ICC measures on the total scores indicated a reasonable agreement between raters. However, three of five internal items (empathy, coping, self-control), one motivational item (leisure activities) and all the external items (social network, intimate relationship, professional care) noticeably varied among raters. However, regarding the items leisure activities and social networks, it should be noted that these items had the most missing values. It could be assumed that either these items are difficult to rate in an early stage of incarceration or the item definitions are likely to be misunderstood among various raters. The weakness in reliability in these items could have possibly influenced the validity of these items as well.

Taking one of the first validation studies from Utrecht into account, which yielded good to excellent predictive validity of the SAPROF post-treatment total scores for violent and sexual recidivism in sexual offenders, the present study reports only small to moderate predictive validity of the instrument in both the ROC analyses and the COX survival analyses. General, non-sexual violent, and (sexual) violent recidivism could be predicted reasonably well by the SAPROF, suggesting that the quantity of protective factors is a predictor for desistance from at least general and violent recidivism in sexual offenders, whereas no predictive power for the sexual recidivism category was found. Our results also correspond partially with the results of the initial sexual offender validation study conducted by the Utrecht research group showing that the SAPROF predicts violent recidivism better than sexual recidivism (de Vries Robbé et al., in preparation). The finding that the SAPROF tends to better predict general and violent recidivism than sexual recidivism might originate in the developmental background of the instrument, namely the assessment of factors related to future violence.

In comparison with the SVR-20, the SAPROF showed a strong negative link towards the SVR-20 scores but small to moderate links towards most recidivism categories. It seems that the quantity of protective factors in an early stage of incarceration shows a counter-part to those of risk factors rather than the actual occurrence of recidivism after release (de Ruiter & Nicholls, 2011; Fitzpatrick, 1997; Ullrich & Coid, 2011).

This assumption could be supported by the results of the survival analyses, that the SAPROF itself showed significant predictive power – again, only for general, non-sexual violent, and (sexual) violent recidivism -, but did not moderate the predictive power to the SVR-20. Following the conceptualization of Loeber & Farrington (2012), it could be assumed that the SAPROF factors rather present themselves as protective factors predicting desistance from criminal behaviors and/or lower probability of recidivism, but do not buffer

the effect of risk factors measured by the SVR-20, which are primarily historical and offenserelated.

Subscales of the SAPROF partially showed significant predictive power, especially internal and motivational factors predicted general, non-sexual and sexual recidivism. None of the subscales predicted sexual recidivism, and, external factors did not predict any recidivism category. Corresponding to this result, some of the individual items of the SAPROF showed a substantial predictive accuracy, which was even higher than the SAPROF total score. Reflecting the predictive accuracy of the internal and motivational items of the SAPROF, selfcontrol, work, and financial management were the most precise predictors with small to moderate effect sizes in all recidivism categories except for sexual recidivism. These items also moderated the predictive accuracy of the SVR-20. These items are exactly the same factors identified in the Dutch validation study as the strongest predictors for violent recidivism (de Vries Robbé et al., 2011). Even if these items seem to be the opposite pole of risk factors at the first glance, they contain different aspects usually not covered by risk assessment tools. Self-control, in the SAPROF, is defined not only as control over impulses or aggression but also as the quality and maintenance of self-discipline. The definition of work also covers more positive aspects than usual, e.g., appreciation and suitability of the employment regardless of monetary rewards. Financial management covers both steady income and responsible management of income regardless of its source.

There were several items, which seem to deserve further analyses. Secure attachment in childhood was the only item, which revealed significant predictive validity regarding sexual recidivism. In the SAPROF, secure attachment in childhood refers to being attached to at least one pro-social role model before adulthood rather than indicating a secure or insecure attachment type as described by Bowlby (Bowlby, 1969; 1973; de Vogel et al., 2009). The association of this static item with desistance from sexual recidivism might indicate that sexual (re)offending could be prevented when a person was capable of keeping bonds

towards others with pro-social characteristics over certain periods. The predictive power of life goals could reflect the positive motivation for a satisfying life being a strong resource against recidivism risk. Although the offenders show only partial explicit motivation for treatment (see Table 11), those willing to reach distinct meaningful goals were found to be lower on risk for recidivism in this study.

One of the strongest limitations and a possible explanation for the low predictive accuracy found in our study might be the fact that the SAPROF ratings were based on archival information, which did not include treatment-relevant information. The SAPROF is described as an instrument, which is helpful for observing treatment changes of clients and for predicting recidivism risk when used in combination with other (SPJ) risk assessment tools. Though only two items (motivation for treatment and professional care) are directly related to treatment, the positive values in the 15 dynamic factors of the SAPROF might require at least some progress within the therapeutic intervention. Thus, considering the treatment-oriented characteristics of the instrument, one can assume that applying the SAPROF for post-treatment ratings or during treatment might lead to a higher predictive accuracy than in the present study (e.g., de Vogel et al., 2009).

The lack of incremental validity could possibly be explained by the combination of SAPROF data, which were collected retrospectively by the researchers and the prospectively collected SVR-20 data during the initial assessment of the offenders. Further, the present study tested an instrument originally developed for forensic hospital populations in a correctional offender sample. Therefore, it cannot be ruled out that there exist specific factors, which can only be applied in a correctional population. In the same context, the SAPROF was developed within a violent offender pool and was designed to assess factors against future violence in general and not specifically sexual violence, thus, the low predictive accuracy of the tool for sexual recidivism in a sexual offender sample seems to have a plausible background. It is also

possible that the SAPROF is missing certain factors for sexual offenders. For instance, Willis and Grace (2008) pointed to the importance of the quality of reintegration planning in sexual offender recidivism. Another study suggested that victim-specific empathy is a stronger predictor for sexual recidivism than general empathy (Brown et al., 2011). Since the SAPROF items do not contain these aspects, it is possible that the items need further clarifications for sexual offenders, whose nature is not primarily violent, at least in certain cases.

Moreover, Seto and Fernandez (2011) indicated distinctive dynamic risk groups depending on sexual deviance and criminogenic needs, and it is possible that the SAPROF is performing better in sexual offenders with high antisociality than primarily with sexual deviance. Since sexual offenders are very heterogeneous in nature, further analyses in various risk groups are needed to differentiate their risk traits and strengths, which could be helpful to provide indications for more appropriate intervention programs to specific types of sexual offenders.

Overall, the results of the present study do not support the usage of the SAPROF sum score for decision-making regarding the situation after release for offender at an early stage of incarceration. However, the significant effect of the SAPROF as an instrument and certain factors within the SAPROF might indicate that the inclusion of positive aspects in individuals in risk assessment procedures could reduce recidivism risk measured by the SVR-20. It has been suggested that the primary purpose of assessment is reducing the probability of an adverse outcome (Douglas & Kropp, 2002), and the assessment and treatment of sexual offenders should be fundamentally non-discriminatory and humane (Colorado Sex Offender Management Board, 2008). With a cautious optimism leaning on the Good Lives Model, it could be expected that when not only risk-oriented but also improvement-oriented factors (e.g., maintenance of self-disciplines, positive self efficacy through work, effective financial management, willingness to achieve positive life goals) were communicated in therapeutic settings more often, the effect of the risk management would be enhanced. A holistic approach to risk appraisal, which includes a wider range of methodological aspects, such as actuarial and clinical, quantitative and qualitative, and considering both risk and protection above all, is vital for an accurate assessment of recidivism and its prevention (e.g., de Vogel et al., 2009; DeMatteo et al., 2005; Gagliardi et al., 2004; Haggård-Grann, 2005; Salekin & Lochman, 2008). Therefore, despite the lack of partial statistical significance, the items comprising positive aspects of certain factors certainly deserve more attention in applied forensic risk assessment.

