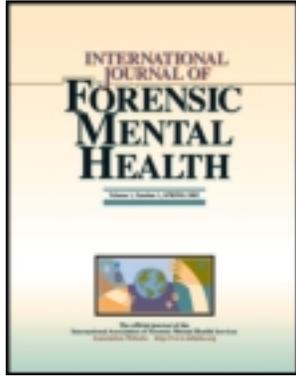


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Assessing Protective Factors in Forensic Psychiatric Practice: Introducing the SAPROF

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In this article, the Structured Assessment of PROtective Factors for violence risk (SAPROF), a structured professional guideline for protective factors, is introduced and the incremental value of this instrument for treatment planning and risk management in forensic settings is discussed. The most important goal of the standardized assessment of protective factors is to complement violence risk assessment resulting in a more balanced and possibly more accurate risk assessment. Furthermore, the positive, strengths-focused approach of the SAPROF may be motivating for both staff and patients, leading to more elaborate and patient-adjusted risk management strategies and improved risk communication.

Keywords: risk assessment, protective factors

The knowledge of risk factors and risk assessment for violent behavior has grown rapidly in the past three decades and structured risk assessment instruments have become an important aspect in routine forensic psychiatric practice. In the late 1990s, the Structured Professional Judgment approach (SPJ; see Douglas & Kropp, 2002; Webster, Douglas, Eaves, & Hart, 1997) was developed. In this approach, a trained mental health professional assesses future violence risk in a structured way by means of a checklist of empirically based risk factors. SPJ focuses on violence prevention as opposed to mere violence prediction, as most actuarial risk assessment tools do. The value of the SPJ approach, as compared to actuarial approaches, is in systematically collecting, reviewing, combining, weighing, and integrating information

on risk factors. Furthermore, discussion with colleagues to reach a final judgment of violence risk is encouraged (De Vogel & De Ruiter, 2006). The SPJ approach has been embraced internationally by mental health professionals who felt acknowledged in their forensic clinical expertise and at the same time felt strengthened by the empirical basis of the SPJ checklists (see Heilbrun, Yasuhara, & Shah, 2010).

One of the most widely used risk assessment instruments according to the SPJ approach is the *Historical, Clinical, Risk Management-20* (HCR-20; Webster et al., 1997) for the assessment of future violent behavior. This instrument has been the subject of numerous studies in various general and forensic psychiatric settings in different countries. Overall, these studies have demonstrated good interrater reliability and predictive validity for the HCR-20 (see Douglas & Reeves, 2010, and Guy, 2008, for detailed reviews of HCR-20 studies). Recently, a revised version of the HCR-20 has been developed, called the HCR:V3 (*Historical, Clinical, Risk Management*, Version 3; Douglas, Hart, Webster, Belfrage, & Eaves, in preparation), which is now being evaluated in different international settings.

The authors wish to thank all mental health professionals and researchers from the Van der Hoeven Kliniek, the Pompestichting and De Waag who contributed to the development of the SAPROF.

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Although our knowledge on risk factors for violence and violence risk assessment has increased enormously, hardly any attention has been paid thus far to factors that may moderate or buffer risk factors. Studies that address protective factors—that is, factors that serve to modify the effects of risk factors and reduce the likelihood of violent recidivism, particularly in adult samples—are scarce (De Carvalho, 2002; Miller, 2006). The identification of protective factors for violent behavior is seen as the major challenge for the near future (Farrington, 2003; Rogers, 2000; Salekin & Lochman, 2008). Most risk assessment instruments for adults stress risk factors and disregard protective factors. If such protective or compensatory factors are not taken into account, the risk assessment will be unbalanced, which may lead to inaccurate predictions. The overreliance on risk factors could result in pessimism among therapists, stigmatization of offenders and ultimately in the wrongful, lengthy detention of forensic psychiatric patients (Rogers, 2000). A balanced evaluation of risk should thus take into account both risk and protective factors. Also, protective factors may provide an explanation for the lack of recidivism in some high-risk individuals (DeMatteo, Heilbrun, & Marczyk, 2005), for example, those with a high level of psychopathy. Treatment aimed at reducing violent recidivism should therefore not only be focused on diminishing risk factors, but also on reinforcing protective factors (Blum & Ireland, 2004; Resnick, Ireland, & Borowsky, 2004).

