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Screening for safety: predicting violence concerns among detained individuals in the Netherlands using the Risk Screener Violence (RS-V)

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SCREENING FOR SAFETY

Predicting Violence Concerns among Detained Individuals
in the Netherlands Using the Risk Screener Violence (RS-V)

Marjam Smeekens

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Screening for Safety

Predicting Violence Concerns among Detained Individuals in the Netherlands
Using the Risk Screener Violence (RS-V)

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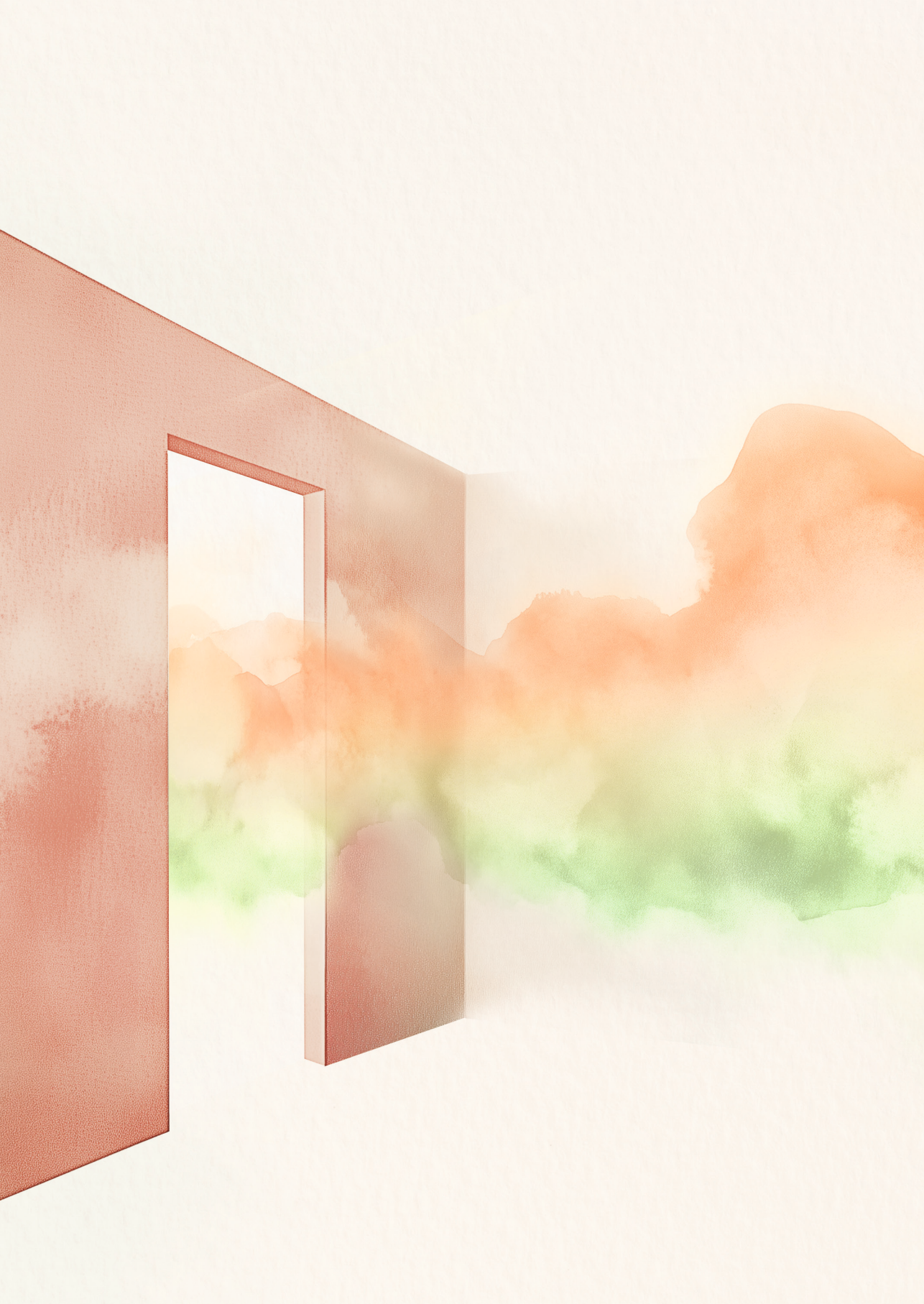
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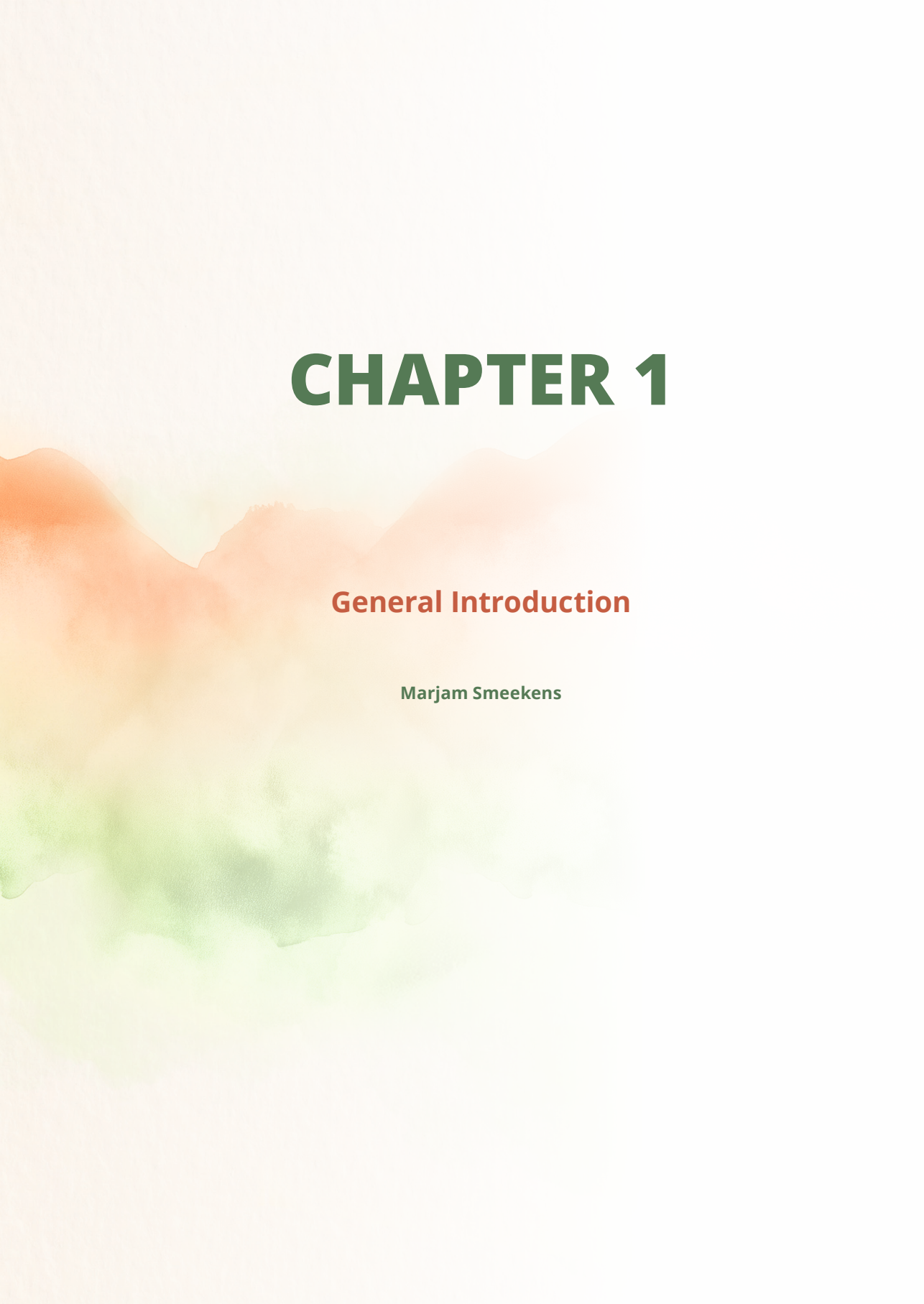
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TABLE OF CONTENTS

Chapter 1	General Introduction	7
Chapter 2	Practical Application, Subgroup Differences, and User Evaluation of the Risk Screener Violence (RS-V) within Prison Practice	25
Chapter 3	The Risk Screener Violence (RS-V): Retrospective Prediction of Violent and Aggressive Incident within the Prison Setting	55
Chapter 4	Prospectively Predicting Violent and Aggressive Incidents in Prison Practice with the Risk Screener Violence (RS-V): Results from a Multisite Prison Study	77
Chapter 5	The Predictive Validity of the Risk Screener Violence (RS-V) for Adults in Prison Regarding Post-Release Violent Recidivism: A File-Based Study	103
Chapter 6	The Prospective Prediction of Community Violence after Release from Prison with the Risk Screener Violence (RS-V)	127
Chapter 7	General Discussion	149
References		173
Appendix	Nederlandse samenvatting	192
	Dankwoord	200
	Curriculum Vitae	203





CHAPTER 1

General Introduction

Marjam Smeekens

The occurrence of violence has a wide-ranging impact and influences every layer of society. Violent and aggressive behavior has significant direct and indirect effects on its victims (e.g., physical, psychological, and social impact) and their families (e.g., disrupted family dynamics and intergenerational trauma) (Andrews et al., 2003; Bancroft et al., 2011; Cirici Amell et al., 2023; Langton, 2014; Lünemann et al., 2019). Not to mention, the incidence of violence may cause safety concerns and ethical challenges among practitioners, may influence feelings of unsafety and stigmatization within the community, and may foster the normalization of violence in wider society (Iqbal et al., 2021; Jussab & Murphy, 2015; Magin, 2006; Murvartian et al., 2023; Schwab-Stone et al., 1995; Storm-Mathisen, 2024; Waters et al., 2005). Research regarding prevention strategies that aim to diminish the occurrence of violence and improve overall safety is therefore important. The prevention of violent behavior begins with identifying which individuals are more prone to be violent, and thus who would benefit the most from preventive measures in order to successfully (re)integrate and function well within society. Within this thesis, research is presented that investigates whether a screening instrument called the Risk Screener Violence (RS-V) sufficiently predicts which detained individuals are more likely to display violent behavior, both inside and outside prison.

In the following paragraphs, the prevalence of violent behavior within the prison setting and within the community is highlighted. Subsequently, risk assessment instruments are explained, underscoring the difference with risk screening instruments. The paragraphs thereafter zoom in on the Dutch prison system and risk management strategies. Next, information about the development and content of the RS-V is provided. Finally, this chapter concludes with the aim and outline of this thesis.

The prevalence of violence

Within the prison setting

The prevalence rates of violence within prisons have been studied most frequently within Western countries, using various data sources. For instance, prison records within England and Wales contained a prevalence rate of 315 physical assaults per 1,000 imprisoned individuals in 2023, with 11% of all assaults being serious (e.g., physical assaults requiring serious medical treatment, or sexual assaults) (Ministry of Justice, 2024). In addition, 29% of Spanish detained individuals reported being physically victimized during a time-frame of six months in prison (Caravaca-Sánchez et al., 2019). Furthermore in Belgian prisons, 18% of the incarcerated persons reported being a victim of physical violence during their prison stay (Plettinckx et al., 2023). In line with this finding, a systematic review by Caravaca-Sánchez and colleagues (2023) estimated the prevalence of physical victimization during incarceration among detained individuals to be 19%. Although prevalence rates of incidents may vary across countries due to

local circumstances, these studies show that the proportion of violent victimization among incarcerated persons appears to be substantial.

Zooming in on the perpetration of violence by detained individuals, this violent behavior can be directed toward fellow detained individuals or toward staff members. Semi-structured interviews conducted among 56 ex-detainees in Canada revealed that all respondents witnessed some form of prisoner-on-prisoner violence while being incarcerated (Ricciardelli & Sit, 2016). Additionally, personal experiences from prison workers in the U.S. demonstrated that more than half (55%) of the correctional officers were threatened by a detained individual at least once during a time-frame of three months (Ellison & Jaegers, 2022). What is more, prison officers are more than twice as likely to experience violent assaults than mental health workers (Schenk & Fremouw, 2012). Moreover, self-report studies conducted in the U.S. among detained individuals found that 4% of the respondents reported to have physically assaulted a prison staff member in the past 12 months, and 17% indicated to have physically assaulted a fellow detainee (Lahm, 2008, 2009). Although in-prison violence research focuses mostly on male populations, several studies have indicated that violence perpetrated by female detainees is less common than violence perpetrated by male detainees (Berg & DeLisi, 2006; Reidy et al., 2017; Warren et al., 2018). To be more specific, the U.S. self-report prevalence rates of physical assault were lower among female perpetrators compared to male perpetrators, targeting either staff members (2% vs. 3%) or fellow inmates (8% vs. 12%) (Celinska & Sung, 2014).

Within the Dutch prison setting, 8% of the prison employees reported being confronted with physical violence, and 26% with violent threats by a detained individual at least once during their employment (Federatie Nederlandse Vakbeweging, 2022). In addition, 73% of these employees experience that intimidation by detained individuals is increasing. Another study conducted within the Netherlands reveals that, even though violent incidents may occur, prison directors view the Dutch prison system as being relatively safe (Van Ginneken, 2024). At the same time, their primary concern is the threat of serious violence, particularly when directed at staff members. Even though the reported prevalence studies vary in the operationalization of violence and used research methods, it can be concluded that the relatively high incidence of violence during incarceration is problematic.