# **Chapter 6 Risk and Strength Profiles of Sexual Offenders**

## 6.1 Introduction

Since the Risk-Need-Responsivity principles (Andrews & Bonta, 1990) was established in the field of sex offender treatment, the importance of treatment programs corresponding to the recidivism risk level of the offender has been emphasized, to achieve a higher responsivity of the client towards the program. The acceptance and development of these principles and their importance have been remarkable in the past three decades. The most widely established intervention program based on the RNR principles is Relapse Prevention (RP). RP treatment for sex offenders was introduced in 1980s. Based on the cognitive-behavioral approach, the program aims to provide offenders a proper coping strategy in high-risk situations for recidivism. Identification of risk factors plays therefore a crucial role in this program.

The effectiveness of such intervention programs is, however, still a methodologically and clinically controversial issue and the quality of these intervention studies vary critically (Eher, 2012). Hanson and his colleagues published a meta-analysis of 43 independent comparisons and found lower rate of recidivism for treated group (2002). This analysis was, however, criticized by Rice and Harris (2003) for including studies with disputable sample selection. Another German meta-analysis also indicated lower sexual recidivism rates in treated offenders (Lösel & Schmucker, 2005), but again, was criticized because 60% of the included studies did not reach the 3rd level on the Maryland scale of scientific rigor (Eher, Gnoth, Birklbauer, & Pfäfflin, 2007). A recent meta-analysis indicated that a large portion of treatment studies have significant bias in their methodology and are able to indicate only weak evidence for treatment outcome (Hanson, Bourgon, Helmus, & Hodgson, 2009).

Moreover, most treatment programs in those studies were not provided based on the RNR principles, though a thorough assessment and differentiated analysis of risk factors are crucial for the prevention of recidivism on the individual level. The reason why the studies have such methodological flaws or why the intervention programs are not provided taking RNR principles into account remains unclear. One of the assumable explanations for the missing RNR-orientation could be the limited resources in therapeutic institutions and flaws in risk communications. For a better management within the institutions to distribute resources effectively so that the risk assessment results could be used as an initial guideline for treatment planning and allocations of the offender in an appropriate program, it could be beneficial to investigate the differences in risk profiles of sex offenders in a large representative sample to identify various risk groups, which might respond to intervention similarly. It is possible as Harcourt (2007) mentioned, that the core premise of risk assessment contains a reasoning error, assuming that offense rates differ among different clusters but those different clusters react similarly to intervention measures. The interpretation of the relationship of risk and recidivism probabilities could be wrong or at least biased since it would not leave any margin for any influence of therapeutic progress or other dynamic variables.

Though there are large numbers of risk assessment tools developed in the last two decades for forensic clinical practice, empirical studies regarding possible classifications of offenders based on their risk factors are rare. Typologies in sex offenders are usually based on personality-related traits such as aggression, impulsiveness, psychopathic or sadistic traits of individuals (Rosenberg & Knight, 1988; Knight & Prentky, 1990). Few empirical studies on classifications of sex offender risk typologies are available these days. High-risk-offenders and their treatment responsiveness get constant attentions of experts. Lussier and colleagues (2010) described a community sample of high-risk sex offenders by Canadian legislation to have similar sociodemographic features and criminal history. This group has offended higher rates of unrelated female victims and seemed to be at risk of sexual offending against children; however, they were heterogeneous in terms of risk measures by the Static-99 and the STABLE-2000 (Hanson & Harris, 2001). Another attempt was to classify sex offenders based on their psychopathological characteristics and psychosocial functioning level suggesting differentiated intervention corresponding to the identified deficits of offenders (Woessner, 2010). Seto and Fernandez (2011) have recently identified four dynamic risk groups using the STABLE-2000. The groups were differentiated based on their antisociality and sexual deviance: low-needs group (lower antisociality and sexual deviance), a typical group (moderate antisociality and lower sexual deviance), a sexually deviant group (higher sexual deviance with primary orientation on children), and a pervasive high-needs group (higher antisociality and sexual deviance). They concluded different groups can benefit from different correctional programs, for instance, mainstream services for the typical group and specialized services for other groups.

Aside from the above mentioned exploratory analyses, there is another type of approach to classify sexual offenders: treatment responders vs. non-responders. A significantly higher rate of recidivism was found in treatment non-responders in a prospective study conducted by Beech and his colleagues (Beech, Mandeville-Norden, & Goodwill, 2012). Moreover, among risk factors which hinder tailoring the treatment suitable to offenders (i.e. Responsivity principle; see Andrews et al., 2011); there seem to be specific factors which have influence on the treatment success. A recent meta-analysis showed that high-risk, high-need offenders are frequently those with specific responsivity issues such as psychopathy and criminal propensity rather than sexual deviance, which predict treatment attrition and higher recidivism rates of this group (Olver et al., 2011).

Therefore, it could be cost-efficient for therapeutic institutions to investigate offender groups regarding not only the risk and but also the responsivity to invest resources more effectively depending on the risk and responsivity of offenders. Aligning the suggestion of above mentioned studies, this chapter aims 1) to explore descriptive profiles of risk and protective factors among sexual offenders in a representative sample and 2) to compare recidivists and non-recidivists within differentiated risk levels in their comprehensive risk and protective factor profiles.

## 6.2 Methods

### Sample

The sample of the current study drives from the same databank of Austrian FECVSO as described in the Chapter 5. 15 cases were excluded due to missing data in the assessment package. 435 representative archival data on the initial risk assessment of these adult male sex offenders were eventually included to the analysis. The average characteristics of the sample were, however, very similar to the sample from Chapter 5 (Table 20).

#### Instruments

To demonstrate comprehensive profiles of the sample including treatment related factors, various assessment tools were selected to be analyzed. Next to the instruments presented in Chapter 5: the SAPROF and the SVR-20, the Static-99 and the PCL-R data, which are also a part of standardized evaluation system of the FECVSO, was also included into the analyses. Aside from the SAPROF, which is coded retrospectively, all the other instruments were

coded during the initial risk assessment procedure (see Chapter 4 and 5 for detailed descriptions of the instruments).

М	SD	min	max	
42	12.7	16	72	
34	22.6	4	156	
6	1.4	3	10	
n		%		
198 45.5		5.5		
2	37	54.5		
2	18	50	).1	
1	54	35	5.4	
Ę	56	12	2.9	
1	50	34	1.5	
7	75	17	7.2	
3	37	8	.5	
	М 42 34 6 1 2 2 1 4 2 1 4 3 4 3 4 6 1 2 1 4 5 1 4 5 1 4 5 1 4 5 1 4 5 1 4 5 1 4 5 1 5 1	M       SD         42       12.7         34       22.6         6       1.4         6       1.4         198       237         218       154         154       56         150       75         37       37	M       SD       min $42$ $12.7$ $16$ $34$ $22.6$ $4$ $6$ $1.4$ $3$ n $2$ $198$ $45$ $237$ $54$ $218$ $50$ $154$ $35$ $150$ $34$ $150$ $34$ $37$ $8$	

Table 20: Sample Description

This combination was chosen to cover different types of risk assessment tools containing actuarial and clinical factors. The PCL-R was also included to comprise psychopathy according to Hare as one of the most valid recidivism predictors.

The Psychopathy Checklist-Revised is one of the best validated and commonly used instruments for assessing psychopathy as a forensic clinical construct derived from the

characteristics of psychopathy contrived by Cleckley (1941) and operationally defined by Hare (1991). It is a 20-item checklist with two factors as the core construct of the psychopathy. Factor 1 assesses the interpersonal and affective characteristics, whereas Factor 2 assesses chronic antisocial behavior. Based on documentary information and a semi structured interview, each item can be rated in a 3-point-scale from 0 to 2. Missing data of the PCL-R was imputed to achieve fuller and more valid assessment results as recommended in the 2nd Edition of the manual (Hare, 2003).