To our knowledge, there are only three risk assessment tools that take protective factors into account. The first one of these is the *Structured Assessment of Violence Risk in Youth* (SAVRY; Borum, Bartel, & Forth, 2006), an SPJ checklist for violence risk assessment in youth containing six protective factors (e.g., *Prosocial involvement, Resilient personality traits*) in addition to 24 risk factors. Recently, Lodewijks, De Ruiter, and Doreleijers (2010) found support for the hypothesis that the protective factors in the SAVRY buffer or mitigate the risk of violent re-offending. In three different samples of Dutch adolescent offenders, the violent re-offense rate was significantly higher when protective factors were absent compared to when they were present. Regression analyses yielded a significant increment for protective factors in the amount of variance explained by dynamic risk factors alone (Lodewijks et al., 2010). The second instrument containing protective factors is the *Short-Term Assessment of Risk and Treatability* (START; Webster, Martin, Brink, Nicholls, & Middleton, 2004), a clinical guide for the dynamic assessment of short-term risks. The 20 dynamic items have to be simultaneously coded on two three-point scales: first as strength, then as vulnerability. In other words, risk factors and protective factors are coded as opposing ends on the same variable. Third, the *Inventory of Offender Risk, Needs and Strengths* (IORN; Miller, 2006) is a self-report measure to determine risks, needs, and protective factors for all types of offenders. In a sample of American pre-release prisoners, several of the IORN subscales, such as the Protective Strength Index and

the Personal Resources Scale were able to differentiate offenders who were sent back to prison for halfway house rule violation from those who did not violate rules (Miller, 2006).

Although each of these three instruments seems promising in its own right, we felt they were not suitable or sufficient for a comprehensive, medium-term and prevention-focused assessment of protective factors in adult forensic psychiatric patients. Considering the rather limited empirical knowledge base on protective factors, the lack of an instrument for the assessment of protective factors in adults and at the same time the mental health professionals' need for guidelines in this area, we decided to develop a structured guide to assess protective factors for violence risk in adult forensic patients. The guideline we developed is called the *Structured Assessment of PROtective Factors for violence risk* (SAPROF; De Vogel, De Ruiter, Bouman, & De Vries Robbé 2009). The SAPROF is designed according to the SPJ approach and is intended to be used in combination with SPJ risk assessments tools such as the HCR-20 or SVR-20. In this article, the SAPROF will be introduced and its value for use in the treatment and risk management of violent offenders will be explained and illustrated by means of a brief case study.

THE CONCEPTUALIZATION OF PROTECTIVE FACTORS

The concept of protective factors is ambiguous. Some authors interpret the concept of protective factors exclusively as the absence of a risk factor (Costa, Jessor, & Turbin, 1999) or as the opposite end of a risk factor (Hawkins, Catalano, & Miller, 1992; Webster et al., 2004). Others assume that there are protective factors without a corresponding risk factor (Farrington & Loeber, 2000). For instance, research has demonstrated that religiosity has a negative relationship to delinquency and conduct problems (Chadwick & Top, 1993; Pearce, Jones, Schwab-stone, & Ruchkin, 2003), while non-religiosity does not constitute a risk factor.

How do protective factors operate in the reduction of risk? Different operational mechanisms are ascribed to protective factors, with direct and indirect influences on risk factors. Several theoretical models have been documented in the scientific literature, mostly in the field of developmental psychopathology (e.g., Fitzpatrick, 1997; Luthar, 1993; Rutter, 1985). Thus far, no empirical foundation has been provided for the various theoretical models of protective factors; therefore, in the SAPROF no choice has been made for a particular model.