Within the community

Once an individual is released from prison, the reoccurrence of offending within the community also poses challenges. Worldwide general recidivism rates are estimated at 26% – 60% for rearrests, 20 – 63% for reconvictions, and 14% – 45% for reincarcerations

within two years after imprisonment (Yukhnenko et al., 2020). More specifically regarding violent reoffending, almost one-third of the American ex-detainees (29%) was rearrested for a violent crime within five years after release from prison (Durose & Snyder, 2015). In addition, the U.S. violent crime rearrest rate was higher for violent offenders (39%) than for non-violent offenders (22%) eight years after discharge (Cotter et al., 2022). In England and Wales, the violent reoffending rate one year after imprisonment was 31%, and 43% after two years of imprisonment (Beaudry et al., 2023). Finally, the violent reoffending rate for Dutch ex-detainees within two years after imprisonment was 16% (Fazel et al., 2019).

Research regarding the specific prevalence of community violence among females is relatively scarce, but the occurrence of violence among females is considered to be consistently low compared to males (Heimer, 2000; Rennison, 2009). This gender gap in offending is reflected on in an American study by Olson and colleagues (2016), who found a rearrest prevalence rate of 15% for females and 30% for males regarding a violent crime within approximately 3.5 years after incarceration. Within the Netherlands, 5% of the female offenders violently reoffended within two years after incarceration, in contrast to 12% of the male offenders (Van Der Knaap et al., 2012). These prevalence rates reveal that the reoccurrence of violence within the community is reason for concern.

Risk assessment instruments

With the purpose of preventing violence from occurring either during incarceration or within the community after discharge, prisons administer risk assessment instruments. The main objective of risk assessment instruments is to estimate the likelihood that an individual will commit a (new) offense and to provide guidance in order to prevent this. Judicial information, prison records, clinical assessments, interviews, self-reports, and behavioral observations form the foundation for completing risk assessment instruments aimed at creating a comprehensive risk profile of an individual. A lower-risk or higher-risk classification is based on several risk factors. These factors are known to be associated with an increase in the occurrence of offending (Bonta & Andrews, 2016). Based on ratings of the included risk factors, an overall conclusion is drawn regarding the risk level of a specific individual.

Most risk-focused assessment instruments contain two types of risk factors: 1) static risk factors, which are often historical and not changeable by intervention, such as 'number of prior offenses' and 'age at first offense', and 2) dynamic risk factors, which are changeable through intervention, such as 'substance misuse', 'impulsivity', and 'criminal social network'. Examples of risk assessment instruments that include both static and dynamic risk factors are the Level of Service/Case Management Inventory (LS/CMI; Andrews et al., 2004) and the Historical-Clinical-Risk Management Version

3 (HCR-20^{V3}; Douglas et al., 2013), the latter one being the most commonly used risk assessment instrument within forensic psychiatry worldwide. Apart from risk factors, protective factors are often incorporated into risk assessment instruments in order to gain a more comprehensive overview of the risk level of an individual. In contrast to risk factors, the presence of protective factors is associated with a decrease of offending (De Vogel et al., 2012a). The Structured Assessment of Protective Factors for violence risk (SAPROF; De Vogel et al., 2012a) exclusively focuses on protective factors to estimate the risk of recidivism. Examples of protective factors included within the SAPROF are 'motivation for treatment', 'self-control', and 'life goals'. Protective factors as reflected by the SAPROF exhibit incremental validity when used in combination with a risk-focused tool (Burghart et al., 2023).

Several risk assessment instruments are developed for specific subgroups of offenders and may therefore include factors specifically applicable for the corresponding target group. For instance, tools such as the Violence Risk Scale (VRS; Wong & Gordon, 2006) have been specifically developed for predicting violent offenses and include risk factors like 'violence during institutionalization'. Other tools focus exclusively on sexual violent offending, such as the Static-99 which includes risk factors like 'prior sex offenses' (Hanson & Thornton, 1999). In addition, the Structured Assessment of Violence Risk in Youth (SAVRY; Borum et al., 2020) focuses on juvenile offenders and therefore includes 'poor school achievement' as a risk factor, and the Female Additional Manual (FAM, an addition to the HCR-20^{V3}; De Vogel et al., 2012b) concentrates on female offenders and includes 'pregnancy at young age' as a risk factor.

Besides differing in content and target group, risk assessment instruments also differ in their approach to arrive at an overall judgment of the risk level of an individual. Actuarial instruments, such as the Violence Risk Appraisal Guide (VRAG; Harris et al., 1993), assign a numerical value to each factor and generate an overall score using a predetermined formula. In contrast, using Structured Professional Judgment (SPJ) based instruments, such as the HCR-20^{V3} or the Short-Term Assessment of Risk and Treatability (START; Webster et al., 2004), allows the assessor to incorporate their own expertise, enabling more flexibility and individualization. These two structured risk assessment methods generally outperform Unstructured Clinical Judgement (UCJ) in predicting criminal behavior, where selecting, measuring, and combining risk factors is solely based on the assessor's expertise (Wertz et al., 2023). Overall, meta-analyses have shown that structured risk assessment instruments perform reasonably well when it comes to identifying which individuals pose a higher risk of reoffending (Campbell et al., 2009; Singh et al., 2011), underscoring the wide-spread use of these risk evaluation tools inside and outside custodial settings.

It should be noted that the administration of risk assessment instruments is only an initial element in overall risk management. Risk management refers to all efforts that are made to reduce or neutralize the risk of recidivism (Bouman et al., 2020). Generally, risk management consists of three steps: 1) identification: identifying risk and protective factors, 2) construction of theory: formulating a hypothesis or theory about the relations between the rated factors and their possible association with criminal behavior, including a description of the individual's risk level and responsivity characteristics, and 3) risk management: formulating a risk management plan or strategy for treatment or supervision (Hutten et al., 2022). This process has been specified as the Risk Assessment and Management Pathway (RAMP) (Hutten et al., 2022; Viljoen & Vincent, 2020). The studies described in this thesis mostly zoom in on the first step (identification) and second step (construction of theory). However, the results of these studies cannot be disentangled from the third step (risk management). That is to say, determining the risk and protective factors of an incarcerated individual by using risk assessment instruments and forming a hypothesis regarding their risk profile is not helpful in diminishing violence if the assessor does not instate follow-up measures based on this information. A translation into a personalized risk management plan is essential (Hutten et al., 2022).

Risk assessment versus risk screening

The administration of risk assessment instruments is relatively time-consuming and requires specific behavioral expertise, which often makes these extensive tools not suitable for forensic institutions with high turnover rates, limited resources, and minimal treatment options. Therefore, apart from risk assessment instruments, forensic institutions may use risk screening instruments to aid the estimation of violence risk. Risk screening instruments differ from risk assessment instruments regarding several aspects: 1) aim, 2) depth of analysis, 3) time investment, 4) assessor, and 5) context. Each of these aspects will be explained in more detail in the following paragraphs.

Aim. Whereas risk assessment instruments are developed to provide an extensive overview of an individual's risk and/or protective factors, risk screening instruments are developed to provide a rapid and early identification of the most important risk and/or protective factors of an individual. In addition, risk assessment instruments aim to guide follow-up measures for supervision, management, and intervention strategies, while the goal of risk screening instruments is to result in more global recommendations for follow-up measures. This could in fact include further risk assessment. In this regard, risk screening is complementary to risk assessment and may serve as triage (De Vries Robbé et al., 2021). To be more specific, an assessor may decide to follow-up on the results of a screening tool by advising to conduct an extensive risk assessment

instrument. This is specifically recommended for individuals who are classified as being higher-risk based on the initial screening, to create a more comprehensive insight into the risk profile of this individual.

Depth of analysis. In line with the difference in aim, the administration of risk assessment instruments allows for a more in-depth analysis of violence risk compared to the administration of risk screening instruments. This is reflected by the number of included factors. For instance, the SAPROF, the HCR-20^{v3}, and the Level of Service Inventory-Revised (LSI-R) are comprised of respectively 17 factors, 37 factors (including 12 subfactors), and 54 factors (Andrews & Bonta, 2000; De Vogel et al., 2012a; Douglas et al., 2013). In comparison, risk screening instruments contain fewer factors and these factors are usually easily observable, such as recent violent behavior or substance use. For example, the LSI-R: Screening Version (LSI-R:SV; Andrews & Bonta, 2001) contains 8 factors in total, and the Dynamic Appraisal of Situational Aggression (DASA; Ogloff & Daffern, 2006) includes 7 factors (Ferguson et al., 2009). Additionally, by offering a more nuanced analysis of the included factors, risk assessment tools are in general able to provide a sound risk estimation on the long term (Brookstein et al., 2021; Dyck et al., 2018; Kröner et al., 2007). In contrast, risk screening tools are initially more focused on the estimation of short term-risks. For instance, the DASA specifically assists in short-term assessment during the next 24 hours (Ogloff & Daffern, 2006).

Time investment. The administration of risk assessment instruments is more time-consuming than the administration of risk screening instruments. For example, completing the HCR-20^{v3} may take up to 14 hours on average (including reviewing a patient's file, clinical interviewing, collecting collateral information and writing a report) (Green et al., 2010). This extended time reflects the comprehensive nature of the assessment process, which involves multiple steps to gather detailed information. Risk screening instruments are designed to be more time-efficient, often taking just a few minutes to administer. For instance, the LSI-R:SV has an estimated administration time of five to ten minutes (Andrews & Bonta, 2001), focusing on a brief evaluation of a limited number of factors.

Assessor. On the one hand, the majority of risk assessment instruments need to be administered by trained behavioral professionals, such as forensic psychiatrists and psychologists, at least requiring a moderate degree of clinical skill (Douglas et al., 1999). Forensic psychiatrists and psychologists have a strong foundation in forensic criminology and are experts when it comes to the evaluation of psychological factors, personality traits, and cognitive abilities underlying criminal behavior (Treska & Fleura Shkemi, 2023). This expertise makes them well equipped to administer and interpret comprehensive risk assessment tools. On the other hand, risk screening tools are designed to be

administered by trained staff members who do not necessarily have specific behavioral expertise (e.g., administrative employees, case managers, and supervisors). This feature makes risk screening instruments specifically applicable to settings where specialized behavioral expertise may not always be readily available, such as in prison.

Context. Within forensic psychiatric clinics, the use of risk assessment instruments is common practice. For instance in the Netherlands, individuals may receive a TBS (terbeschikkingstelling) order if they commit a serious violent or sexual offense and at the same time suffer from a mental disorder that diminishes their responsibility for the committed offense (De Ruiter, 2016). Individuals with a TBS order are generally admitted to a specialized maximum security forensic psychiatric hospital with an average treatment duration of eight years (TBS Nederland, 2023). The focus of TBS is gradual resocialization and preventing further serious offending through long-term individualized treatment and risk management, making repeated thorough (violence) risk analysis necessary. The relatively long average treatment duration and the availability of specific behavioral expertise allows for a detailed and periodical administration of violence risk assessment instruments. Instead, risk screening tools are usually used in settings with limited treatment opportunities, where quicker decisions are needed, or where the availability of trained behavioral specialists is limited (Davies & Dedel, 2006). For instance, prisons within the Netherlands have an average detention duration of four months (Dutch Custodial Institutions Agency, 2023a), and the majority of individuals within the Dutch prison system do not require specialized forensic psychological treatment. As a result, specific behavioral expertise is not readily available for all detained individuals (Russo et al., 2020), which makes the administration of risk screening instruments more suitable if risk evaluation for all individuals is desirable.

The Dutch prison system

The Dutch prison system consists of 25 prisons, with an inflow of 26,769 individuals (94% males and 6% females) in 2023 (Dutch Custodial Institutions Agency, 2024b). In the same year, the Dutch prison system housed an average of 8,980 individuals on a daily basis. Most individuals reside within regular prison regimes for convicted offenders or remand regimes for pre-trial offenders. Examples of other Dutch regimes are minimum-security regimes for individuals soon to be released, extra care facilities for vulnerable individuals, penitentiary psychiatric centers for individuals with (serious) psychiatric problems, and facilities for persistent offenders (Van Ginneken et al., 2018). In addition, there are separate facilities for males and females. As stated above, Dutch detained individuals have a relatively short average prison stay of four months, with 24% of individuals being discharged within two weeks and 72% within three months (Dutch Custodial Institutions Agency, 2024b). Furthermore, the 2022 incarceration rate

of the Netherlands (52 to 100,000 inhabitants) is relatively low compared to England and Wales (132 to 100,000 inhabitants) or the U.S. (531 to 100,000 inhabitants) (Ann Carson & Kluckow, 2023; Dutch Custodial Institutions Agency, 2024b).

When an individual enters a Dutch prison, prison employees start with an admission, screening and selection process (Dutch Custodial Institutions Agency, 2023b). The aim of this screening process is to rapidly create initial insight into several important aspects related to a successful reintegration into society: valid identification documents, employment and income, housing, (psychological) care, finances, and social network. In addition, prison employees (e.g., correctional officers, unit supervisors, and case managers) observe the detained individual during the first weeks of detention and report on these observations within the detainee's digital file. Based on the behavioral observations, prison records, and information from collaborating institutions (such as the municipality or parole services) a Detention and Reintegration (D&R) plan is formulated (Dutch Custodial Institutions Agency, 2020b). In this D&R plan, the detained individual agrees to work on (behavioral) goals throughout the detention period. The case manager and the mentor discuss the draft of the D&R plan with the incarcerated individual to include personal needs, (reintegration) goals, and possible remarks. The D&R plan may be updated during the entire detention period of an individual and may provide information regarding risk management and reintegration related leave. Formulating a D&R plan promotes individualized guidance toward a safe and successful reintegration into society.