In spite of the debate on in-group differences on psychopathic offenders' probability of recidivism, there is a global consensus in recent research and clinical field data that psychopathy is a strong predictor of violent behavior, and most importantly, sexual recidivism (Douglas & Webster, 1999; Douglas, Yeomans, & Boer, 2005; Grann, Langstrom, Tengstrom, & Kullgren, 1999; Hare, Clark, Grann, & Thornton, 2000; Urbaniok, Endrass, Rossegger, & Noll, 2007).

#### Procedures

For the first part of the study regarding descriptive profiles of the sample, the sample was divided into categories depending on the risk estimates suggested in the Static-99: Low, Moderate - Low, Moderate - High, and High. The subsamples are descriptively analyzed throughout the above mentioned assessment tools and their subscales. Criminal history and recidivism in these groups were also included to this part of the analysis to observe the differences of the risk profiles reflected in actual outcomes. Besides the criminal history presented in Chapter 5, a category comprising history of violent crime with or without sexual components was added to ensure the comparability with the recidivism measures. Based on the assumption, that the primary concern of offender rehabilitation measures is to prevent any further criminal behavior related to person-related harm, the recidivism categories

included in this part of the study were violent recidivism with or without sexual component: violent (incl. sexual) recidivism and general recidivism category described in Chapter 5.

The second part of the study was conducted based on the hypothesis that recidivists and non-recidivists in these different actuarial risk groups show significant differences in their clinical risk measured by the SVR-20, protective factors measured by the SAPROF, and the PCL-R scores. The purpose of this analysis is to explore differences in the recidivists and non-recidivists to identify possible indicators of recidivism in a group of offender with same actuarial risk level. The SVR-20 and the PCL-R scores are expected to be higher; the SAPROF scores on the other hand lower in the recidivists group among all actuarial risk categories. The SAPROF was also compared on the item level, if recidivists and non-recidivists in different risk groups reveal significant differences in specific protective factors. As mentioned in Chapter 5, item 12 medication, item 16, living circumstances, and item 17 external control were excluded from this part of the analysis. Moreover, these groups might also differ in their criminal history and reconvictions for the aforementioned two categories.

### Statistical Analysis

The different profiles of the identified groups were analyzed in a one-way ANOVA, variance analysis using SPSS Version 19. Significance in differences was tested with Scheffé post hoc test to control family-wise Type 1 error. Though it might result in a higher than desired Type II error rate due to a severe correction, it was expected to increase the statistical accuracy by using a conservative method.
#### 6.3 Results

#### **Descriptive Profiles**

Table 21 demonstrates the values of the risk assessment tools in the groups with four different risk categories of the Static-99. The final protection judgment of the SAPROF was also calculated, but the table demonstrates only the scores since it is not useful to determine descriptive statistics for variable with less internal variance in the first place.

The PCL-R total scores as well as the PCL-R Factor 2 scores of offenders with low-moderate risk were significantly higher than those of the low risk group and lower than the moderate-high risk group (p < .001). There was no significant difference between the moderate-high and high risk group. PCL Factor 1 and scores were however, not significantly different between the low and low-moderate risk group or moderate-high to high risk group, though the low risk group showed significantly lower scores than the moderate-high and high risk group (p < .01) and the low-moderate group only lower than high risk group (p < .05).

## Table 21: Group differences in assessment tools

	Lc	DW	Low-Me	oderate	Modera	nte-High	Hi	gh
	Risk (	Risk Group		Risk Group		Risk Group		Group
	(n =	103)	(n = 165)		(n = 108)		(n = 59)	
	M	SD	М	SD	М	SD	М	SD
PCL-R Total	13.7	4.7	18.6	7.5	23.5	7.8	25.8	6.1
PCL-R Factor 1	7.5	3.0	8.5	4.1	9.3	3.7	10.2	3.2
PCL-R Factor 2	4.9	2.9	7.8	4.1	11.3	4.5	12.8	3.8
SVR-20 Total	13.5	4.9	18.0	5.7	21.8	5.7	26.7	4.5
SVR-20 PSA	6.5	3.4	10.5	4.5	13.6	4.3	16.6	3.0
SVR-20 SO	5.1	2.4	5.2	2.4	5.5	2.5	7.1	2.8
SVR-20 FP	2.0	1.2	2.3	1.2	2.7	1.2	3.0	1.2
SAPROF Total	12.7	4.9	10.8	4.8	8.6	4.5	7.0	3.3
SAPROF IF	3.6	1.6	3.1	1.6	2.4	1.5	2.0	1.1
SAPROF MF	6.8	2.6	5.2	2.8	3.8	2.7	2.6	2.2
SAPROF EF	2.6	1.9	2.7	1.9	2.4	1.7	2.4	1.5

The SVR-20 total scores and the Psycho-Social Adjustment (PSA) subscale scores were significantly differ among all the risk groups (p < .001). Sexual Offense (SO) items were significantly higher in the high risk group compared to any other risk group (p < .001), whereas the non-high risk group showed no difference to each other. Future Plan (FP) subscale showed also no significant differences except for low risk group lower than moderate-high and high risk group (p < .001) and low-moderate group lower than high risk group (p < .01).

The SAPROF total scores were significantly lower in the low risk group in comparison with the low-moderate or moderate-high risk groups (p < .001), whereas the moderate-high and high risk group did not show any significant difference. The SAPROF Internal Factor (IF) scores were significantly lower in the both low and low-moderate group compared to the moderate-high and high risk group (p < .01). The lower the Static-99 risk group, the lower were the Motivational Factor (MF) scores (p < .001). The External Factors (EF) did not reveal differences among the risk groups.

Regarding the criminal history and recidivism, there were significant differences among all the risk groups regarding previous general and violent (including sexual) delinquencies (p < .05). Non-sexual violent criminal history was also increased over the actuarial risk categories (p < .01); however, the moderate-high and high risk group did not show significant differences. General recidivism as well as violent (including sexual) recidivism were not different within the both lower risk groups and higher risk groups, but the difference between the lower and higher risk groups was significant (p < .001).

#### Recidivists vs. Non-recidivists within Different Risk Level

Figure 5 demonstrates the percentages of participants belonging to the different actuarial risk categories based on the Static-99 and how they are distributed depending on their actual reconviction due to a violent including sexual violent crime. An observable difference over the risk categories was that the lower the risk level, the higher was the discrepancy between the number of recidivists on the left and non-recidivists on the right side. Though recidivist groups were always bigger than the non-recidivist groups, the difference was marginal in the high risk category.



Figure 5. Recidivists vs. Non-recidivists

There were several factors in which the recidivists and non-recidivists showed significant differences (see Table 22). In the low risk group, the SAPROF total scores and the Motivational item scores were significant higher in the non-recidivists (p < .05), whereas the PCL-R Factor 2 scores were significantly higher in the recidivists (p < .01). The SVR-20 scores were not significantly different among low risk offenders regardless of their recidivism. Though the SAPROF total or subscale scores did not show significant differences, work and financial management showed differences in this group. Recidivists (M = 1.38, SD = .74). The difference in financial management reached also a statistical significance (p = .06), in which recidivists (M = .57, SD = .79) scored lower than non-recidivists (M = 1.12, SD = .72).

Recidivists with low-moderate risk were rated significantly higher in the SVR-20 total scores and the SVR Psychosocial Adjustment scores (p < .001). The PCL-R factor 2 (p < .001) as well as the PCL total (p < .01) were also significantly higher in the recidivists than in nonrecidivists in the low-moderate risk group. The SAPROF scores did not differ between groups. Recidivists showed, however, significantly (p < .05) lower scores in work (M = .64, SD = .61) than non-recidivists (M = 1.00, SD = .73). Financial management differed also significantly (p < .01) in this low-moderate risk group (Recidivists: M = .19, SD = .42 vs. Non-recidivists: M =.78, SD = .66). Regarding previous convictions, the recidivists also had significantly more convictions of general and violent (incl. sexual) crime in the history.