DEVELOPMENT OF THE SAPROF

When starting to develop this new tool for protective factors, we aimed to select protective factors that are empirically related to reduced future violent behavior, according to the scientific literature. Moreover, we intended to include

practically applicable factors, that is, dynamic factors that could be targets in risk management or treatment. The SAPROF was initially developed to assess adult males with a history of (sexual) violence who suffer from mental illness or personality disorder. The SAPROF can also be used in women with a history of violence who suffer from mental illness or personality disorder. In general, however, the assessor should be careful when drawing conclusions regarding risk judgment in women, since most instruments (including the SAPROF) are developed and researched in primarily male populations (see also De Vogel & De Ruiter, 2005; De Vogel & De Vries Robbé, in press). Preliminary results with the SAPROF in a group of 35 forensic psychiatric female patients showed good predictive validity for violent incidents during treatment (De Vries Robbé, & De Vogel, 2010). The authors chose to develop one instrument for the assessment of protective factors for both violent and sexually violent behavior because hardly any research has been conducted into protective factors specifically for sexually violent behavior and almost no specific factors for sex offenders were mentioned by mental health professionals (see below). Since most risk factors are valid for general violence and sexual violence (see also Hanson & Morton-Bourgon, 2004), we assume most protective factors to be valid for general and sexual violence too.

In 2004, the SAPROF Research Version (SAPROF-RV; De Vogel, De Ruiter, & Bouman, 2004) was issued on a modest scale in The Netherlands. The selection of the protective factors in the SAPROF-RV was based on several literature reviews on protective and contextual factors for violent behavior (Bouman, 2009; De Carvalho, 2002; De Vogel et al., 2009) and clinical expertise of mental health professionals at the Van der Hoeven Kliniek, a Dutch forensic psychiatric hospital. These mental health professionals were specifically asked to suggest factors that might protect against relapse into violent behavior during 60 case conferences in which the results of the HCR-20 risk assessment were discussed (De Vogel & De Ruiter, 2006). In 2006, we conducted a pilot study with the SAPROF-RV in two Dutch forensic psychiatric hospitals (Van der Hoeven Kliniek and Pompe Kliniek) and one Dutch forensic outpatient setting (De Waag). In this pilot study, mental health professionals and researchers scored the SAPROF-RV and were asked to comment on the item descriptions and the instrument in general. Their suggestions as well as an updated review of the literature were incorporated into the Dutch SAPROF Version 1 (De Vogel, De Ruiter, Bouman, & De Vries Robbé, 2007). Research with SAPROF Version 1 is now being conducted in various Dutch forensic samples (for example, De Vries Robbé, De Vogel, & De Spa, this issue). In 2009, the SAPROF English version was published. In 2010, the German and Italian versions were published and in 2011 the Spanish, French, Swedish, and Norwegian versions. Portuguese, Russian, and Danish translations are being prepared.

AIMS OF THE SAPROF

The aim of the SAPROF is to complement the assessment of risk of future violent behavior in (sexually) violent offenders and forensic psychiatric patients. Insight into the presence or absence of protective factors provides a more complete view of the individual in his context and may offer guidelines for treatment and risk management. Furthermore, for both patients and mental health professionals it can be motivating to consider what could be further developed during treatment (i.e., protective factors), rather than to focus exclusively on risk factors. This can be part of a strengths-based approach to psychiatric treatment (see, for instance, the Good Lives Model; Ward, Mann, & Gannon, 2007).