Every six weeks (in some prisons nine weeks), each detained individual is discussed during a multidisciplinary team meeting (MDO) in order to (re)evaluate the D&R plan. Various prison employees attend these meetings (e.g., back office employees, correctional officers, unit supervisors, and case managers). The primary aim of the MDO is to report on the status of the formulated reintegration goals and on the engagement and motivation of the detained individual regarding these goals. Additionally, if applicable, the extramural detention process is monitored and an advice for the leave committee is formulated. The leave committee utilizes this advice, among other information sources, to decide upon granting leave and reintegration procedures for a safe reintegration process. Prior to the MDO where the detained individual's case will be addressed, the mentor and case manager meet with the individual for a trajectory meeting. During these trajectory meetings concrete reintegration goals and actions are formulated, updated, and actively monitored (Dutch Custodial Institutions Agency, 2020a)).

Risk management within Dutch prisons

Risk management within the Dutch prison system is an integrated approach that ideally involves appropriate guidance, supervision, and social support (e.g., regarding housing,

income, and care), is supported by risk evaluation, and is complemented by tailored behavioral and treatment interventions (if applicable) (Dutch Custodial Institutions Agency, 2021). Each prison is appointed at least one risk management psychologist who can be consulted by the prison board or by case managers to coordinate the detention and reintegration of a detained individual with regard to risk management. In the case of short-stay individuals (72% is released within three months; Dutch Custodial Institutions Agency, 2024b), risk management is primarily focused on guiding an individual toward after-care facilities such as probation services, local authorities, or outpatient clinics, and informing these stakeholders about known risks. In the case of longer stay individuals, multiple interventions may be offered to higher-risk individuals (Dutch Custodial Institutions Agency, 2021). For instance, providing additional social work, financial and employment aid, or behavioral interventions such as individual or group therapies or skills training. The ultimate goal is to safely reintegrate individuals into society.

To gain in-depth knowledge regarding the current risk and protective factors of an incarcerated person and to guide overall risk management, Dutch prison psychologists may administer the following risk assessment instruments: the Historisch, Klinisch, Toekomst-Revised (HKT-R, developed in the Netherlands and quite similar to the HCR-20^{v3}; Spreen et al., 2013), the FAM for female offenders, the Static-99R/Stable-2007 for those with a history of sexual offending (Hanson et al., 2007; Hanson & Thornton, 1999; Smid et al., 2014), and/or the SAPROF for assessing protective factors (Dutch Custodial Institutions Agency, 2021). Extensive risk assessment with these tools is only conducted for a small group of Dutch detained individuals who stay in a penitentiary psychiatric center or who are transferred to forensic psychiatric care after their prison stay. In addition, risk assessment tools can be conducted upon request when deemed necessary by prison staff, for example for individuals who qualify for leave or for whom serious concerns exist regarding internal or external safety. Given the required time investment to perform comprehensive risk assessment and the general shortage of behavioral experts in the Dutch prison system; these assessments are only being carried out for a very small number of individuals. Completing extensive risk assessment instruments for all Dutch detained individuals is simply not feasible. Furthermore, the administration of elaborate risk evaluation is only necessary or efficient for the subgroup of individuals that have a higher risk of displaying violent behavior (De Vries Robbé et al., 2021). Due to the mentioned restrictions and considerations, the risk level of the majority of detained individuals remained unnoticed. This was unfortunate, since incarceration provides a window of opportunity to gain more in-depth insight into the offender population and a possibility to closely monitor individual risky behaviors.

In the context of further improving risk management and risk evaluation for all detained individuals (Dutch Custodial Institutions Agency, 2021), the Dutch prison system searched for a relatively simple risk evaluation instrument that could be conducted rapidly for all individuals at an early stage of incarceration (De Vries Robbé et al., 2021). This screening instrument should be able to identify general concerns regarding future violent behavior, and serve as potential triage for the administration of extensive risk assessment instruments (De Vries Robbé et al., 2021). Initiatives regarding the development of violence risk screening tools have been emerging in several settings (e.g., mental health services, psychiatric units, community corrections, and hospital emergency departments) (Daniel et al., 2015; Davies & Dedel, 2006; Langan, 2010; Rosenfeld et al., 2017). Likewise, a few violence risk screening instruments have been developed for the prison setting. For instance, the mentioned LSI-R:SV and the DASA, but also the VRS-Screener Version (VRS-SV; Wong & Gordon, 2007) and an even more compact version thereof (Ogloff et al., 2018). However, these and other pre-existing instruments were not deemed suitable for the prison context within the Netherlands. For an extensive analysis of the examined instruments, see De Vries Robbé et al. (2021). The Dutch prison system valued an instrument that: 1) is aimed at the prison setting, 2) incorporates both risk and protective factors, 3) is specifically aimed at the prediction of violence, 4) is based on SPJ principles to arrive at an overall judgement regarding initial violence risk, and 5) is able to predict both violence inside prison as well as outside prison (De Vries Robbé et al., 2021). After careful consideration, a new violence risk screening tool called the Risk Screener Violence (RS-V) was developed in 2020 (De Vries Robbé & Van den End, 2020).

The Risk Screener Violence (RS-V)

The RS-V is a risk screening instrument aimed at estimating concerns regarding future violent behavior of a detained individual, both inside and outside prison (De Vries Robbé & Van den End, 2020). The RS-V offers a first impression of the most important risk and protective factors of an individual, and aims to contribute to both internal safety as well as community safety. The RS-V has been developed for the prison setting and may be administered for males as well as females. Within the Netherlands, the RS-V is being conducted across all prison regimes, except in penitentiary psychiatric centers and immigration detention facilities. The tool is developed to be conducted by trained general prison employees, who are not specifically equipped with behavioral expertise. The definition of violent behavior used within the RS-V and within this thesis is: *'attempting, threatening with, or actual physical violence toward others (including sexual violence)'* (De Vries Robbé & Van den End, 2020). Within Dutch prison practice, the RS-V is administered during the first few weeks after admission and if an individual qualifies for leave. In addition, the RS-V may be administered periodically for individuals with a

longer detention duration to retain an accurate and updated overview of the violence risk level. Moreover, prison employees may decide to rate the RS-V on indication whenever deemed necessary, for instance if new violence risk related information becomes available (De Vries Robbé & Van den End, 2020). The RS-V consists of three parts and includes ten factors in total. Based on the ratings of the included factors, three final conclusions are formed regarding violent behavior displayed within prison, outside of prison after discharge, and during leave. For an overview of the included factors within the RS-V, see table 1.1.

The first part of the RS-V includes an historical risk factors subscale, consisting of two historical risk factors (De Vries Robbé & Van den End, 2020). The first historical risk factor (H1) concerns the occurrence of previous violent behavior within the community. To be more specific, the number of formal convictions for a violent offense prior to admission (including the index offense). The second historical risk factor (H2) is rated based on the occurrence of previous violent behavior within prison. Meaning, violent incidents (including violent threats) that occurred during prior prison stays. Moreover, additional historical risk-related information may be added (e.g., homelessness, trauma, or school difficulties). Within the Dutch prison setting, H1 and H2 are rated by a back office employee based upon criminal records and prison records respectively. Back office employees are responsible for the administration process regarding the admission, possible transfer, reintegration, and release of an individual. Both historical risk factors are rated within one or two days after admission of an individual to prison. As a result, the historical risk factors subscale is rated for all individuals who enter a Dutch prison. If an individual showed violent behavior prior to the current prison stay, a signal is sent out to the head of the ward/department where this individual currently resides. This allows for timely intervention regarding, for instance, the approach or placement of an individual.

The second part of the RS-V contains four dynamic risk factors (R1 to R4) and four dynamic protective factors (P1 to P4), see table 1.1 (De Vries Robbé & Van den End, 2020). Within Dutch prisons, these factors are rated by a case manager based on reports of behavioral observations of a detained individual during the past six months, or during the first few weeks after admission. The presence of the dynamic factors can be rated as follows: 'not or hardly present', 'moderately present', 'clearly present'. The case manager rates all eight dynamic factors within six weeks after admission and prior to the second MDO. In addition, the case manager provides sound argumentation for each rating and adds other dynamic risk-related information if applicable (e.g., medication use, financial issues, or psychological problems). A case manager within

the Dutch prison system is responsible for the detention and reintegration process of a small group of incarcerated persons.

Within the third part of the RS-V, three final conclusions regarding future violent behavior are formulated (De Vries Robbé & Van den End, 2020). These conclusions contain concerns regarding violence: A) inside prison, B) outside prison after release, and C) outside prison during leave. Final conclusion C is only completed in the case of proposed leave. Based on the ratings of the individual factors, the argumentation, and additional violence related information, the final conclusions are rated as follows: 'low concerns', 'moderate concerns', or 'serious concerns' for future violence, including sound argumentation. When developing the RS-V, the term 'concern' was preferred above the term 'risk' to indicate more clearly that the RS-V is a screening instrument and the results are only an initial indication of violence risk. Within the Dutch prison system, the final conclusions are rated during the second MDO that occurs after six weeks of admission. This automatically means that for individuals with a detention duration of less than six weeks, only part one of the RS-V is rated. However, six weeks is deemed necessary for prison employees to gather enough information about a detained individual to properly rate the RS-V (De Vries Robbé et al., 2021).

Table 1.1 The content of the RS-V and corresponding qualitative labels

Part	Timeframe	Content	Qualitative labels
1	Entire past	Historical risk factors subscale H1. Previous interpersonal violence outside prison H2. Previous interpersonal violence inside prison	0x 1x 2 – 3x 4 – 5x ≥6x
2	Past six months in prison	Dynamic risk factors subscale R1. Recent interpersonal violence R2. Substance use R3. Negative/defiant attitude R4. Impulsive behavior Dynamic protective factors subscale P1. Following rules and agreements P2. Coping with problems and frustrations P3. Positive influences from social network P4. Motivation for crime free future	Not or hardly present Moderately present Clearly present
3	Coming six months	Final conclusions. Concerns regarding future: A. Violence inside prison B. Violence outside prison after release C. Violence outside prison during leave	Low concerns Moderate concerns Serious concerns

As stated above, according to the RAMP, the identification of risk and protective factors and the construction of theory (i.e., formulating the final conclusions) is only effective if a risk management plan and follow-up measures are formulated. Discussing the final conclusions in a multidisciplinary manner offers the opportunity for prison staff to subsequently discuss follow-up measures based on the results of the screening. The results of the RS-V may guide decision making regarding the administration of extensive risk assessment instruments, granting leave, the deployment of behavioral interventions, the placement of individuals within certain regimes or within single or double cells, and/or risk communication to collaboration institutions or aftercare facilities. Specifically for individuals with moderate or serious concerns regarding future violent behavior based on the RS-V, implementing follow-up measures is advisable in order to contribute to the prevention of violence. The results of the screening and the intended follow-up measures may be discussed with the detained individual during a trajectory meeting.

To find out whether the RS-V is an effective instrument for the Dutch prison context, a pilot study was conducted in 2019 involving seven prisons (De Vries Robbé et al., 2021). The results of this pilot study were promising. Namely, the ratings on the pilot version of the RS-V showed excellent inter-rater reliability and sound predictive validity for violent behavior, both inside prison and outside prison after release. In addition, employees within the seven participating prisons indicated that the RS-V was relatively easy to administer and created more insight into concerns regarding violent behavior of detained individuals (De Vries Robbé et al., 2021). After some minor adjustments, it was therefore decided to implement the final version of the RS-V in all 25 Dutch prisons in 2021. During implementation, the RS-V became embedded within the work processes of the Dutch prison system. For instance, the tool was incorporated into the D&R plan and discussed during the scheduled MDOs and trajectory meetings. However, further validation and investigation of the psychometric quality of the RS-V within the entire Dutch prison system was deemed necessary.

It is important to use properly validated risk assessment methods within forensic settings. Not in the first place because implemented instruments should provide accurate predictions. In the case of the RS-V, it is important to find out whether the tool is sufficiently able to identify which individuals in prison are more prone to display violent behavior. This is called the predictive validity of an instrument: the extent to which a test result is able to predict a future criterion (Cronbach & Meehl, 1955). A sound predictive validity is necessary in forensic practice since decision-making based on the results of the assessment may significantly impact an individual's life (in the case of false positive predictions) and in-prison or public safety (in the case of false negative

predictions) (Shingler et al., 2020). Using tools with an accurate predictive validity will help to minimize errors and biases. In addition, studying the validity of risk evaluation tools in forensic practice will promote the refinement and improvement of the specific tool (American Psychological Association, 2020). Consequently, tools are better able to address the needs of the targeted offender population, possibly leading to better outcomes regarding safety enhancement.