The hypothesis was inversely confirmed in the moderate-high risk group. Recidivists with moderate-high risk were assigned to significantly higher protection categories in the SAPROF (p < .01), the SAPROF total scores were also higher in the recidivists group approaching statistical significance (p = .06). The SAPROF External item scores were also higher among recidivists (p < .05), whilst the PCL factor 1 scores (p = .05) lower in this group. Recidivists in this group revealed even significantly coping scores (M = .37, SD = .48; p = .05) than non-recidivists (M = .20, SD = .39).

Only the SVR Psychosocial Adjustment scores were distinguishable between the high risk recidivists and non-recidivists (p < .05) regarding risk factors. However, several SAPROF items showed significant differences in this group. Again, work and financial management showed significant differences between recidivists (Work: M =.15, SD = .37; Financial management: M =.13, SD = .34) and non-recidivists (Work: M =.57, SD = .74; Financial management: M =.45, SD = .50). In addition, life goals scores differed between recidivists (M =.04, SD = .20) and non-recidivists (M =.29, SD = .59) significantly (p < .05) as well.

## Table 22: Group differences in assessment tools

		Lo	W			Low-Mo	oderate			Modera	te-High			Hi	зh	
		Risk (	Group	p		Risk Group		Risk Group		Risk Group						
	Non-rec	cidivists	Recic	livists	Non-rec	cidivists	Recid	livists	Non-rea	cidivists	Recic	livists	Non-rec	cidivists	Recid	livists
	(n =	96)	(n =	= 7)	(n =	137)	(n =	27)	(n =	: 70)	(n =	38)	(n =	33)	(n =	26)
	М	SD	М	SD	М	SD	М	SD	М	SD	М	SD	М	SD	М	SD
PCL-R Total	13.5	4.7	16.0	4.3	17.8	7.1	22.8	8.0	24.0	7.6	22.4	8.3	24.9	5.8	27.0	6.4
PCL-R Factor 1	7.5	3.0	6.7	2.5	8.4	3.9	9.1	4.9	9.8	3.6	8.4	3.8	10.2	3.3	10.1	3.3
PCL-R Factor 2	4.6	2.8	8.3	1.9	7.2	3.9	11.0	3.9	11.4	4.3	11.2	4.8	12.1	4.0	13.7	3.3
SVR-20 Total	13.5	4.9	14.6	3.7	17.4	5.6	20.7	5.7	22.2	5.3	21.0	6.4	26.2	4.4	27.5	4.7
SVR-20 PSA	6.3	3.3	8.6	4.2	9.9	4.4	13.7	4.0	14.0	4.2	12.9	4.5	15.9	3.0	17.7	2.7
SVR-20 SO	5.2	2.4	3.7	2.7	5.3	2.4	4.7	2.7	5.5	2.4	5.5	2.9	7.6	2.4	6.5	3.1
SVR-20 FP	2.0	1.2	2.3	0.8	2.3	1.2	2.4	1.2	2.8	1.1	2.6	1.3	2.8	1.4	3.3	0.9
SAPROF Total	13.0	4.7	9.0	5.8	11.0	4.9	9.6	4.5	8.0	4.1	9.7	5.0	6.9	3.3	7.1	3.5
SAPROF IF	3.6	1.6	2.9	1.9	3.1	1.6	2.8	1.4	2.3	1.3	2.6	1.9	2.0	1.1	2.1	1.2
SAPROF MF	7.0	2.6	4.8	2.6	5.4	2.8	4.3	2.5	3.7	2.6	4.2	2.8	2.9	2.3	2.2	1.8
SAPROF EF	2.7	1.9	1.6	1.8	2.7	1.9	2.6	1.7	2.1	1.5	2.9	1.8	2.1	1.2	2.7	1.7

#### 6.4 Discussion

The first analysis in this chapter regarding the descriptive profiles of sexual offenders yield in several significant differences on clinical risk and protective factors, psychopathy scores, criminal history, and the actual recidivism. Though the general tendency seems to reflect the previously proved convergent validity among the risk estimates (Rettenberger & Eher, 2006), there were interesting findings regarding variables with no significant differences among the different risk group. Especially between the moderate-high and high risk group, there seemed to be less diversion in several factors compared to the lower risk group. The PCL-R Factor 1 scores, the SVR Sexual offenses and Future Plan scores, and the SAPROF total, Internal, and External scores showed no significant difference between the moderate-high and high-risk group. The PCL-R Factor 1 scores, which comprises interpersonal and affective deficits rather than antisociality, and the SVR items with primary relationship to deviant sexuality revealed throughout the modus operandi, and protective factors, particularly factors related to the personal characteristics in the SAPROF seem to be similarly distributed in the moderate-high and high risk group. Similar to the higher risk group, the both lower risk group did not show significant differences in the PCL-R Factor 1, SVR Future Plan items, and the SAPROF Internal and External scores.

The most important finding is, nevertheless, that the low and low-moderate risk group did not differ in their general and (sexual) violent recidivism, as well as the moderate-high and high risk group. The lower risk groups showed several similarities in clinical risk and protective factors next to their actuarial risk level to each other, so did the higher risk groups. Overall, the results indicate it might be beneficial to provide differentiated intervention at least for two separate risk level groups: lower and higher risk groups.

The group distribution in the second part of the analyses illustrated an important phenomenon itself. It seems that the higher the actuarial risk, the less accurate is the

discrimination of recidivists from non-recidivists. The proportion of recidivists in lower risk groups is clearly higher than in higher risk groups.

Several factors seem to deserve more attention in clinical practices. The uncertainty in predicting occurrence of an actual recidivism among offenders sharing the same risk estimates is a frequently discussed issue. Therefore, the additional factor identified to be distinguishable between recidivists and non-recidivists with the same actuarial risk level in this chapter could provide clinical implications for developing intervention strategies.

Recidivists with low baseline risk according to the Static-99 revealed lower SAPROF total and Motivational item scores and higher PCL-R Factor 2 scores. Risk factors except for the psychopathy seem to play less decisive role in this risk group. More importantly, as the SAPROF Motivational items measure factors related to willingness to be a positive member of society, missing this general pro-social attitudes could be critical in the low risk group.

The common denominator among the low-moderate risk recidivists were the higher previous conviction rates, the higher SVR-20 total and the Psychosocial Adjustment scores, and the PCL-R total and the Factor 2 scores. Cases with noticeable poor psychosocial functioning level and historical indices with general disrespect of social norm might deserve more concern than others without, though their static risk for sexual recidivism seems to be lower.

Chronic antisocial life style measured by the PCL-R Factor 2 could offer crucial information on intervening in the lower risk offenders with probably higher propensity for general offending behavior than severe sexual or violent offenses. The results of the present study seem to be at least partially corresponding with Pullman and Seto's suggestion (2011) regarding generalist and specialist explanations in adolescent sex offenders. They summarized the discourse between the generalist versus specialist perspectives and postulated that many adolescents are generalist with risk for various forms of delinquencies whereas only a minority is specialists who are at risk primarily for future sexual offenses. Especially in case of the lower risk offenders who recidivated, the generalist argument offer some clarification.