CODING THE SAPROF

The SAPROF is divided into three subscales: Internal items, Motivational items, and External items (see Table 1). Internal items are personal characteristics that can be protective, such as coping skills. Motivational items comprise protective factors that reflect an individual's motivation to participate in society in a positive manner. External items deal with protection from factors outside the individual such as supervision. All items, except items 1 (*Intelligence*) and 2 (*Secure*

TABLE 1
Case Study: Scores on the Items of the
SAPROF

	Admission	Discharge
<i>Internal items</i>		
1. Intelligence	0	0
2. Secure attachment in childhood	1	1
3. Empathy	1	1
4. Coping	0*	1*
5. Self-control	0*	1*
<i>Motivational items</i>		
6. Work	0*	2 ^v
7. Leisure activities	0	1*
8. Financial management	0	1
9. Motivation for treatment	1	2
10. Attitudes towards authority	0	1
11. Life goals	0	2 ^v
12. Medication	0	2
<i>External items</i>		
13. Social network	2 ^v	2
14. Intimate relationship	0	2 ^v
15. Professional care	2 ^v	1
16. Living circumstances	2	1
17. External control	2 ^v	1

^vKey item; *Goal item. Items 1 and 2 cannot be coded as a goal as they refer to historical factors. The assessor is advised to use the option of coding critical items sparingly. In this setting, we agreed to code a maximum of three keys and three goals.

attachment in childhood), are dynamic and provide practical guidelines for treatment aimed at risk reduction.

The design and coding procedures of the SAPROF are highly similar to those of other SPJ guides. The items are coded on a three-point scale: 0 = *the item does not apply*, according to the available information; 1 = *the item probably or partially applies*; and 2 = *the item definitely applies*. When coding the SAPROF, the assessor goes through a four-step decision process. First, the assessor has to establish the presence or absence of each of the 17 protective factors at the item level (as well as identify possible additional case-specific protective factors). Second, the assessor is invited to mark so-called *critical* items, protective factors considered essential for the prevention of violent behavior in the case at hand. When assigning these critical items, a distinction is made between the protective effect that is already present at the time (*key* item) and the protective effect that may occur after intervention (*goal* item). (Items 1 and 2 cannot be marked as goal items, as they refer to historical factors.) Third, the assessor has to integrate the results of the first two steps and code the Final Protection Judgment. This Final Protection Judgment is coded as a *low*, *moderate*, or *high* level of protection and is valid for a specific time period, for instance, during a specific treatment phase or in a given context (e.g., inpatient versus outpatient). The Final Protection Judgment does not only depend on the simple summation of the item scores, but also on the integration, weighing and combination of items. In the final step, the SAPROF results are integrated with the results of a SPJ risk assessment tool such as the HCR-20, resulting in an Integrative Final Risk Judgment for the risk of future violent behavior (*low*, *moderate*, or *high*).

We highly recommend the consensus model for reliable and accurate violence risk assessment. In this consensus model, risk assessment is performed independently by raters from different disciplines and functions in relation to the patient, for example, researchers and mental health professionals. Their independent coding is followed by discussion in order to reach consensus. Research at the Van der Hoeven Kliniek demonstrated that risk assessment using the consensus model leads to a significantly more accurate prediction of the risk of violent recidivism (De Vogel & De Ruiter, 2006). During these case conferences, possible effects of rater bias can be ruled out, raters can sharpen their understanding of the items, correct each other, share information that is not available to everyone, select possible additional risk or protective factors and discuss risk management strategies.

USING THE SAPROF IN FORENSIC CLINICAL PRACTICE

The findings from the SAPROF assessment can be used in practice with some caution, as the scientific basis of the SAPROF is still limited and generalizability of the guideline has not yet been demonstrated. Most of the SAPROF's items

offer guidance for treatment. Mental health professionals can assist their patients in their search for suitable employment (Item 6, *Work*) and structured leisure activities (Item 7, *Leisure activities*), or help them expand and maintain a social network and relationships (Items 13, *Social network*; 14, *Intimate relationship*; and 15, *Professional care*). Moreover, it is important to decide upon the level of control and supervision the patient needs. At the start of inpatient treatment, mental health professionals may find that it is mainly the external items, especially Items 15 (*Professional care*), 16 (*Living circumstances*), and 17 (*External control*), which provide protection from relapse into violent behavior. Ideally, other dynamic protective factors, such as Items 4 (*Coping*) and 9 (*Motivation for treatment*) will be addressed and strengthened during the course of treatment so that the intensive external protection will no longer be necessary (see the case study below). It may be useful for mental health professionals to go over the SAPROF items together with their patients, and discuss which factors need attention during treatment. This positive, collaborative approach—looking for options and possibilities together—can be motivating for both mental health professionals and patients.