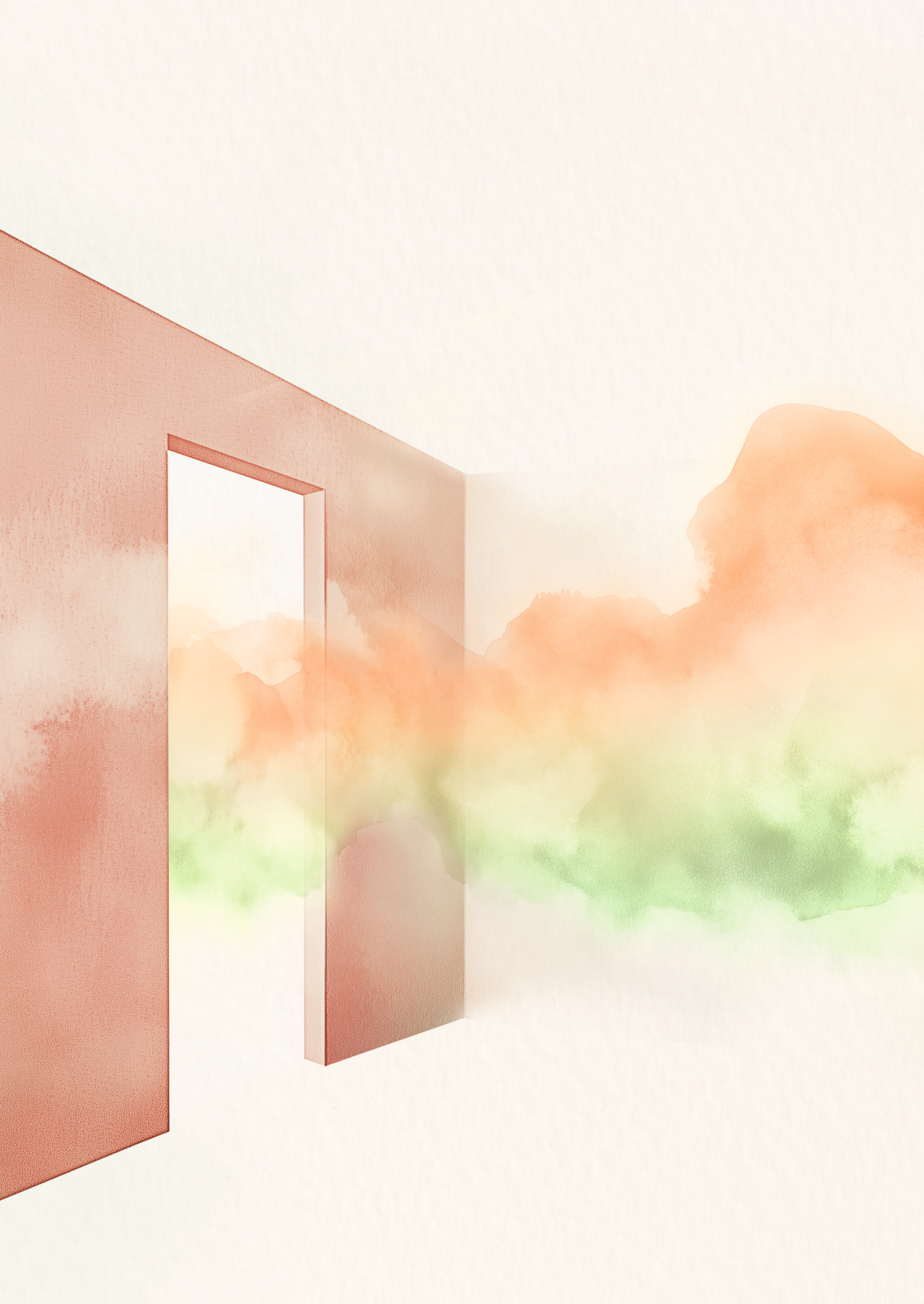
Aim and outline of the thesis

The general aim of this thesis is to determine the practical application of the RS-V within the Dutch prison system and to discover its psychometric ability to predict future violent behavior of detained individuals. **Chapter 2** describes a study that investigates differences in RS-V ratings between two cohorts after the initial implementation of the RS-V within Dutch prison practice, and between subgroups of incarcerated persons (males vs. females¹, young adults vs. adults, first-time vs. recurrent detainees). In addition, this chapter gives insight into the user experiences of prison employees who administer the RS-V on a daily basis. **Chapter 3** zooms in on a study that retrospectively analyzes the predictive validity of RS-V ratings for violent and aggressive incidents occurring during prison stay. These RS-Vs are rated by researchers based on digital file information of detained individuals. **Chapter 4** illustrates a similar study design. However, this large prospective study includes RS-Vs scored by prison employees in prison practice, related to incidents of violence during incarceration. **Chapter 5** describes retrospective research that zooms in on the predictive values of RS-V ratings regarding violent recidivism after release from prison, including a distinction between males and females. The prospective study included in **Chapter 6** looks into the predictive validity of RS-V ratings by prison employees for violent (re)offending versus general (re)offending within the community after release. Finally, **Chapter 7** contains a General Discussion including a summary and interpretation of the results, limitations and strengths of the thesis, implications for Dutch prison practice, and recommendations for future research. Table 1.2 displays an overview of the chapters and the corresponding scientific studies included within this thesis.

1 In this thesis, gender differences are analyzed using 'male' and 'female' as recorded in detention files. It is important to acknowledge that these categories might not reflect individuals' gender identities or broader socio-cultural factors.

Table 1.2. Overview of the chapters and corresponding scientific studies included within this thesis

	Chapter 2	Chapter 3	Chapter 4	Chapter 5	Chapter 6
Research questions	- Is there a difference in the practical application of the RS-V in prison practice between two time cohorts? - Is there a difference in RS-V scores between subgroups of detained individuals? - What are the <u>user experiences</u> of prison staff with the RS-V across time?	- What is the predictive validity of RS-V scores for violent incidents within prison practice? - Is there a difference in the predictive validity of RS-V scores for violence toward <u>other detained individuals</u>?	- What is the predictive validity of RS-V scores for violent incidents within prison practice? - Is there a difference in the predictive validity of RS-V scores for individuals with a shorter <u>detention duration</u> versus individuals with a <u>longer detention duration</u>?	- What is the predictive validity of RS-V scores for violent recidivism after release from prison? - Is there a difference in the predictive validity of RS-V scores for violent recidivism versus <u>general recidivism</u>?	- What is the predictive validity of RS-V scores for violent recidivism after release from prison? - Is there a difference in the predictive validity of RS-V scores for violent recidivism versus <u>general recidivism</u>?
The included RS-Vs are rated by	Prison staff within prison practice	Researchers based on file information	Prison staff within prison practice	Researchers based on file information	Prison staff within prison practice
Timeline of data collection	Prospective	Retrospective	Prospective	Retrospective	Prospective
Sample	Detained individuals (n = 8,960) Prison employees (n = 821)	Detained individuals (n = 181)	Detained individuals (n = 958)	Ex-detainees (n = 571)	Ex-detainees (n = 1322)
Outcome measures	-	- Violent incidents - Aggressive incidents	- Violent incidents - Aggressive incidents	- Violent (re)offending - General (re)offending	- Violent (re)offending - General (re)offending
Follow-up period	-	4 months within prison	4 months within prison	6, 12, and 24 months within the community	6 and 12 months within the community



CHAPTER 2

Practical Application, Subgroup Differences, and User Evaluation of the Risk Screener Violence (RS-V) within Prison Practice

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ABSTRACT

In order for violence risk evaluations to effectively contribute to the reduction of violent behavior of detained individuals, proper use of the employed method is fundamental. The present study explores the practical application of the recently implemented Risk Screener Violence (RS-V) within all Dutch prisons. In addition, risk profiles of different subgroups of individuals are explored and the participant responsiveness of RS-V users is examined. Based on a pilot-study in seven Dutch prisons, it was expected that the RS-V would be used consistently over time for the initial evaluation of violence risk for different subgroups of individuals, and that prison employees would value the RS-V as useful. This comparative study included a substantial and largely unbiased sample of RS-Vs ($n = 8,960$) completed by prison employees from two cohorts after implementation of the RS-V. Differences in RS-V ratings between these cohorts and between subgroups of detained individuals were investigated: 1) males vs. females, 2) young adults (age ≤ 25) vs. adults, and 3) first-time vs. recurrent detainees. In addition, prison employees ($n = 821$) annually filled out user evaluations for three years after implementation. Similar results regarding RS-V ratings were found between the two cohorts, showing the effective uptake of the tool. Moreover, males, young adults, and recurrent detainees showed more severe violence risk profiles based on the RS-V. Finally, user evaluations showed that prison employees considered the RS-V to be useful and fairly easy to administer. The implementation and application of the RS-V within the Dutch prison system has been successful thus far. Based on the screening, employees are able to detect specific risk-related patterns for subgroups of individuals. In addition, the user evaluations demonstrated predominantly positively valued responses. Nevertheless, continued evaluations and user support is necessary to maintain a high-quality risk screening practice.

Keywords: risk screening, violence risk, prison, user evaluation, subgroup comparisons

INTRODUCTION

Within the Dutch prison setting, a new and easy-to-use risk screening tool was developed to make initial risk evaluation possible for all adult incarcerated individuals. This tool, called the Risk Screener Violence (RS-V), has been implemented in all Dutch prisons in 2021 (De Vries Robbé & Van den End, 2020). Since then, the implementation and application of the RS-V in real-life prison practice have been closely monitored. This was done, for instance, by annually evaluating user experiences among prison employees. Proper use of the RS-V in prison practice is fundamental for the tool to effectively contribute to enhanced insight in individual risk and protective factors, and to the possible reduction of future violent behavior for detained individuals through subsequent targeted interventions. By analyzing a large sample of RS-V ratings (almost 9,000) from two cohorts since the start of implementation, the current study aims to evaluate the practical application of the RS-V within the entire Dutch prison system. In addition, this study provides an overview of RS-V risk profiles for different subgroups. Moreover, user evaluation results across three years from implementation are analyzed. Finally, recommendations regarding the large scale application of the RS-V in prison practice are shared. These results may inform the use of risk evaluation procedures in similar institutional contexts as well.

Violence risk evaluation within the prison setting

In the Netherlands, prior to the development of the RS-V, in-prison violence risk evaluation was only conducted on a regular basis for a small group of incarcerated individuals (< 10% of the prison population). To be more specific, comprehensive risk assessment was only carried out for individuals who resided within specialized prison units (e.g., forensic psychiatric wards or terrorist units), for individuals who transferred to forensic psychiatric care after their prison sentence, and/or for individuals for whom serious concerns existed regarding internal prison safety and/or external societal safety. Conducting extensive risk assessment for all incarcerated persons (with risk-focused tools like the HCR-20^{v3}; Douglas et al., 2013, or the LS/CMI; Andrews et al., 2004, and protection-focused tools like the SAPROF; De Vogel et al., 2012a) is often time-consuming, generally requires a behavioral expert (i.e., a psychologist or psychiatrist), and is not always feasible or necessary. In recent years, improving overall risk management for all detained individuals and enhancing prison safety has become a top priority within the Dutch prison setting (Dutch Custodial Institutions Agency, 2021). To support this, there was a need and a desire to implement a short and more compact risk screening method that could be used for all adult incarcerated individuals, which includes a focus on both risk and protective factors. International initiatives regarding risk screening tools were considered, but deemed not fully applicable for quick and easy

violence risk screening within the Dutch prison context (see Smeekens et al., 2024b). Therefore, a new risk screening tool was developed for use within all Dutch prisons: the Risk Screener Violence (RS-V).

The Risk Screener Violence

The RS-V has been designed by forensic experts of the Netherlands Institute for Forensic Psychiatry and Psychology (NIFP) and the Amsterdam University Medical Centre, in close collaboration with the Dutch Custodial Institutions Agency (which is responsible for all 25 Dutch prisons) and the Dutch probation services (De Vries Robbé & Van den End, 2020). The primary goal of the RS-V is to gain insight into the most relevant risk and protective factors related to future violent behavior of each detained individual. The RS-V consists of three parts, including two historical risk factors (part one), four dynamic risk factors and four dynamic protective factors (part two), and three final conclusions regarding concerns about future violent behavior of an individual (both inside and outside of prison; part three). Because the RS-V is a compact evaluation measure and may (after initial training) be rated by general prison employees without specific behavioral expertise, it becomes feasible to conduct the RS-V for all Dutch detained individuals at the beginning of their detention period (see section 'Method' for more detailed information about the content and administration process of the RS-V).

Since its implementation in 2021, the RS-V forms an important core element of overall risk management within Dutch prisons. The observed risk and protective factors offer useful input for individualizing the detention and reintegration plans, informing decision-making regarding leave, and enhancing overall prison safety. Additionally, the initial 'concerns' regarding violent behavior that follow from the RS-V may serve as triage for conducting more extensive risk assessment (e.g., by means of the HCR-20^{V3}; Douglas et al., 2013, and the SAPROF; De Vogel et al., 2012a). For example, if employees want to generate a more comprehensive image of the risk and protective factors and improve intervention guidance regarding the prevention of in-prison aggressive incidents or violent recidivism.

The psychometric quality of the RS-V has been tested in several large-scale validation studies (see Chapters 3 – 6). Two of these validation studies included RS-Vs rated by researchers based on file information of incarcerated individuals. Using retrospective prison record data, these studies found that RS-V ratings have sound predictive validity for both violent incidents occurring during prison stay and violent recidivism displayed after release from prison (Smeekens et al., 2024b, 2024c). The inter-rater reliability of the RS-V has shown to be excellent (Smeekens et al., 2024b). In addition, a prospective study analyzing RS-Vs rated by prison employees in daily prison practice found even higher predictive validities regarding violent and aggressive incidents during detention

(Smeekens et al., 2024a). Another prospective study is currently being conducted that investigates whether RS-Vs completed by prison staff in daily prison practice also predict community violence after release. Thus far, these studies show that RS-V scores are able to accurately predict future violent behavior of detained individuals, both inside and outside prison.

The current study

Besides knowing whether the RS-V can be rated in a reliable way and is able to predict future violent behavior of detained individuals, carefully implementing the tool within prison practice and monitoring the application is important to enhance its influence on working processes and decision-making within the overall detention setting, and to eventually prevent future violent behavior (Lipsey, 1999; Viljoen & Vincent, 2020; Vincent et al., 2016). To find out whether the RS-V provides a successful additional guidance for overall risk management, it is important to evaluate its practical application over time. Therefore, the first goal of this study is to examine the practical use of the RS-V. This is done by analyzing a large sample of RS-V ratings carried out by prison employees in all 25 Dutch prisons, calculating correlation statistics, and investigating differences in RS-V scores of detained individuals between two time periods (cohorts). The first cohort contains RS-Vs that are rated during a 6-month time period shortly after the initial implementation of the screener within Dutch prison practice (September 2021 – February 2022), and the second cohort includes RS-Vs completed in prison practice during a 6-month time period one year after the initial implementation (September 2022 – February 2023). Average differences in RS-V scores between these two time periods could provide information regarding specific application elements that may require additional monitoring. However, based on the results of a pilot-study in seven prisons in 2019, it is expected that the RS-V is a useful method for the initial evaluation of violence risk (De Vries Robbé et al., 2021).