A critical concern arises from the falsification of the hypotheses in the moderate-high risk group. The overall distribution of most of the investigated factors was inversed to the hypotheses. The recidivist group showed lower PCL-R and SVR-20 scores and higher SAPROF scores. Besides, recidivist in this risk group revealed higher coping scores than non-recidivists. Though the other differences were not significant, the false-negative judgment on the overall protection level seems to aligning with the phenomenon of clinical override. However, explicitly the PCL Factor 1 scores, which comprise the interpersonal and affective deficits, were also inversely distributed. Therefore, possible deceitful manners with influence on assessor-client contact do not deliver a logical explanation for this group either. Taking the result of the first analysis into account, which made this group hardly distinguishable from the high risk group, this group might be the most difficult group to estimate the overall risk level based on a convergent approach. A very speculative explanation could be that this group entails offenders with more symptomatic behavior related to certain disorders, e.g. sexual preference disorder, which might have led to a relapse due to the disorder even if there were noticeable protective factors. This hypothesis needs a further analysis.

The high risk offender group, in which the recidivists and non-recidivists was similar in comparison with other risk groups, only the Psychosocial Adjustment level in the SVR-20 was higher in the recidivists.

Regarding specific protective factors among different base-line risk groups, work and financial management, which were the factors with higher predictive validity in the previous chapter, also demonstrated significant differences between recidivists and non-recidivists. Particularly in the high risk group, life goals seem to illustrate the differences between recidivists and non-recidivists additionally.

Aside from the content variation of the identified factors, it can be assumed that the lower risk groups do not only have lower actuarial risk per se, but also have more discernible features, whereby the people with critical, immanent recidivism risk can easily be identified.

The overall results of this chapter seem to suggest a possible advantage appraising recidivism risk on a differentiated scheme, especially based on the level of risk. It might be helpful not only matching the level of service to the level of risk, but the level of further assessment to the baseline level of risk for a more accurate estimation of recidivism risk and identification of additional risk factors, which are immediately related to the delinquent behavior. The specific features identified in this study need further verifications for a possible implementation of programs targeting specific risk factors within the same baseline risk group.

This study has several limitations especially regarding the characteristics of archival data. Since the case reports did not contain much information on treatment progress, it was not possible to analyze the actual courses of treatment, which might have had influence on the recidivism than the risk assessment results only. Besides, the risk status of offenders at discharge was also not available, which might be more relevant for recidivism rather than the initial assessment result.

Different rating timeline of assessment tools is again a methodologically critical issue (see Chapter 5 for detailed description on the rating). It remains unclear if the results regarding the protective factors measured with the SAPROF were influenced by the retrospective study design.

The results regarding the moderate-high risk group need further analyses, since a falsenegative prediction carry severe consequences (Ægisdóttir, White, Spengler, Maugherman, Anderson, Cook, et al., 2006; Dawes, Faust, & Meehl, 1989).

## **Chapter 7 General Discussion**

This dissertation has dealt with the topic protective factors on sexual offenders. The importance of risk assessment and resource in course of offender rehabilitation was elaborated based on various theoretical approaches. The historical development of the field of applied forensic assessment was demonstrated and the problematic issue neglecting protective factors was pointed out. The terminology and the concept regarding protective factors and empirical findings supporting the utility of these factors were explored. The review and search suggested a very limited evidence for existence and function of protective factors. Nonetheless, summarizing the findings and theoretical suggestions, a conceptual model comprising previous conceptualizations on protective factors and their relationship to recidivism and desistance was illustrated.

A retrospective validation study of the German SAPROF within an incarcerated male sexual offender sample was conducted to test the feasibility of the instrument assessing absence of recidivism in sexual offenders. Though the SAPROF has demonstrated significant predictive power regarding general and violent including sexual violent recidivism, sexual recidivism was not predicted. Hierarchical regression analyses suggested that rather specific items but not the instrument itself could add predictive accuracy towards the SVR-20, an interaction model with the SVR-20 and the SAPROF remains untested.

The sample was again analyzed in their descriptive risk and protection profile differentiated in their actuarial risk level to suggest a cost-efficient intervention programming in institutions. An explorative search on differences between recidivists and non-recidivists was conducted to find additional factors related to actual occurrence of recidivism among different baseline risk group. Whereas the results regarding low, low-moderate, high risk groups were comprehensible, illustrating higher levels of general antisociality and risk factors regarding sexual violence, but lower protective factors in recidivists group, low-moderate risk group remained with several contradictions showing lower risk factors and higher protective factors among recidivists.

To summarize, the results are slightly contradictory. There is a noticeable development in the field of protective factor researches, but neither research nor clinical practice seems to have sufficient evidence supporting the practical utility of protective factors. The German SAPROF seems to detect desistance from general and violent recidivism. Furthermore, it reveals partial evidence of predictive performance (e.g. Item 2: Secure attachment in the childhood) for sexual recidivism even though it was primarily developed to assess protective factors related to violence.

Several factors in the SAPROF showed stronger relevance towards recidivism and discrimination between recidivists and non-recidivists. Certainly, work and financial management would fall into the category of "interaction between risk and protective factors" suggested in the conceptual model suggested in Chapter 4. However, positive life goals, which represent quite new perspectives in assessment and treatment of offenders relying on the GLM model, seem to deserve more attention in forensic clinical practice and research. Especially, secure attachment to a prosocial role model in childhood seemed to be relevant for sexual recidivism as well. Though sexual recidivism were not predicted well by protective factors in general, differentiated examination of the childhood attachment and resilience (Jessor, 2013), and furthermore, search for further possible protective factors need to be conducted. Factors which are disputable regarding their link to recidivism, e.g. high self-esteem or empathy (Bushman & Baumeister, 1998; de Vogel et al., 2009; Hanson & Bussiere, 1998; Hughes, Cavell, & Grossman, 1997) need more differentiated examination with clear operationalization within a larger sample. There are indeed items still in an experimental stage, which were not included in this dissertation (e.g., sexual relationships, social skills, quality of life). It is necessary to test if these factors could add predictive values also regarding sexual recidivism. Differentiated risk profiles on offenders delivered several implications relevant for future studies; the results are yet very preliminary and explorative and need confirmation over various settings.

Overall, the effort of researchers to find more effective interventions to prevent re-offending is evident. The terminological and conceptual debate would be approached in a very controversial and dynamic development of the discourse. There certainly is an overlap between risk and protective factors, especially in cases of the factors mentioned in research on dynamic variables. In fact, however, to prove that the absence of specific risk factors is actually a protective factor, an extra validation study for those variables would be needed. Farrington and Loeber (2000) suggested that more specific research on differences in exposure to risk and protection between recidivists and non-recidivist is needed to clarify the link between them. Several studies have suggested a different predictive accuracy of assessment tools for specific offender group (Barbaree, Seto, Langton, & Peacock, 2001; Bartosh, Garby, Lewis, & Gray, 2003; Eher, Rettenberger, & Matthes, 2009), which might indicate that protective factors could be differently distributed among offender groups as well. A pilot study conducted within the master's thesis of Yoon (2009) suggested that though the number of risk and protective factors was negatively related, the overall judgment of risk and protection do not always reveal negative correlations. Stated otherwise, parallel to the conventional concept of high-risk, low-protective and low-risk, high-protective offenders, there could be high-risk, high-protective offenders as well as low-risk, low-protective offenders. Classifications of these different risk groups, however, need further analyses.

The conceptual model gained at least partial supports through the empirical studies conducted within this dissertation. Static and dynamic risk factors seem to be differently related to the recidivism, however, stronger than protective factors. Protective factors showed also discernible link to absence of recidivism, however, they need further investigation in their link towards primary prevention and desistance as suggested by Loeber & Farrington (2008; 2012).

The profound shift in attitudes toward rehabilitation of sexual offenders has been shown. Beginning with the early millennium, the task of forensic professionals has been changed from a mere examination the initial conditions, which lead to specific outcomes to far broader aspects embracing continuous evaluation and management of the identified condition (Hollin, 2003). Empirically based researches on protective factors in offender populations are still rare and necessitate further improvement.