In 2007, the SAPROF was implemented on full scale in the Van der Hoeven Kliniek. In this hospital, all patients are assessed using the HCR-20 in a consensus model at different phases of treatment (see De Vogel & De Ruiter, 2006). Sex offenders are also assessed using the *Sexual Violence Risk-20* (SVR-20; Boer, Hart, Kropp, & Webster, 1997). All researchers and mental health professionals, already trained and experienced in conducting risk assessments, were trained in the SAPROF during a workshop. Frequent users of the SAPROF stated that the instrument can be helpful in formulating treatment goals, monitoring treatment progress and facilitating risk communication (Van den Broek & De Vries Robbé, 2008).

CASE STUDY

John was admitted to the Van der Hoeven Kliniek in 2000 because of a conviction for assault and being accessory to homicide. After a night out, he was walking home with a friend in a small Dutch town when a young man accidentally bumped into him. John, who had been drinking, became aggressive and started hitting and kicking the man. Subsequently, he held the man as John's friend stabbed him with a knife. The man died on site. John was sentenced to three years imprisonment and a TBS-order (Dutch judicial measure implying mandatory inpatient psychiatric treatment). John had been convicted once before at the age of 16 because of robbery and burglary.

John grew up in a trailer park, a closely-knit community. His father was an alcoholic and was known to be a very aggressive criminal. He left the family when John was six years old. His mother, grandmother, and great-grandmother

took care of John. Although they were loving and caring, they were not able to control him or set limits and in fact spoiled him. John did not learn to take care of himself or to take responsibility for his own behavior. He was expelled from school because of severe conduct problems and was sent to a school for children with special needs. He started to drink alcohol when he was 12 years old and soon after started committing crimes (burglary, drug dealing), often together with his father who lived in the neighborhood and wanted his son to follow in his footsteps. Although John seemed to enjoy people being afraid of him, he himself was actually very scared of his father and often felt depressed.

When John was admitted to the Van der Hoeven Kliniek, he was placed in a living group in which there is a strong emphasis on taking responsibility for one's own behavior. He was diagnosed with borderline personality disorder and antisocial personality disorder. The first year, he was not able to follow his treatment program (work, education, sports, creative arts) and lay in his bed most of the time. Sometimes he felt discriminated against because of his trailer park background and then he became verbally aggressive; however, no acts of physical violence occurred. Gradually, he learned to take responsibility for his behavior and became a positive member of his living group. He showed genuine remorse for his index offense and was motivated to work on his problems related to aggression and alcohol abuse. He broke off contact with his father. He remained close to his mother and grandmother who had both left the trailer park and had moved to a regular house. John entered psychotherapy and presented a relapse prevention plan to his treatment staff and family members. The therapists stated that John had gained insight, learned a number of coping skills, and became less impulsive. In 2002, he met a woman with a trailer park background through his mother. Soon, she became very important to him. In 2003, they got married and in 2004 a daughter was born. John felt very proud and was motivated to be a good father and to take care of his family. He found a job in a clothing store. At the end of 2004, he started to live with his wife and daughter under the supervision of a transmural team of the Van der Hoeven Kliniek in collaboration with the probation service. In 2005, the TBS-order was conditionally terminated by the court, based on the positive advice of the Van der Hoeven Kliniek. One of the conditions was that John would still be supervised by the probation service for at least one year.