Previous research regarding extensive risk assessment instruments has identified differences in violence risk profiles for various subgroups of offenders (e.g., Gammelgård et al., 2012; Olver et al., 2021; Strub et al., 2016; Monjazebe & Douglas, 2021). Yet, to our knowledge, studies investigating subgroup differences in prison regarding risk and protective factors based on screening tools are relatively scarce. Therefore, another goal of this study is to find out more about differences in RS-V scores between subgroups of incarcerated individuals: 1) males vs. females; 2) young adults (age ≤ 25) vs. adults (age ≥ 26); and 3) first-time vs. recurrent detainees. Understanding subgroup differences may provide useful information regarding specific patterns in risk/protective factors and behaviors that potentially influence the occurrence of violence, and it may inform the application of tailored interventions and rehabilitation strategies.

Several hypotheses concerning the comparisons of the mentioned subgroups have been formulated. First, a previous study including RS-Vs that were rated by researchers based on file information of detained individuals found that females received lower risk factor scores and higher protective factor scores (resulting in lower overall concerns regarding violence risk) compared to males (Smeekens et al., 2024b). The current study intends to replicate these findings with a larger sample of RS-Vs that are completed by prison employees in real-life prison practice. Second, within the forensic literature it is widely documented that the likelihood of offending during adulthood generally decreases with age and that young adults are most prone to be at high risk of violent offending (e.g., Cihan & Sorensen, 2019; Flanagan, 1983; Valentine et al., 2015). Therefore, we expect young adults to receive higher scores on the risk factors and lower scores on the protective factors of the RS-V (resulting in a higher overall violence risk profile), compared to adults. Third, with regard to initial or recurrent incarceration, we would expect recurrent individuals to show higher risk profiles on the RS-V as opposed to first-time detainees. This is supported by previous research showing that repeated incarcerations are associated with a greater presence of risk factors (Farrington & West, 1993; Herbst et al., 2016).

Besides investigating the practical use of the RS-V and subgroup differences in RS-V risk profiles, this study aims to compare annual user evaluations completed by prison staff across three years from implementation. These user experiences provide insight into the participant responsiveness (Carroll et al., 2007). In other words, the extent to which prison employees are engaged with the RS-V and their judgements regarding the usefulness of its outcomes and overall relevance of the RS-V for prison practice. The results of the user evaluation may provide information regarding possible in-prison improvements that are necessary to further enhance the usefulness of the RS-V in practice. The pilot study showed promising result regarding participant responsiveness (De Vries Robbé et al., 2021).

METHOD

Participants

To be included in this study, the RS-Vs rated by prison workers in prison practice needed to adhere to several inclusion criteria. First, the RS-V of an individual needed to include all three parts: the historical part one, the dynamic risk factors and protective factors in part two, and the final conclusions in part three (see table 2.1). Second, no more than two out of the 14 factors could be rated as 'unknown' (missing). Third, part three of the RS-V of an eligible detainee needed to be completed between September 2021 and

February 2022 (cohort 1) or between September 2022 and February 2023 (cohort 2), see section 'Procedure' for more information on these cohorts.

A total of 8,960 RS-Vs fulfilled these inclusion criteria and were included in the final sample of this study, 4,446 RS-Vs in cohort 1 and 4,514 RS-Vs in cohort 2. There was an overlap between these two cohorts: 600 individuals were (still or recurrently) incarcerated during both time periods and received two RS-V ratings, one rating in cohort 1 and one rating in cohort 2. However, for the purpose of this overview study, these repeated assessments were treated as individual cases². The average age of the included individuals at the moment of the screening was 38 ($SD = 12.08$, range = 18 – 90). Regarding gender, 8,484 RS-Vs were completed for males (94.7%), 470 for females (5.2%), and for six individuals gender was unknown (0.1%). The sample contained 1,501 young adults with an age of 25 or less (16.8%, $M = 23$, $SD = 1.83$), and 7,459 adults with an age of 26 or more (83.2%, $M = 39$, $SD = 10.91$). Almost one-third (30.1%) of the included individuals ($n = 2,695$) was a first-time detainee, while 57.1% had been incarcerated before ($n = 5,114$) (missing values = 1,151; 12.8%). The overall average detention duration until the moment of the screening was 348 days ($SD = 670.85$, range = 7 – 10,945³), within cohort 1 this was 353 days ($SD = 645.43$, range = 9 – 10945) and within cohort 2 this was 342 days ($SD = 695.07$, range = 7 – 9379).

The Risk Screener Violence

The RS-V is a Structured Professional Judgement (SPJ) based violence risk screening instrument, designed to create insight into the most relevant risk and protective factors of each detained individual (De Vries Robbé & Van den End, 2020). This tool, specifically developed for the prison setting, is composed of three parts. These parts are administered by different prison employees at different time points during incarceration. The RS-V may be conducted within different prison regimes, for males as well as females. Within the Dutch prison system, the RS-V is conducted at the beginning of the detention period and whenever leave is proposed. In addition, the RS-V may be reassessed at the discretion of prison staff if it is deemed valuable to re-evaluate the individual's violence risk periodically, for example when a violent incident has taken place, new risk-

-
- 2 There are three possible scenarios regarding the occurrence of these repeated measurements: 1) a new RS-V rating due to re-incarceration, 2) a follow-up rating in case of proposed leave, and 3) a follow-up rating at the discretion of prison staff because, for instance, new risk-related information became available. Analyses revealed no substantial differences in RS-V scores between the repeated measurements and the overall sample. Therefore, the repeated measurements were treated as individual cases.
 - 3 The current sample had a relatively long average detention duration until the moment of the screening. This can be explained by the fact that at the beginning of the implementation process of the RS-V in September 2021, all individuals that were imprisoned at that moment retroactively received a RS-V rating. Which means that for individuals who just started their detention period, but also for individuals that were imprisoned for a longer time period, a RS-V was conducted.

related information has become available, or when much time has passed since the last screening. Table 2.1 displays the individual factors included within the RS-V.

Part one of the RS-V consists of two historical risk factors that map out the frequency of previous convictions for violence within the community (H1) and of previous violent incidents during prior prison stays (H2). These factors are rated on a five-point scale (for research purposes converted to numerical 0 – 4). The historical risk factors are completed by a back office employee (i.e., an administrative support worker) based on official criminal records and disciplinary prison reports, within one or two days after admission of an individual to prison. This way, the initial risk profile is known instantly and, if necessary, fitting risk management initiatives can be instated immediately to ensure prison safety. For example, if an individual displays a historically high violence risk profile it may be decided to not (yet) place this person in a double cell, or to be more cautious when approaching this individual in the first days to weeks after admission. These measures may rapidly improve the initial safety for other inmates and staff. Part one of the RS-V is rated for all individuals that are admitted to a Dutch prison and is updated each time the RS-V is re-assessed.

Part two is comprised of four dynamic risk factors (R1 to R4) and four dynamic protective factors (P1 to P4) (see table 2.1). These dynamic factors are rated by a case manager within six⁴ weeks after admission of an individual to prison. This time is needed to be able to observe the individual's behavior in different surroundings, such as the prison unit, the workplace, and sports. The dynamic ratings are based on behavioral observations and behavioral reports completed by prison workers from various disciplines within the digital detainee file. The dynamic factors are rated on a three-point scale: 'not or hardly present' (indicated as 0 within this study), 'moderately present' (1), or 'clearly present' (2), and are supported by sound argumentation.

The third and final part of the RS-V includes three final conclusions regarding future violent behavior. Final conclusion A considers concerns regarding future violence inside prison, final conclusion B regarding violence outside prison after release, and final conclusion C regarding violence outside prison during leave (only rated when leave is proposed). The final conclusions are rated during a multidisciplinary team meeting⁵ within

4 In some Dutch prisons a timeframe of nine weeks in stead of six weeks is used for the rating of the dynamic factors and final conclusions, due to differences in the planning of their prison program.

5 The discussion of the final conclusions during multidisciplinary team meetings is done to enhance the collaborative contemplation regarding violence risk with multiple staff members from various prison disciplines and to ensure that risk evaluation findings also lead to improved risk management (rather than just remaining an administrative write-up).

six weeks after admission of a detainee. The results of the final conclusions may be 'low concerns' (converted to 0 in this study), 'moderate concerns' (1), or 'serious concerns' (2) regarding future violent behavior. If more than two factors in part one and part two are scored as 'unknown', the RS-V is considered incomplete; which implies that there is not enough risk-related information available to rate the final conclusions. Part two and three are only rated for those individuals who have a prison sentence of at least six weeks.

During the multidisciplinary team meetings, possible follow-up measures are discussed for individuals for whom there are moderate or serious concerns regarding any of the violence conclusions. For instance, single-celling, targeted (behavioral) interventions, or discussing the RS-V results with the probation officer or other agencies involved in rehabilitation. Ideally, the RS-V findings are also discussed with the incarcerated individual themselves in a trajectory meeting. Given the fact that two-thirds of the total prison population are short-stay individuals and remain in prison for less than six weeks, the full RS-V is administered only for those individuals who still reside in prison after six weeks. For more information about the content and administration process of the RS-V, see earlier descriptions by (Smeekens et al., 2024a, 2024b, 2024c).

Table 2.1 The historical risk factors, dynamic risk factors, dynamic protective factors, and final conclusions included in the RS-V

Part 1. Historical risk factors

- H1. Previous interpersonal violence outside prison
 - H2. Previous interpersonal violence inside prison
-

Part 2. Dynamic factors (past 6 months in prison)

Risk factors

- R1. Recent interpersonal violence
- R2. Substance use
- R3. Negative/defiant attitude
- R4. Impulsive behavior

Protective factors

- P1. Following rules and agreements
 - P2. Coping with problems and frustrations
 - P3. Positive influences from social network
 - P4. Motivation for crime free future
-

Part 3. Final conclusions (coming 6 months)

Concerns regarding future

- A. Violence inside prison
 - B. Violence outside prison after release
 - C. Violence outside prison during leave
-

The implementation of the RS-V within Dutch prison practice

After an initial exploration and development phase, an extensive pilot study was carried out in 2019 during which the pilot version of the RS-V was tested in seven Dutch prisons (De Vries Robbé et al., 2021). Subsequently, after some minor content adjustments, the tool was finalized and it was decided to implement this final version of the RS-V in all 25 Dutch prisons in September 2021. Implementing the RS-V within the entire Dutch prison system simultaneously involved careful preparation and taking several well-planned steps, especially since this implementation process occurred during the COVID pandemic. The most important steps are described in the following paragraph.

In order to facilitate the simultaneous implementation of the RS-V in all 25 prisons, a train-the-trainer model was employed to facilitate the training for all prison staff working with the RS-V. In total, five train-the-trainer events were held in order to train all new trainers employed within the 25 prisons ($\pm$ 75 new trainers). During these week long events, the participants received training in the use of the RS-V tool, were explained the background of the tool, discussed ins and outs of the implementation project, heard about user experiences from the pilot sites, designed local implementation plans for their own prison, learned about general teaching skills, and practiced presenting the training to their peers. Subsequently, over the following weeks to months these newly trained RS-V trainers instructed all other prison personnel within their own prisons on the use and application of the RS-V. Using a train-the-trainer model in this manner made it feasible to train a large number of employees across 25 prisons during a short time period of several months, while at the same time creating a core group of enthusiastic prison workers, keen to take the lead in the roll-out of this new violence risk screening method, and to motivate their peers in each of their own organizations.

To facilitate the actual implementation trainings within the prisons, each prison unit received several documents: 1) printed (booklets) and digital versions of the RS-V manual; 2) a RS-V user support guideline that contained information about the administration process and possible follow-up measures that could be taken based on the acquired results of the RS-V; and 3) a Q&A report including frequently asked questions that arose during the pilot and implementation phase.

The implementation process was closely monitored by the research team and regularly evaluated with all the new trainers during the roll-out in prison practice. In addition, in order to monitor the correct application of the RS-V in daily prison practice, researchers attended multidisciplinary team meetings to observe the multidisciplinary discussion of all three parts of the RS-V and to evaluate how consensus was reached regarding the final 'violence risk concerns' conclusions of the RS-V. Moreover, researchers randomly

selected about 30 rated RS-Vs for each prison from the Dutch Custodial Institution online database, to check the quality of the ratings and argumentation provided for each risk and protective factor. Several points of potential improvement were highlighted for each prison. Finally, the Dutch Ministry of Justice and Security instated the mandatory use of the RS-V for every prisoner admitted to a Dutch prison. This led to roughly 25,000⁶ RS-Vs being conducted yearly, for each new individual that enters a Dutch prison and for all newly proposed prison leave.

Procedure

The ethics committee of the Institute of Pedagogical Science of the University of Leiden approved this study protocol (Reference Number: ECPW-2021/33). Data collection occurred in May and June 2023 and consisted of retrieving demographic information and RS-Vs from the digital database of the Dutch Custodial Institutions Agency, called MetIS. Within MetIS, individual detainee data from different systems is centralized (e.g., information concerning demographics, admissions, and reintegration plans, as well as RS-Vs rated in prison practice). The RS-Vs stored in MetIS were retrieved for two cohorts/time periods. The first batch of RS-Vs that was retrieved from MetIS contained RS-Vs completed between September 2021 and February 2022, shortly after implementation of the tool within Dutch prison practice. The second batch of retrieved RS-Vs was completed between September 2022 and February 2023, one year after the initial implementation of the RS-V.