Hill and his colleagues (2008) underlined the importance of structured, initial and continuous risk assessments. The Standards and Guidelines for the Assessment, Evaluation, Treatment, and Behavioral Monitoring of Adult Sex Offenders suggested by the Colorado Department of Public Safety (2008) stresses that assessment and evaluation of sexual offenders should be understood as an ongoing process, of which results are therefore not constant over time. The risk and protection levels can fluctuate not only among individuals but also within a single individual. For these reasons, every individual assessment needs a systematic and accurate case-specific examination for the mutual cooperation necessary to manage risk and protection effectively in society. In addition, the relevance of the clinical assessment results to specific outcomes aligned with relevant and well-established base rates needs to be clear. Applying the base rate, the assessor should consider the ease specific referral questions, setting, and clinical characteristics to decide whether the base rates were estimated in a comparable setting (Rogers, 2000). More importantly, the assessment results should be able to be interpreted individually and flexibly, considering the constellation of factors and the function of these factors within an individual.

Controversial discourses on certain factors being predictive or not, might depend more on the criminogenotype of the offender rather than on the phenotype. Hanson (2013) argued that the discrepancy of the predictive accuracy of empathy across different studies might be related to the motivational aspects of the sexually offending behavior in the first place. He elaborated with an example of vindictive rapists, whose primary motivation of offending is to punish women for their wrong doing regardless of their empathetic capability. Therefore, intervention in sexual offending should comprehend not only general factors related to the offending behavior but also case specific relevance of these factors in individuals' psychological and social mechanism. Future research will need to assess the benefits of this integrative approach systematically, preferably on a meta-analytic level.

A clear consensus in the field of applied forensic assessment is, nonetheless, that searching out the clients' deficits should not be the only target of intervention in the offender population. Identifying strengths and fostering the strengths is particularly crucial to achieve the ultimate goal of all offender treatment measures, the prevention of relapse. In the criminal justice system's recent history, the need for risk assessment of offenders by forensic practitioners has been constantly increasing. The focus in the field of applied forensic assessment has been primarily on the identification and prediction. However, with the improvements in assessment and evaluation methods, the questions have become more sophisticated, including rather individual analyses and prevention (Andrade, Kahterine, & Diener, 2009). Mainstream assessment tools are slowly becoming more comprehensive, embracing dynamic variables; furthermore, they are examining the factors that protect clients from recidivism.

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# SVR-20 Coding sheet

Name:	Number:		Date:	
Age:	(Name, First name) (in years)			D D . M M . Y Y
	Gender:			1ale
Davishian	$Coding: \mathbf{U} = NO, 1$	. = Pernaps, <b>2</b> = Y	$res, \mathbf{X} = Omit$	Aktuelle Veränderungen
Psychos	ocial adjustment		Score	+/0/-
1	Sexual deviation			
2	Victim of child abuse			
3	Psychopathy			
4	Major mental illness			
5	Substance use problems			
6	Suicidal/homicidal ideation (ideas)			
7	Relationship problems			
8	Employment problems			
9	Past non-sexual violent offenses			
10	Past non-violent offenses			
11	Past supervision failure			
B. Sexua	al Offenses			
12	High density sex offenses			
13	Multiple sex offense types			
14	Physical harm to victim(s) in sex offenses			
15	Uses weapons or threats of death in sex off	enses		
16	Escalation in frequency or severity of sex of	fenses		
17	Extreme minimization or denial of sex offen	ises		
18	Attitudes that support or condone sex offer	ises		
C. Futur	e Plans			
19	Lacks realistic plans			
20	Negative attitude towards intervention			
				Risk
				□ Low
		Fina	l Risk Judgment	Moderate
				凵 High

# SVR-20 Kodierungsbogen

Name:	(Mashagma Variama)	Nummer:		Datum:			
Alter:	(in Jahren)	Geschlecht:	🛛 Männlich	□ Weiblich	1 1 . IVI IVI . J J		
	Kodierung: <b>0</b> = Nein, <b>1</b> = V	/ielleicht/möglic	cherweise/teilweise	, <b>2</b> = Ja, <b>X</b> = Nie	cht beurteilbar		
A. Psych	osoziale Anpassung		Wert	Aktuell Veränderur +/0/-	e ngen Schlüssel		
1	Sexuelle Deviation						
2	Opfer von Kindesmissbrauch						
3	Psychopathy						
4	Schwere seelische Störung						
5	Substanzproblematik						
6	Suizidale/homicidale Gedanl	ken					
7	Beziehungsprobleme						
8	Beschäftigungsprobleme						
9	Nicht-sexuelle gewalttätige	/ordelinquenz					
10	Gewaltfreie Vordelinquenz						
11	Früheres Bewährungsversag	en					
B. Sexualdelinquenz							
12	Hohe Deliktfrequenz						
13	Mutiple Form der Sexualdeli	nquenz					
14	Physische Verletzung der Op	fer					
15	Waffengebrauch						
16	Zunahme der Deliktfrequenz	oder -schwere					
17	Extremes Bagatellisieren ode	er Leugnen					
18	Deliktfördernde Ansichten						
C. Zukur	nftspläne						
19	Fehlen realistischer Pläne						
20	Ablehnung weiterer Interver	tionen					
Summe Risiko Zusammenfassende Risikobeurteilung Mittel					<b>iko</b> Niedrig Mittel Hoch		

# **SAPROF Coding sheet**

To be used only in combination with the HCR-20 or related structured risk assessment instruments

Name:	(Name, First name)	Number:		Date:	D D . M M . Y Y
Age:	(in years)	Gender:	🗆 Male	□ Female	
Context o	f risk assessment:	□ Admission □ (Court) report □ Annual risk ass □ Others:	sessment		

Coding: <b>0</b> = No, <b>1</b> = Perhaps, <b>2</b> = Yes, <b>X</b> = Omit								
Inter	nal items	Score	Кеу	Goal				
1	Intelligence							
2	Secure attachment in childhood							
3	Empathy							
4	Coping							
5	Self-control							

Motiv	vational items	Score	Кеу	Goal
6	Work			
7	Leisure activities			
8	Financial management			
9	Motivation for treatment			
10	Attitudes towards authority			
11	Life goals			
12	Medication Inot applicable			

Exter	nale Items	Score	Кеу	Goal
13	Social network			
14	Intimate relationship			
15	Professional care			
16	Living circumstances			
17	External control			

Other considerations:	

Final Protection Judgment and	Protection	Risk
Integrative Final Risk Judgment	🗆 Low	□ Low
SAPROF + SPJ risk assessment tool	□ Moderate	□ Moderate
	🗆 High	🗆 High

# SAPROF Kodierungsbogen Nur in Verbindung mit dem HCR-20 oder SVR-20 anzuwenden

Name:		Nummer:		Datum:	
	(Nachname, Vorname)	-		-	ТТ. ММ. J J
Alter:	(in Jahren)	Geschlecht:	🛛 Männlich	□ Weiblich	
Hintergru	nd der Risikoeinschätzung:	<ul> <li>Aufnahme</li> <li>Stellungnahm</li> <li>Jährliche Risik</li> <li>Anderes (bitte</li> </ul>	e/Gutachten oeinschätzung angeben):		

Kodierung: <b>0</b> = Nein, <b>1</b>	! = Vielleicht/möglicherweise/teilweise,	, <b>2</b> = Ja, <b>X</b> = Nicht beurteilbar
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Inter	nale Faktoren	Wert	Schlüssel	Ziel
1	Intelligenz			
2	Sichere Bindung in der Kindheit			
3	Empathie			
4	Coping			
5	Selbstkontrolle			

Moti	vationale Faktoren	Wert	Schlüssel	Ziel
6	Arbeit			
7	Freizeitaktivitäten			
8	Finanzmanagement			
9	Behandlungsmotivation			
10	Einstellung gegenüber Autoritäten			
11	Lebensziele			
12	Medikation 🛛 nicht zutreffend			