Both the HCR-20 and SAPROF were retrospectively coded by three raters for two time points: upon admission and upon final discharge (see De Vries Robbé et al., this issue). Tables 1 and 2 present the consensus codings for both time points. As can be seen from the tables, at the end of treatment John's scores on the dynamic items of the HCR-20 had decreased while at the same time he obtained higher scores on the SAPROF, particularly on the Internal and Motivational items. Upon admission, the protection was mainly found in External factors, such as *Social network*, *Profes-*

TABLE 2
Case study: Scores on the Items of the HCR-20

	Admission	Discharge
<i>Historical items</i>		
1. Previous violence	2	2
2. Young age at first violent incident	2	2
3. Relationship instability	1	1
4. Employment problems	2	2
5. Substance use problems	2	2
6. Major mental disorder	0	0
7. Psychopathy	1	1
8. Early maladjustment	2	2
9. Personality disorder	2	2
10. Prior supervision failure	2	2
<i>Clinical items</i>		
11. Lack of insight	2	1
12. Negative attitudes	2	0
13. Active symptoms of major mental illness	0	0
14. Impulsivity	2	1
15. Unresponsive to treatment	1	0
<i>Risk management items</i>		
16. Plans lack feasibility	2	0
17. Exposure to destabilizers	2	1
18. Lack of personal support	2	1
19. Noncompliance with remediation attempts	1	0
20. Stress	2	1

Note: After Webster et al., 1997.

sional care, and *External control*. However, over the course of treatment John developed positively on the Internal items *Coping* and *Self-control* (although both of these items are still seen as *goal* items, because they need further development), and even more on the Motivational items, especially *Work*, *Life goals*, and *Medication*. The item *Work* was rated as a *goal* item at the start of treatment and became a *key* item for John at the end of treatment. The external item *Intimate relationship* is also seen as a *key* item for John. If this relationship would end—or if any of the other (*key*) items would change for the worse, the risk of violence will probably increase. Repeated assessments are thus highly recommended. The Final Protection Judgment was formulated as a moderate level of protection, and the Final Risk Judgment as low at the time of discharge. Data of the Judicial Documentation register of the Ministry of Justice were collected after five years from John's discharge and showed that there had been no new (violent) convictions.

DISCUSSION

In this article, we introduced the SAPROF, a new structured tool for the assessment of protective factors for violence risk according to the SPJ approach. The aim of the SAPROF is to provide a positive approach that will be motivating for both staff and patients and will lead to a more balanced risk assessment, more elaborated risk management strategies and

better risk communication. Two of the founders of the SPJ approach, Kevin Douglas and Stephen Hart, stated in the foreword of the SAPROF English Version: "The SAPROF is solution-focused. It focuses entirely and directly on *protective* factors and the development of the person's resources and strengths. This focus has been missing from work on violence risk, and has the potential to usher in a sea change in the field, profoundly affecting the way we think about our patients and deliver services to them" (p. 7). Although we share this enthusiasm, some words of caution are appropriate. The SAPROF should still be considered as a "work in progress" and clinical results should be interpreted with caution. There are several limitations to the SAPROF. The most important one is that there is little scientific evidence for protective factors for violence risk. The empirical foundation of the SAPROF is not as strong as for other SPJ guidelines such as the HCR-20, because of lack of empirical studies into the role of protective factors. Future research will have to show whether the items of the SAPROF indeed predict reduced violent recidivism. A further limitation is that, under particular circumstances, almost every protective factor of the SAPROF could also be a risk factor. For example, the item *Intelligence* might act as a risk factor, because an intelligent psychopath might be apt at steering clear of the justice system. It is therefore crucial to consider the putative protective role of the items for each person individually, rather than regarding them as having general applicability. Although the research findings thus far seem promising (e.g., De Vries Robbé et al., this issue), More prospective, multicenter research with larger samples of forensic psychiatric patients and offenders is necessary to further determine the reliability, predictive and incremental validity of the SAPROF. Moreover, research is needed into theoretical models of protective factors, the nature of the effects these protective factors may have on reducing violence risk and the interaction between risk factors and protective factors. Increased knowledge of protective factors in addition and in relation to risk factors may hopefully take the field of risk assessment up to a next level with more balanced, comprehensive risk assessments with the ultimate goal to prevent future violent behavior.

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