Statistical analyses

IBM SPSS Statistics version 28 was used to perform data preparation, check for assumptions, and conduct data analyses. For research purposes, subscale scores (historical risk factors, dynamic risk factors, and dynamic protective factors) and a total RS-V score were calculated. The total RS-V score is comprised of the historical risk factors subscale and the dynamic risk factors subscale, minus the dynamic protective factors subscale. In order to calculate this RS-V total score, the five-point scale of the historical risk factors was collapsed into a three-point scale to match the dynamic subscales (i.e., the rating of 0 remained 0, the ratings of 1 – 2 were recoded into 1, and the ratings 3 – 4 were recoded into 2).

Concerning the included RS-Vs ($n = 8,960$) that adhered to the inclusion criteria, 0.56 factors were missing per case on average. This mostly concerned the protective factor P3 (positive influences from social network) and the protective factor P4 (motivation for crime free future), with respectively 26.4% and 19.4% missing values. While the other

6 For two-thirds of these RS-Vs, only the historical part one was completed, due to the fact that these short-term incarcerated individuals were already discharged before week six.

individual factors contained 0.2% to 4.4% missing values. In order to adjust for these missing values, the method of pro-rating was used for the calculation of the subscale scores and the RS-V total score. Meaning that each missing value was replaced with the mean value of the corresponding subscale.

Practical application

For each cohort, descriptive statistics of the unadjusted individual factors and final conclusions, and of the adjusted subscale scores and RS-V total score were retrieved. To test differences in demographic variables (i.e., gender, age, and first-time/recurrent detainees) between the two cohorts, three Pearson chi-squared tests were conducted. In addition, since this study included predominantly ordinal data, Mann-Whitney *U* tests were conducted to find out whether there were any significant differences between the two cohorts regarding the adjusted RS-V subscale scores and RS-V total score, the unadjusted RS-V individual factors, and the final conclusions. Moreover, Spearman's rank correlations coefficients were calculated to investigate associations between the RS-V subscale scores, RS-V total score, and the final conclusions for both cohorts. Correlations coefficients may be classified as small (.10 – .30), medium (.30 – .50), or large (above .50) (Cohen, 1988).

Subgroup differences

Non-parametric Mann-Whitney *U* tests were performed to test the difference in RS-V scores (unadjusted individual factors and final conclusions, adjusted subscale scores and RS-V total score) between males and females, between young adults (age = ≤ 25) and adults (age = ≥ 26), and between first-time and recurrently incarcerated individuals.

User evaluation

A RS-V user evaluation questionnaire was developed to support the monitoring of the implementation process of the RS-V in Dutch prison practice. The main goal of this questionnaire is to monitor and gain insight into the user experiences of prison workers that directly or indirectly work with the RS-V in daily practice. The user evaluation is an anonymous digital questionnaire, which is comprised of eight questions: seven multiple choice (four single select and three multi select) and one open-ended question. See table 2.2 for an overview of these questions.

Table 2.2 Questions included within the RS-V user evaluation questionnaire

Question	Type of question	Answering options
Q1. Do you find the RS-V useful in general?	Multiple choice, single select	Not useful, Somewhat useful, Sometimes useful, Quite useful, Very useful
Q2. Do you find the RS-V useful at the beginning of detention?	Multiple choice, single select	Not useful, Somewhat useful, Sometimes useful, Quite useful, Very useful
Q3. Do you find the RS-V useful prior to leave?	Multiple choice, single select	Not useful, Somewhat useful, Sometimes useful, Quite useful, Very useful
Q4. Do you find it difficult to rate the RS-V?	Multiple choice, single select	Not difficult, Somewhat difficult, Very difficult, I do not rate the RS-V myself
Q5. What do you believe is the added value of the RS-V?	Multiple choice, multi select	Gain more insight into (the problems of) incarcerated individuals, Improve the formulation of individual detention and reintegration plans, Increase prison safety, Increase community safety, Improve decision-making regarding granting leave, Improve communication with stakeholders and after-care facilities, Reduce recidivism, The RS-V has little added value, Other
Q6. What changes do you think are necessary within your own prison to make the RS-V even more useful in daily practice?	Multiple choice, multi select	More time for rating part one and part two of the RS-V, More time during the multidisciplinary team meeting to discuss and rate part three of the RS-V, Timely and more informative reporting from various disciplines, Improvements regarding interventions following the RS-V results, Better alignment with stakeholders and after-care facilities regarding re-integration, More support regarding the use of the RS-V, Feedback on research findings, Other
Q7. In your opinion, what has improved, worsened, or remained the same since the implementation of the RS-V in 2021?	Multiple choice, multi select	Rating the RS-V, Discussing the RS-V during multidisciplinary team meetings, Interventions following the RS-V results within prison practice, Alignment with stakeholders and after-care facilities regarding re-integration, Informing decision-making regarding granting leave, More insight into (the problems of) incarcerated individuals, Knowledge about the content of the RS-V, Other
Q8. Do you have any additional comments about the RS-V?	Open ended	-

7 This question was added for evaluation 2 and 3.

The digital user evaluation questionnaire was distributed among prison employees within all 25 Dutch prisons. The questionnaire was e-mailed to the director of each Dutch prison, who then distributed the questionnaire among his or her own employees. The user evaluation was distributed three times after implementation: evaluation 1 in October 2021, evaluation 2 in November 2022, and evaluation 3 in October 2023. The employees had approximately two months to complete the questionnaire. Repeated reminders to do so were sent out during this period.

Respectively, 323, 309, and 189 prison workers participated in the user experiences study during evaluation 1, evaluation 2, and evaluation 3. A wide variety of prison employees from all 25 Dutch prisons filled out the user evaluations (e.g., case managers, correctional officers, back office employees, prison directors, unit supervisors, psychologists, and nurses). The respondents worked in various, often multiple, regimes within the Dutch prison system (e.g., general prison units, pre-trial detention units, or intensive care facilities).

Because the single select multiple-choice questions within the user evaluation were ordinal variables, non-parametric Kruskal-Wallis H tests (including post-hoc analysis using Dunn's method with a Bonferroni correction for multiple tests) were conducted to find out about differences between the three evaluation moments regarding the perceived usefulness and rating difficulty of the RS-V (Q1 to Q4). Descriptive statistics across these evaluations were retrieved for the other questions included within the user evaluation (Q5 to Q7).

RESULTS

Practical application

The cohort samples that are included within our study (cohort 1 = 4,446 RS-Vs, cohort 2 = 4,514 RS-Vs) are representative of the actual number of detainees that theoretically were supposed to have received a full RS-V rating in prison practice during these time periods. Based on the average incarceration numbers and length of detention (Dutch Custodial Institutions Agency, 2023a, 2024b), it is estimated that approximately 5,000 individuals should have received a full RS-V screening in each cohort. In this respect, the included cohort samples are representative of the actual RS-V population.

Demographic variables

The chi-squared tests showed that there was a significant difference between the two cohorts regarding gender ($\chi^2(1) = 4.706$, $p = .030$). Cohort 1 ($n = 256$, 5.8%) included

relatively more females than cohort 2 ($n = 214$, 4.7%). There were no significant differences between the two cohorts regarding age or first-time/recurrent detainees.

RS-V scores

The dynamic risk factors subscale ($U = 9,770,008.50$, $p = .017$), the dynamic protective factors subscale ($U = 9,132,123.00$, $p < .001$), and the RS-V total score ($U = 9,479,680.00$, $p < .001$) showed a significant difference between cohort 1 and cohort 2. As can be seen in table 2.3, on average, the RS-Vs in cohort 1 received lower ratings on the dynamic risk factors and the RS-V total score, than the RS-Vs in cohort 2. This was reversed with regard to the dynamic protective factors. The historical risk factors and the three final conclusions (see figure 2.1) did not significantly differ between the two groups. The analyses regarding the individual RS-V factors revealed that R2 (substance use; $U = 8,791,408.00$, $p < .001$), P3 (positive influences from social network; $U = 5,166,771.50$, $p < .001$), and P4 (motivation for crime free future; $U = 6,164,136.00$, $p < .001$) significantly differed between cohort 1 and cohort 2 in the same directions as their respective subscales. The other individual factors showed no significant difference between the two cohorts.

In both cohorts, approximately one-fourth of the RS-Vs were conducted prior to proposed leave and thus also included a final conclusion C (concerns regarding violent behavior during leave), for cohort 1 this was 24.5%, and for cohort 2 this was 24.2%. See figure 2.1 for the distribution of the final conclusion ratings per cohort. There were no significant differences between the cohorts in these distributions. Regardless of cohort differences, prison employees clearly have more concerns regarding future violent behavior after release compared to violent behavior during leave ($\chi^2(4) = 2,280.96$, $p < .001$), and compared to violent behavior during imprisonment ($\chi^2(4) = 1,514.68$, $p < .001$). Additionally, the concerns for future violence during leave was also significantly greater than the concerns for future violence within prison ($\chi^2(4) = 2,290.96$, $p < .001$).

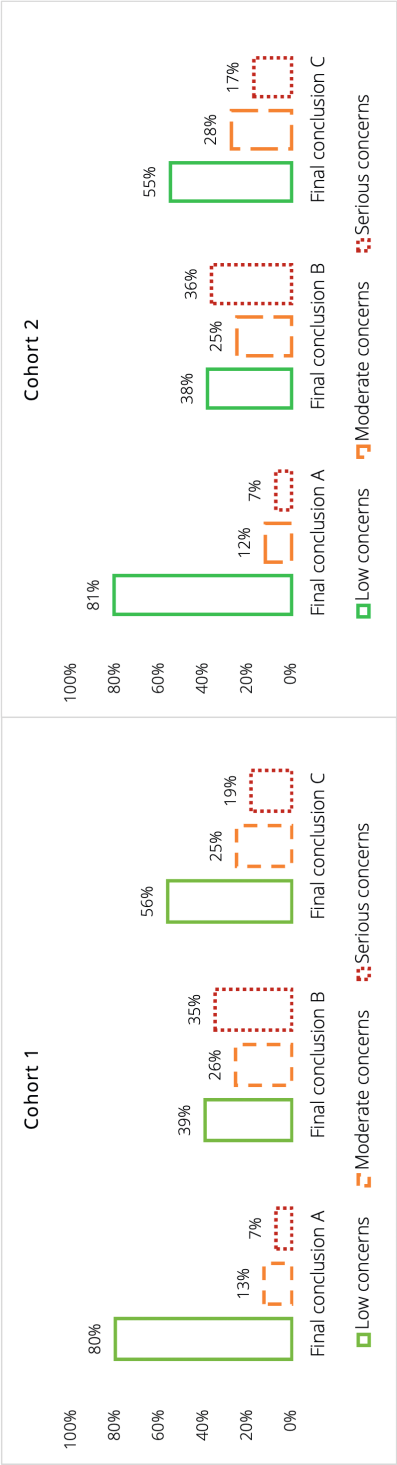


Figure 2.1 The ratings of final conclusion A (concerns about interpersonal violence inside prison), B (concerns about interpersonal violence after release), and C (concerns about interpersonal violence during leave) of the RS-V in cohort 1 ($n = 4,446$) and cohort 2 ($n = 4,514$)

Table 2.3 The descriptive statistics (M , SD) per cohort of the individual RS-V factors, the adjusted RS-V subscales and RS-V total score, and the final conclusions per cohort

Individual RS-V factors										RS-V subscales					Final conclusions. Concerns about future violence											
										Historical risk factors		Dynamic risk factors		Dynamic protective factors		RS-V total score		A (inside prison)		B (after release)		C (during leave)				
H1										H2	R1	R2	R3	R4	P1	P2	P3	P4								
Cohort 1 (n = 4,446)																										
M										1.80	.46	.11	.40	.26	.20	1.65	1.63	1.51	1.59	1.36	.96	6.48	-4.16	.27	.96	.62
SD										1.46	.96	.38	.66	.58	.51	.64	.65	.71	.64	1.24	1.50	2.08	3.80	.58	.86	.78
Cohort 2 (n = 4,514)																										
M										1.77	.45	.12	.45	.26	.20	1.64	1.64	1.45	1.52	1.33	1.02	6.26	-3.90	.27	.98	.62
SD										1.48	.96	.39	.69	.58	.53	.65	.64	.73	.67	1.25	1.52	2.03	3.80	.58	.86	.76

Table 2.4 Correlation coefficients of the adjusted RS-V subscale scores and total score, and the final conclusions of the RS-V for cohort 1 (*n* = 4,446) and cohort 2 (*n* = 4,514)

	Historical risk factors		Dynamic risk factors		Dynamic protective factors		RS-V total score	Final conclusion A	Final conclusion B	Final conclusion C
Cohort	1	2	1	2	1	2	1	2	1	2
Historical risk factors	-	-								
Dynamic risk factors	.345	.319	-	-						
Dynamic protective factors	-.260	-.265	-.505	-.494	-	-				
RS-V total score	.663	.643	.720	.726	-.819	-.831	-			
Final conclusion A: Concerns regarding violence inside prison	.506	.509	.438	.382	-.343	-.334	.510	.492	-	-
Final conclusion B: Concerns regarding violence after release	.721	.745	.316	.302	-.278	-.279	.549	.545	.416	.376
Final conclusion C: Concerns regarding violence during leave	.601	.658	.407	.361	-.307	-.318	.534	.562	.491	.463
									.790	.842
										-

Note. All *p* values were < .001

Correlations

Table 2.4 shows that there are moderate to large positive correlations between the RS-V total score and the final conclusions in both cohorts. Meaning that the final conclusions, which are discussed in a multidisciplinary way, are moderately to largely associated with the historical ratings within part one and the dynamic ratings within part two of the RS-V that are completed by individual prison workers. In addition, the correlation between the final conclusions and the historical risk factors subscale can be classified as large, whereas the correlation between the final conclusions and the dynamic factors subscales is low to moderate. Correlation results were similar across the two cohorts.