Exter	nale Items	Wert	Schlüssel	Ziel
13	Netzwerk			
14	Intimbeziehung			
15	Professionelle Hilfe			
16	Wohnsituation			
17	Aufsicht			

Weitere Schutzfaktoren:	

Gesamtbeurteilung des Schutzes und der integrativen	Schutz	Risiko
Risikobeurteilung	□ Niedrig	□ Niedrig
SAPROF + SPJ Risikoerfassungsinstrument	□ Mittel	□ Mittel
	🗆 Hoch	🗆 Hoch
# Static-99 Coding Form

Name	e:		Number:			Dat	e:		
Age:	Г	(Name, First name)			_	_		DD	. M M . Y Y
			Gender:		□ Male		Female		
		Risk Factor				Codes			Score
	Υ.					Aged 2	5 or older	0	
T	YOU	ng				Aged 1	.8 – 24.99	1	
	_						Yes	0	
2	Eve	Ever lived with lovers for at least two years?					No	1	
							No	0	
3	Ind Any	ex non-sexual violence: convictions					Voc	1	
							res	1	
4	Pric	or non-sexual violence:					No	0	
	Any	ny convictions					Yes	1	
					<u>Charges</u> None	<u>Convictio</u> None	<u>ns</u> □	0	
5	Pric	or sex offenses			1-2	1		1	
					3-5	2-3		2	
					6, 6+	4,4+		3	
						,	3 or less	0	
6	Pric	or sentencing dates (excludir	ig index)				4 or more	1	
							No	0	
7	Any	convictions for non-contact	t sex				NO	0	
	OTTE	renses					Yes	1	
							No	0	
8 An		y unrelated victims					Anv	1	
						No	0		
9	Any	stranger victims (24 hours-	rule)				NO	U	
					Yes	1			
10	Anv	v male victims					No	0	
							Yes	1	
	ç			(Ad	d up scores	from individua	l risk		
	Sur			fac	tors)				
		Static 00 Sear	06			Diele	atogorie	-	
							ategone	3	
99 ent	,	0-1				1			
Static-9 Judgme		2 - 3 4 - 5			vioderate -	LOW			
					Moderate -	High			
		6 plus			🗆 High				

# Static-99 Kodierungsbogen

Name	<b>e</b> :	(Nachname, Vorname)	Nummer:				Datum:	7	
Alter:	: [	(in Jahren)	Geschlecht:		🗆 Männlie	ch	□ Weiblich	-	1.101101.33
	Risi	íkofaktor			<b>k</b> Bitte jew	<b>(odierung</b> veils Zutre	s <b>richtlinie</b> ffendes ankre	uzen	Wert
1	Alte Pro	er des Straftäters (zum gnosezeitpunkt)?				25 Ja 18	ahre oder älte bis 24,99 Jahr	er C	
2	Bez Bez anc	iehungsstatus – Partnersch iehungen, die mindestens z lauerten	aftliche :wei Jahre				J Nei	a C n 1	
3	Ver nicł	urteilungen beim Indexdelił nt-sexueller Gewalt?	kt aufgrund				Nei J	n C a 1	)
4	Frü	here Verurteilungen aufgru	nd nicht-				Nei	n C	)
 	sexu	Jeller Gewalt?			Anklagen	Verurt	J	a 1	L
5	Frül auf	here Anklagen und/oder Ve grund sexuell motivierter St	rurteilungen traftaten		Keine 1-2 3-5 6, 6+	4	einingen eine C 1 C 2-3 C , 4+C	] C ] 1 ] 2 ] 3	) L 2 3
6	Anz Ind	ahl der Vorstrafen (ausgend exdelikt)?	ommen das			3	3 oder wenige 4 oder mer	er C	)
7	Ver Stra Kor Teli	urteilungen aufgrund sexue aftaten ohne Opfer bzw. köi itakt – Exhibitionismus, obs efonanrufe, Voyeurismus	ll motivierter rperlichen zöne				Nei J	n C a 1	
8	Ver Tät	wandtschaftliches Verhältn er und Opfer	is zwischen			 N	Verwanc Nicht verwanc	lt C	)
9	Bek – H Stu	anntheitsgrad zwischen Tät andelt es sich um ein fremd nden-Regel)?	er und Opfer les Opfer (24-				Nei	n C a 1	)
10	Ges ein	;chlecht des Opfers − Hande männliches Opfer?	elt es sich um				Nei	n C a 1	)
	Gesamtscore								
		Static-99 Rohv	vert	Ris	ikokategor	ie			
tic-99 ırteilung		0 und 1 2 und 3 4 und 5			Niedriges R Niedriges b Durchschni	ückfallris is durchs ttliches t	iko chnittliches bis hohes Rü	Rücl ckfal	kfallrisi ko Ilrisi ko

eu	4 und 5	Durchschnittliches bis nones Ruc
Ba	6 und mehr	Hohes Rückfallrisiko

# **Curriculum Vitae**

### DAHLNYM YOON, M.A.

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# **EDUCATION**

Apr.2010 - present	PhD expected at University of Hamburg and University Medical Center Hamburg-Eppendorf (UKE), Germany Dissertation topic: Resource-oriented Risk Assessment and Intervention in Sex Offenders
Oct.2007 – Dec.2009	<b>M.A. in International Criminology at University of Hamburg, Germany</b> M.A. Thesis: "Against Risk-only Risk Assessment – An argument for the importance of protective factors, based on the pilot study at the University Medical Center Hamburg- Eppendorf"
Mar.2003 – Aug.2007	B.A. in Psychology, German Studies at Ewha Womans University, Seoul, Korea
Sep.2005 – Aug.2006	Exchange student at Ruhr University, Bochum, Germany
Mar.2000 – Feb.2003	Daewon Foreign Language High School, Seoul, Korea

### SCHOLARSHIPS AND AWARDS

Apr.2010 – Mar.2012	PhD Scholarship of the University of Hamburg, Germany
Jul.2010	Best Student Poster Award International Academy of Sex Research Annual Meeting in Prague, Czech Republic
Apr.2008 – Dec.2009	Study Scholarships for Graduates of All Disciplines DAAD (German Academic Exchange Service)
Feb.2005	Dean's List, honored with Scholarship, Ewha Womans University, Seoul, Korea

# **EXPERIENCE**

Jan. – present	Project coordinator for the evaluation of Social-therapeutic Unit (SOTHA) in Hamburg
	prison system
	Ministry of Justice, Hamburg
	Institute for Sex Research and Forensic Psychiatry, UKE, Hamburg, Germany

DAHLNYM YOON, M.A.

Apr.2011 – present	German regional trainer and project coordinator for the SAPROF (Structured Assessment of PROtective Factors for violent risk) Van der Hoeven Kliniek, Utrecht, The Netherlands
	Institute for Sex Research and Forensic Psychiatry, UKE, Hamburg, Germany
Jun.2009 – present	Coordinator of FORensic Ambulatory program for Sex offenders (FORAS) and Forensic- Psychiatric Court report services (FPG) Institute for Sex Research and Forensic Psychiatry, UKE, Hamburg, Germany
Oct. 25 – 26, 2012	Organization of 2nd Symposium on Emprical Researches in the Forensic Psychiatry, Psychology, and Psychotherapy (EFPPP)
	institute for Sex Research and Forensier Sychiatry, ORE, Hamburg, Germany
Jul. 28 – 29, 2011	Organization of Hamburger Summer School for "Risk Assessment in Sex Offenders (SVR- 20, revised Version) and People with Mental Retardation (ARMADILO-S)" Institute for Sex Research and Forensic Psychiatry, UKE, Hamburg, Germany
Feb. – Aug.2009	Student assisstant in the "Hamburg Model Project for children and adolescents who are at risk for sexual offending"
	Institute for Sex Research and Forensic Psychiatry, UKE, Hamburg, Germany
Aug.2008 – Mar.2009	Internship in the Forensic-Psychiatric Court report services (FPG) Institute for Sex Research and Forensic Psychiatry, UKE, Hamburg, Germany
OTHER ACTIVITIES	
Apr.2007 – present	Honorary Scientific Investigator, National Police Agency, Seoul, Korea
Dec.2006 - present	Full member, National Psychology Student Council of Korea
Jan. – Mar.2007	Volunteer, Save the Children Korea