Subgroup differences

Males versus females

The historical risk factors ($U = 1,281,078.50$, $p < .001$), the dynamic risk factors ($U = 1,832,278.00$, $p = .001$), the RS-V total score ($U = 1,570,672.00$, $p < .001$), and the three final conclusions (respectively A, B, and C: $U = 1,720,687.50$, $p < .001$; $U = 1,242,730.50$, $p < .001$; $U = 87,112.00$, $p < .001$) differed significantly between males and females. Males received higher ratings for all of these variables (see table 2.5). More specifically, most individual RS-V risk factors were rated significantly higher for males than for females, except factor R4 (impulsive behavior). For the protective factors, the opposite significant association was found: females scored higher on most protective factors, except factor P3 (positive influences from social network). Nevertheless, the overall dynamic protective factors subscale did not differ significantly between males and females.

Young adults versus adults

There was a significant difference between young adults (age ≤ 25) and adults (age ≥ 26) regarding the subscale of the dynamic risk factors ($U = 8,427,582.00$, $p < .001$), the dynamic protective factors ($U = 8,922,493.00$, $p < .001$), the RS-V total score ($U = 8,672,696.50$, $p < .001$), and all three final conclusions (respectively A, B, and C: $U = 9,174,689.50$, $p < .001$; $U = 8,853,542.00$, $p < .001$; $U = 511,304.00$, $p < .001$). As can be seen in table 2.5, the group of young adults received higher ratings on the subscale of the dynamic risk factors, the RS-V total score and the three final conclusions than the adults. In addition, young adults received lower ratings on the subscale of the dynamic protective factors. No significant differences were found between the two groups regarding the subscale of the historical risk factors. Concerning the individual factors of the RS-V, all factors significantly differed between the two groups in the same direction as their respective subscales. Except for factor H1, factor P3, and factor P4, which did not differ significantly between young adults and adults.

Table 2.5 The descriptive statistics (*M*, *SD*) of the individual RS-V factors, the adjusted RS-V subscales and RS-V total score, and the final conclusions per group (males/females, young adults/adults, first-time/recurrent incarceration)

Individual RS-V factors													RS-V subscales					Final conclusions. Concerns about future violence:				
													Historical risk factors		Dynamic risk factors	Dynamic protective factors	RS-V total score	A (inside prison)	B (after release)	C (during leave)		
H1	H2	R1	R2	R3	R4	P1	P2	P3	P4													
Males (n = 8,484)																						
M	1.83	.47	.11	.43	.27	.20	1.64	1.64	1.48	1.55	1.38	1.01	6.36			-3.97	.28	1.00	.65			
SD	1.47	.98	.39	.68	.58	.52	.65	.65	.72	.66	1.26	1.53	2.07			3.82	.59	.86	.78			
Females (n = 470)																						
M	.97	.10	.07	.36	.17	.19	1.75	1.60	1.49	1.66	.64	.76	6.57			-5.17	.08	.44	.19			
SD	1.17	.44	.30	.67	.45	.48	.58	.62	.70	.58	.81	1.27	1.85			3.21	.30	.72	.45			
p	<.001	<.001	.043	.005	.001	.955	<.001	.021	.967	.001	<.001	.001	.160			<.001	<.001	<.001	<.001			
Young adults (age ≤ 25, n = 1,501)																						
M	1.54	.36	.16	.57	.36	.29	1.44	1.56	1.43	1.44	1.15	1.37	5.85			-3.33	.32	1.09	.82			
SD	1.29	.81	.45	.75	.66	.60	.74	.69	.71	.71	1.04	1.76	2.26			4.05	.63	.85	.82			
Adults (age ≥ 26, n = 7,459)																						
M	1.83	.47	.10	.40	.24	.18	1.69	1.65	1.49	1.58	1.38	.92	6.47			-4.18	.26	.95	.60			
SD	1.50	.98	.37	.66	.56	.50	.61	.64	.72	.65	1.28	1.45	2.00			3.74	.57	.86	.76			
p	.163	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.799	<.001	.204	<.001	<.001			<.001	<.001	<.001	<.001			
First-time detainees (n = 2,695)																						
M	1.05	.12	.06	.27	.16	.12	1.74	1.72	1.57	1.68	.70	.60	6.76			-5.46	.10	.71	.39			
SD	1.15	.49	.27	.57	.46	.41	.56	.58	.66	.57	.83	1.17	1.77			2.86	.37	.82	.64			
Recurrent detainees (n = 5,114)																						
M	2.18	.63	.14	.52	.32	.25	1.59	1.59	1.41	1.48	1.69	1.24	6.14			-3.22	.36	1.11	.72			
SD	1.49	1.09	.44	.72	.63	.57	.68	.67	.75	.70	1.31	1.66	2.17			4.08	.65	.85	.80			
p	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001			<.001	<.001	<.001	<.001			

First-time versus recurrent detainees

All RS-V subscale scores (respectively historical, dynamic risk, and dynamic protective: $U = 3,747,423.00, p < .001$; $U = 5,223,989.00, p < .001$; $U = 5,778,466.50, p < .001$), the RS-V total score ($U = 4,349,578.00, p < .001$), and the three final conclusions (respectively A, B, and C: $U = 5,626,156.00, p < .001$; $U = 5,024,269.00, p < .001$; $U = 296,007.00, p < .001$) differed significantly between the group of first-time detainees and the recurrent detainees. On average, first-time detainees received lower ratings on the historical risk factors, dynamic risk factors, the RS-V total score, and the three final conclusions compared to recurrent detainees (see table 2.5). On the contrary, regarding the dynamic protective factors, first-time detainees received higher ratings compared to detainees with repeated incarcerations. In addition, all individual factors differed significantly: first-time individuals had higher individual RS-V risk factor scores than recurrent individuals, while they scored lower on each of the protective factors.

User evaluation

Overall, the user evaluation of the RS-V was positive across all three evaluation moments, as can be seen in figure 2.2. At each time point, users were optimistic about the usefulness of the RS-V for prison practice in general (Q1), as well as more specifically for the screening of violence risk at the start of the prison sentence (Q2), and prior to leave (Q3). Additionally, the majority of prison workers found the RS-V not difficult to rate (Q4). Regarding statistical differences between the three moments of evaluation: Q1, Q2, and Q4 were not significantly different between evaluation 1 in 2021, evaluation 2 in 2022, and evaluation 3 in 2023. Q3 did significantly differ between the three moments of evaluation ($\chi^2(2) = 7.589, p = .022$). Post-hoc analyses revealed that during evaluation 1 (mean rank score = 429.39) the RS-V was rated as somewhat more positively/more useful prior to leave compared to evaluation 2 (mean rank score = 381.40; $p = .019$). No significant differences were found between evaluation 1 or evaluation 2 versus evaluation 3 regarding Q3.

Across the three evaluation moments, the multi select multiple-choice questions showed similar results. Namely, RS-V users indicated the most added value (Q5) of the RS-V as follows: 'Gain more insight into (the problems of) incarcerated individuals' (64%), 'Improve decision-making regarding granting leave' (63%), and 'Increase prison safety' (58%). However, prison employees also mentioned several changes that they consider are necessary in order to make the RS-V even more useful in daily practice (Q6): 'Timely and more informative reporting by various disciplines' (47%), 'Improvements regarding interventions following the RS-V results' (37%), and 'More time during the multidisciplinary team meeting to discuss and rate part three of the RS-V' (33%). The participants of the user evaluation indicated that especially 'Rating the RS-V' (45%),

'Discussing the RS-V during multidisciplinary team meetings' (43%), and 'More insight into (the problems of) incarcerated individuals' (42%) improved over time since the initial implementation of the RS-V (Q7).

The open-ended question 8 ('Do you have any additional comments about the RS-V?') contained predominantly positively valued answers. For example, 'The RS-V is an important tool that we should definitely continue to use in prison practice', 'The tool helps with becoming more conscious of potential risks', and 'By using the RS-V we have a more complete picture of a detained individual'. Some comments were more critical: 'The tool should be used correctly, otherwise it loses its value', 'I truly believe the RS-V is a useful tool. However, we could do more with the results of the tool', and 'More personalization is needed'. A few negative comments were given: 'Rating and discussing the RS-V feels like an obligation' and 'The RS-V does not help in promoting re-integration into society'.

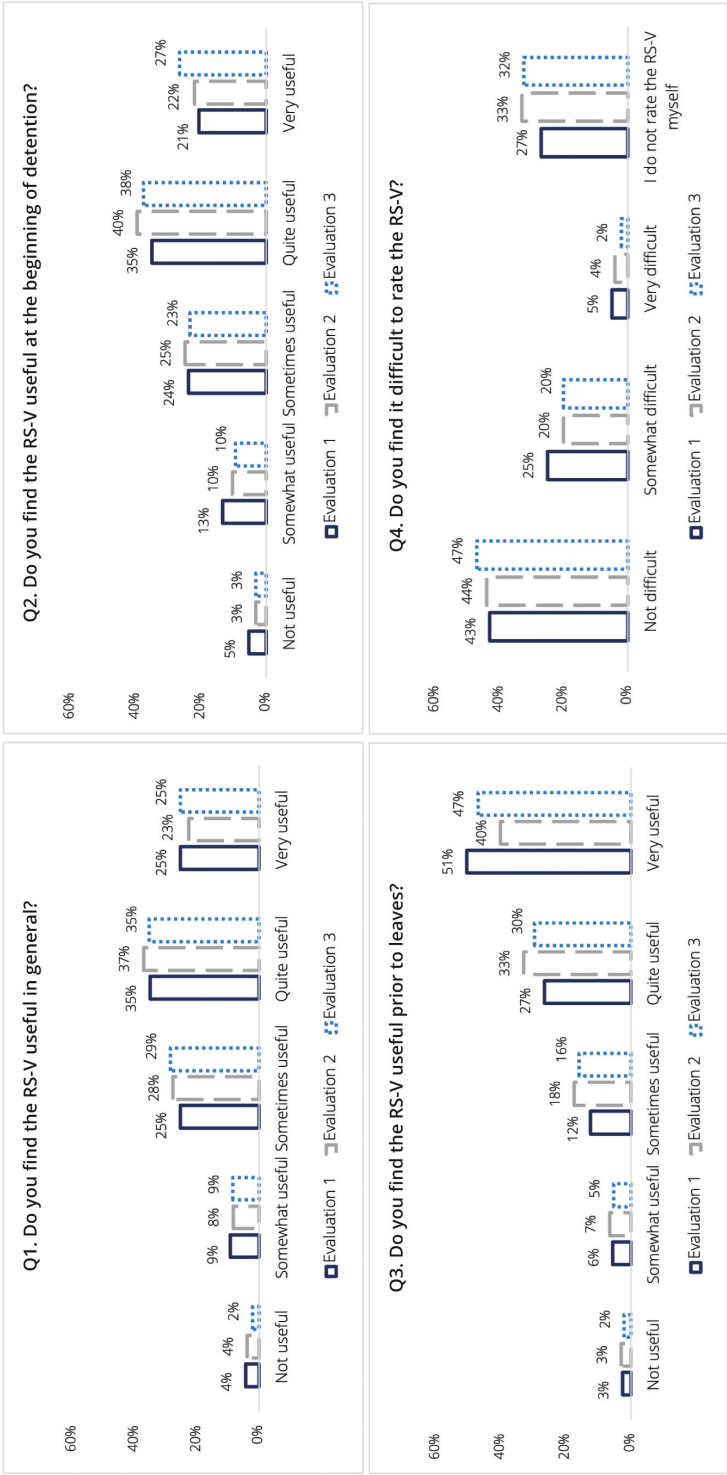


Figure 2.2 Results regarding the single select multiple-choice questions Q1, Q2, Q3, and Q4 of the RS-V user evaluation. Results are displayed per evaluation moment. Evaluation 1: $n = 323$, evaluation 2: $n = 309$, evaluation 3: $n = 189$

DISCUSSION

The goal of this prison practice study was three-fold. First, this research aimed to create insight into the practical application of a new risk screening tool called the Risk Screener Violence (RS-V) within the Dutch prison system. Second, this study aimed to provide a comparison of RS-V scores for different subgroups of detained individuals. Third, user evaluations across three years from implementation were analyzed. By analyzing a substantial and largely unbiased sample of almost 9,000 RS-Vs rated by prison employees in real-life prison practice from two cohorts, this study found overall quite similar results for RS-Vs rated shortly after implementation and those rated one year later. RS-Vs from the second cohort did show slightly more critical/negative ratings on the dynamic subscales and the RS-V total score than RS-Vs rated exactly one year prior. However, the overall judgments regarding concerns about future violent behavior (i.e., the final conclusions) did not significantly differ between the two time periods. In addition, during both cohorts there were moderate to large correlations between the individually rated RS-V subscale scores and the multidisciplinary-discussed final conclusions. With regard to differences in RS-V scores for various subgroups, this study found that males, young adults, and recurrent detainees showed more severe violence risk profiles, compared to respectively females, adults, and first-time detainees. To our knowledge, this is the first study to investigate group differences regarding violence risk within prison based on the results of a screening tool. User evaluations completed by prison staff revealed that the general evaluation of the usefulness of the RS-V was positive, and that the overall rating difficulty of the RS-V was considered low. Respondents expressed clear benefits regarding the implementation and use of the RS-V in prison practice and remained consistently positive in their evaluations of the RS-V across three years from implementation. Nevertheless, some respondents also provided critical comments regarding suggested improvements to increase the useful application of the RS-V in prison practice.

Practical application

Within this study, we compared RS-V ratings from two cohorts: the first cohort contained RS-Vs rated closely after implementation (September 2021 – February 2022), and the second cohort included RS-Vs completed exactly one year later (September 2022 – February 2023). When comparing the RS-Vs from both cohorts, the results reveal somewhat higher ratings for one of the dynamic risk factors (and as a result the entire dynamic risk subscale) as well as slightly lower ratings on two of the dynamic protective factors (and consequently the entire dynamic protective factor scale) during cohort 2 compared to cohort 1. The historical risk profile and the final conclusions did not differ between the two cohorts.