- Helped the signature-seeking Campaign for Legislation of Child Abuse Prevention Act
- Aug.31 Sep.02, 2007Selected Attendant, Cognitive Neuroscience Summer WorkshopGraduate School of Cognitive Science, Sungkyunkwan University, Seoul, Korea
- Jan. Dec.2005Psychology Department Representative in the Emergency Student Commission<br/>College of Social Science, Ewha Womans University, Seoul, Korea

# PUBLICATIONS

Yoon, D. & Briken, P. (2012). Erfassung von Ressourcen bei Sexualstraftätern [Assessment of resources in sex offenders]. In J. L. Müller, M. Rösler, P. Briken, P. Fromberger, & K. Jordan (Eds.), *EFPPP Jahrbuch 2012: Empirische Forschung in der forensischen Psychiatrie, Psychologie und Psychotherapie* (pp. 135-139). Berlin, DE: MWV

#### DAHLNYM YOON, M.A.

- Driemeyer, W., Spehr, A., **Yoon, D.**, Richter-Appelt, H., & Briken, P. (2013). Comparing Sexuality, Aggressiveness, and Antisocial Behavior of Alleged Juvenile Sexual and Violent Offenders. Journal of Forensic Sciences, 58(3), 711-718.
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- Yoon, D., Spehr, A., & Briken, P. (2011) Structured Assessment of Protective Factors: a German pilot study. *Journal of Forensic Psychiatry and Psychology*, 22(6), 834-844.
- Driemeyer, W., **Yoon, D.**, & Briken, P. (2011). Sexuality, Antisocial Behavior, Aggressiveness, and Victimization in Juvenile Sexual Offenders: A Literature Review. *Sex Offender Treatment*, *6*(1), 1-26.
- Spehr, A., Driemeyer, W., Yoon, D., Martin, R., & Briken, P. (2011). Hamburger Modellprojekt fur sexuell auffällige Minderjährige: Wie unterscheiden sich Jungen mit von Jungen ohne Migrationshintergrund [The Hamburg Model Project for deviant sexual behaviour in minors: Does migration make a difference]? Recht und Psychiatrie, 29(3), 123-131.
- Yoon, D., Spehr, Vries Robbe, de, V., Vogel, de, V., & Briken, P. (2011). Strukturierte Erfassung von Schutzfaktoren [Structured Assessment of Protective Factors]. *Forensische Psychiatrie und Psychotherapie*, 18(2), 38-44.
- Yoon, D., Rettenberger, M., Berner, W., & Briken, P. (2010). Finding Resources of Sexual Offenders A new German assessment paradigm. *Korean Journal of Forensic Psychology*, 1(3), 221-249.
- Spehr, A., **Yoon, D.**, & Briken, P. (2010). Sexuell auffällige Minderjährige [Minors with problematic sexual behavior]. *Zeitschrift für Sexualforschung*, *23*, 139–154.
- Yoon, D., & Driemeyer, W. (2009). Sexuell grenzverletzende Kinder und Jugendliche Ein Tagungsbericht [Children and Adolescents with sexually offending behavior – A conference report]. Zeitschrift für Sexualforschung, 22, 163–168.

#### PRESENTATIONS

- Yoon, D., Rettenberger, M., Bluemel, A., & Briken, P. (2013). *Construct and incremental validity of interpersonal traits of Psychopathy.* Poster presented at the European Winterschool Novel Insights into Antisocial Behavior. Monastery Seeon
- Yoon, D. (2012). Risk profile of sex offenders clinical risk assessment and its relevance to recidivism. Paper presented at the 2nd Symposium on Empirical Researches in the Forensic Psychiatry, Psychology, and Psychotherapy (EFPPP), Hamburg
- Yoon, D. (2012). SAPROF eine deutsche Validierungsstudie [SAPROF A German validation study]. Paper presented at the 27th Annual Conference of Working Group of Forensic Psychiatry (AGFP), Munich

- Yoon, D. (2012). Predictive validity of protective factors in sexual offenders. Paper presented at the 11th Conference of International Association for the Treatment of Sexual Offenders (IATSO), Berlin
- Yoon, D. (2012). Structured assessment of protective factors A retrospective validation of the German version of the SAPROF. Poster presented at the 14th Symposium on Violence & Aggression, Saskatoon, Canada
- Yoon, D. (2011). (Wegschließen?) Zurückholen in die Gesellschaft! Ressourcen-orientierte Risikoeinschätzung bei Sexualstraftätern [(Total seclusion?) Better integration! – Resource-oriented Risk Assessment of Sex Offenders]. Paper presented at the BMBF (Federal Ministry of Education and Research)-Workshop, Witten
- Yoon, D., Klein, V., Spehr, A., Rettenberger, M., & Briken, P. (2011). *Resource-oriented Risk Assessment An* Approach to Balance Resource and Risk. Paper presented at the 32nd International Congress of Law and Mental Health (IALMH), Berlin
- Rettenberger, M., Boer, D., **Yoon, D.**, & Eher, R. (2011). *The predictive accuracy of risk factors in the sexual violence risk-20 (SVR-20).* Paper presented at the 32nd International Congress of Law and Mental Health (IALMH), Berlin
- Yoon, D., Spehr, A., Rettenberger, M., Briken, P. (2011) *Assessment of protective factors, the first and further steps in Hamburg.* Paper presented at the 12th Annual International Association of Forensic Mental Health Services (IAFMHS) Conference, Barcelona
- Rettenberger, M., Boer, D., **Yoon, D.**, & Eher, R. (2011). *Risk Assessment Using Structured Professional Judgment: A Prospective-longitudinal Study about the Predictive Validity of the Sexual Violence risk-20 (SVR-20).* Paper presented at the 12th Annual International Association of Forensic Mental Health Services (IAFMHS) Conference, Barcelona
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- Yoon, D., Spehr, A., & Briken, P. (2010). Against "Risk-Only" Risk Assessment Structured Assessment of Protective Factors. Paper presented at the 11th Conference of International Association for the Treatment of Sexual Offenders (IATSO), Oslo
- Driemeyer, W., **Yoon, D.**, Spehr, A., & Briken, P. (2010). *Comparing Sexuality, Aggressiveness, and Antisocial Behavior of alleged Juvenile Sexual and Violent Offenders*. Poster presented at the Annual Meeting of International Academy of Sex Research, Prague (Best Student Poster Award)
- Yoon, D., Spehr, A., & Briken, P. (2009). Ressourcen-orientierte Risikoeinschätzung bei Sexualstraftätern [Resource-oriented risk assessment of sex offenders]. Paper presented at the 25th Annual Conference of Working Group of Forensic Psychiatry (AGFP), Munich
- Yoon, D. (2008) Sex Offender Treatment Program Clinical Evaluation of the Core Program in Hamburg. Paper presented at the Common Session "Punitiveness and Crime Policies in Europe," Corinth

#### SKILLS AND TRAININGS

SCID-II, PCL-R, HCR-20, SVR-20, ARMIDILO-S, SAPROF Trainings

English (TOEIC: 895), German (TestDaF: 5), basic Japanese Languages

Computer Microsoft Office Specialist (Word, Excel, Power Point), SPSS, Photoshop, HTML etc.

Hamburg, June 2013

Dahlnym Yoon

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