There are several possible explanations for this result. First, the difference in RS-V scores between the two cohorts could be explained by a difference in the number of females in the two cohorts: cohort 1 ($n = 256$) contained relatively more RS-Vs for females than cohort 2 ($n = 214$). Females tend to receive lower scores on the RS-V risk factors (see below), which could explain why on average cohort 1 contained RS-Vs with lower dynamic risk ratings. Another plausible explanation is that case managers, who rate the dynamic factors in prison practice, became more critical and precise in their ratings and argumentation regarding the individual dynamic factors. As a result of more experience and improved rating skills over time, it may be that the RS-V includes a more 'accurate' rating and argumentation.

Overall, this study found moderate to large correlations in both cohorts between the individually rated RS-V subscale scores and the final conclusions that are discussed in a multidisciplinary way. This result indicates that, during multidisciplinary discussions, prison workers more or less incorporate all subscales of the RS-V when deciding upon the final concerns regarding future violent behavior. However, a notable difference was observed regarding the large correlation between the final conclusions and the historical risk factors in contrast to the moderate correlation between the final conclusions and both the dynamic risk factors and the dynamic protective factors, especially for the final conclusions regarding violence outside the prison context. An important implication for prison practice that follows from this result is that prison employees should try to incorporate the dynamic factors even more when contemplating on the final conclusions of the RS-V. Especially since previous studies have shown that ratings on the dynamic risk factors subscale and the dynamic protective factors subscale have solid predictive value for violent incidents occurring during incarceration, but also for violent recidivism displayed after release from prison (Smeekens et al., 2024a, 2024b, 2024c). Regardless of these differences at factor level, it is striking to observe that overall the percentages of individuals for whom low, moderate or serious concerns were concluded, on all three final conclusions, was virtually identical in both cohorts. This indicates that the number of individuals with certain risk profiles remains relatively stable over time.

Subgroup differences

This study also investigated differences in RS-V scores for various subgroups of detained individuals. The first comparison was made between males and females. In line with our hypothesis, males showed more serious risk profiles based on the RS-V compared to females. Apart from the dynamic protective factors subscale which did not significantly differ between males and females, males received higher ratings on all the subscales of the RS-V and received greater concerns regarding future violent behavior (inside prison and outside prison). This is in line with a previous retrospective file study that

analyzed RS-Vs rated by researchers based on file information of detainees (Smeekens et al., 2024b).

Second, the RS-V ratings of young adults (age ≤ 25) and adults (age ≥ 26) were compared. In line with our hypothesis, young adults showed a more serious risk profile based on the RS-V. Despite not differing on the subscale of the historical risk factors, the young adult group obtained higher ratings on the dynamic risk factors, and lower ratings on the dynamic protective factors compared to adults. The same result was found for the majority of the corresponding individual factors. Consequently, young adults more often received serious concerns regarding future violent behavior compared to adults, supporting the age-crime curve.

Third, we looked at the differences in RS-V scores between first-time detainees and recurrent detainees. The results show that, in line with our expectations, recurrent detainees differed in a negative way from first-time detainees on all individual factors, all subscales, the RS-V total score, and the final conclusions. Recurrent detainees showed more serious concerns for future violent behavior than first-time detainees. This seems somewhat contradicting to the previous finding regarding age, since first-time detainees are more likely to be young adults, who in fact show more severe risk profiles. Nevertheless, it appears both of these subgroup defining variables are such strong predictors that independently they show very clear distinctive findings. The result that recurrent detainees have more concerning risk profiles suggests that the prevention of community (re)offending (often followed by re-incarceration) might play a key role in the enhancement of both institutional and societal safety. Thereby highlighting the importance of preventive efforts to avert (re)offending, especially among first-time offenders. In part, this could be achieved through effectively communicating violence risk profiles to external facilities, in order to promote more personalized community reintegration interventions and increasingly individualized care trajectories.

Whereas the detection of subgroup differences regarding risk profiles by extensive risk assessment instruments is well known, these results reveal that the RS-V as a screening tool is also able to detect specific risk-related patterns for different groups of detained individuals. Although these analyses are conducted at the group level and each person should be looked at individually, the findings from this study can provide valuable early-on insights to prison staff regarding subgroups of detainees who might be prone to displaying violent behavior. Knowing that males, young adults, and recurrent individuals overall demonstrate more severe violence risk profiles, may help prison workers when considering individual intervention planning and support risk management decision-making during the early stages of detention. Moreover, these

insights could be used for prison population management and may guide allocation, staffing and effective safety planning.

User evaluation

The repeated user evaluations gave insight into the user experiences of prison employees working with the RS-V in daily practice. In general, the three evaluation moments after implementation show that the RS-V was positively valued. To be more specific, prison staff found the RS-V to be useful for screening, both at the beginning of detention and prior to leave. More importantly, these user evaluation results stayed consistently positive each year, demonstrating ongoing participant responsiveness. A factor that may also contribute to sound participant responsiveness is that the majority of prison workers believed the RS-V is fairly easy to administer.

Besides yielding predominantly positively valued comments, the user evaluation also revealed several critical comments that suggest in-prison improvements could be made in order for the RS-V to be even more useful in prison practice. Three important recommendations for the Dutch prison system follow from these critical comments. First, the timing and quality of the reports written by prison workers from various disciplines is in need of improvement. The ratings included within the RS-V are largely based on behavioral observations described within these reports. The more in-depth the reports are written, the better informed the RS-V ratings will be. Second, prison employees highlight that they need more time to discuss the final conclusions of the RS-V within the multidisciplinary team meetings. Third, it is important that the results of the RS-V (i.e., low, moderate or serious concerns regarding future violent behavior) are actively discussed by prison employees during multidisciplinary team meetings and follow-up measures are instated to prevent future violence from actually occurring. Preventive measures are crucial, especially since previous studies have shown that the RS-V is able to accurately predict institutional violence and community violence. Regarding these recommendations, prison policy makers could consider offering more training to enhance the efficient and comprehensive write-up of behavioral observations and to promote a better structured multidisciplinary discussion of violence risk. Also, more time should be allocated during these team meetings for in-depth discussions regarding follow-up and risk management for each detained individual for whom the RS-V has been completed. However, the frequently occurring staff shortages and thus the restricted time prison workers often have to attend meetings and discuss individual trajectories, remains a problem that is not easily solved.

Limitations

Regardless of the carefully conducted prospective research design, it is important to mention some limitations. First, we only included fully rated RS-Vs in this study, implying that individuals had to have been incarcerated for at least six weeks. This study therefore lacks data regarding detainees who were already released before the full screening could be executed and who thus only received ratings on part one (the historical risk factors) of the RS-V, carried out within one or two days after admission. We were not able to compare the historical risk factors of these short-stay individuals with those of the longer-stay (six weeks plus) individuals. It could be that the sample included in this study is therefore comprised of relatively more individuals with severe risk profiles, receiving longer average sentences⁸.

Second, although previous studies investigated RS-V ratings in relation to violence outcome measures, the current study did not. These previous studies revealed good predictive validity of RS-V scores for future violent behavior, for females as well as males (Smeekens et al., 2024a, 2024b, 2024c). However, the predictive validity studies did not yet specifically look into the predictive value of RS-V ratings for the subgroups of young adults versus adults and first-time versus recurrent detainees. Given the clear profile differences found for these subgroups in the present study, it would be valuable for future studies to specifically investigate the predictive validity of RS-V ratings for these subgroups as well.

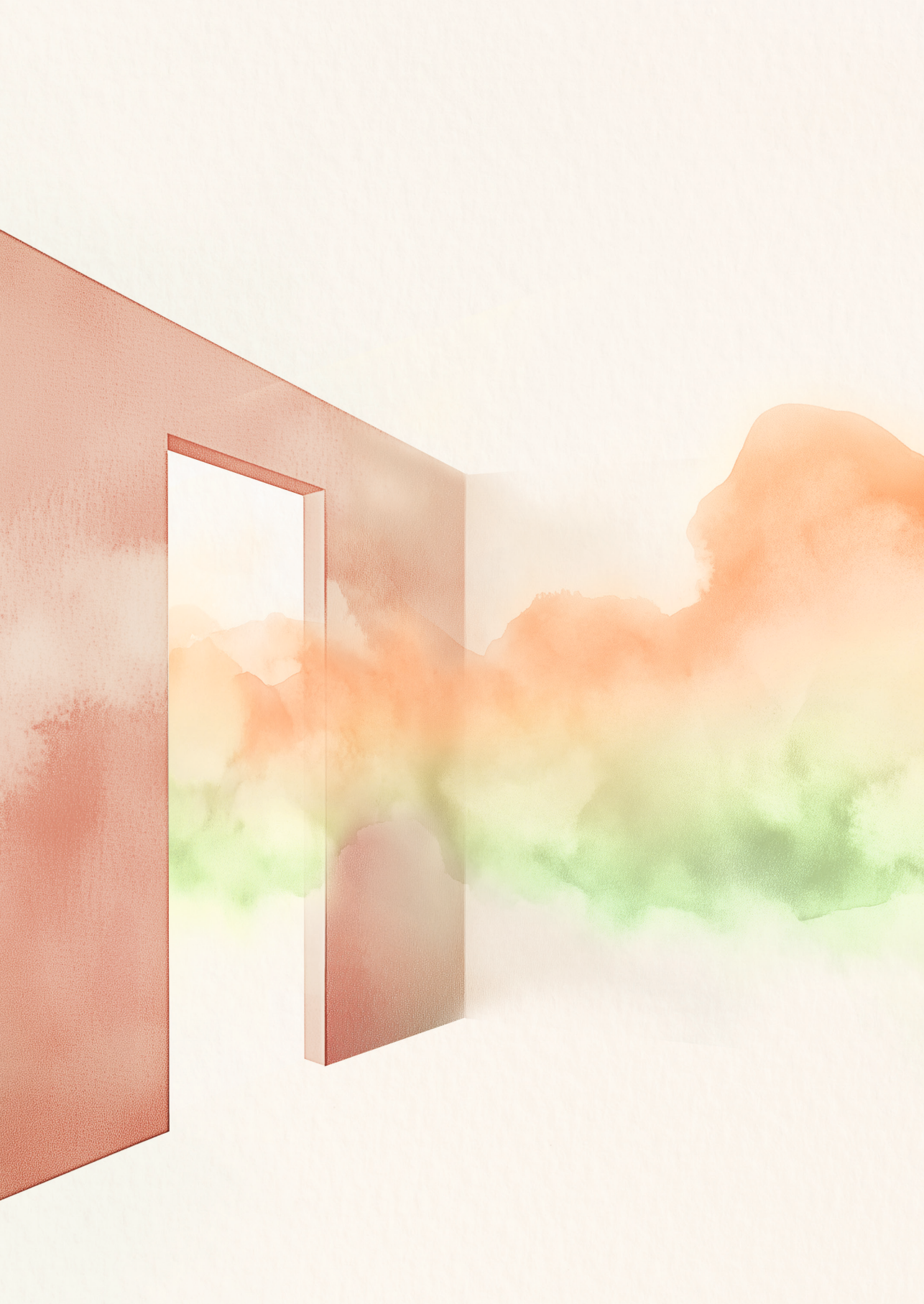
Third, regarding the specific subgroup of recurrent detainees, this study contained no information regarding the actual number of re-incarcerations of an individual: it was only known whether individuals were imprisoned for the first time or whether it concerned a recurrent imprisonment. In future investigations, it would be useful to know whether the actual number of incarcerations is of influence on the RS-V ratings and consequent predictions.

Fourth, the user evaluation consisted of an anonymous digital questionnaire that gave insight into the experiences of prison workers rating the RS-V in daily practice. However, the disadvantage of using an anonymous questionnaire with predominantly closed multiple choice questions is that we potentially missed important user information. For instance, since there is no opportunity for further inquiry, underlying motives may remain unnoticed, and respondents may not be able to fully comment on all questions. Conducting more in-depth qualitative individual interviews with prison employees would potentially provide valuable additional insights regarding the use of the tool in prison practice, in addition to the group-based findings in the present study.

⁸ The average sentence length within the Netherlands is four months.

Conclusion and future recommendations

Implementing the RS-V in 25 prisons simultaneously, during the COVID pandemic, was a challenging endeavor. Nevertheless, based on the results of this study it can be concluded that the implementation and application of the RS-V within Dutch prison practice has been largely successful thus far. However, continued evaluations and user support is needed to maintain and continuously improve the correct application of the RS-V within prison practice to maximize its utility for risk reduction. Therefore, it would also be useful to continue to study the RS-V application and user evaluations in the long-term (e.g., >5 years after implementation). In addition, future research could focus on finding out what types of follow-up measures detained individuals receive (inside and outside prison) and how the RS-V contributes to improved risk-management and rehabilitation guidance, specifically for individuals with moderate to serious concerns regarding future violent behavior. Furthermore, the quality of the content of the RS-Vs rated in prison practice could be investigated further by periodically checking the argumentation given by prison employees for the individual factors and the final conclusions. In addition, monitoring the quality of the reports written by various disciplines on which the RS-V ratings are predominantly based could provide valuable information. Finally, potential improvements could be made with regard to the involvement of the detained individuals themselves in the violence risk evaluation process. For example by examining the possibilities for a self-report version of the RS-V and by consistently discussing the findings from the RS-V evaluation with the individual, in order to promote collaborative trajectory planning and enhance motivation for a positive development. Overall, it appears the application of the RS-V in Dutch prison practice brings a valuable contribution to overall risk management and subsequent prison safety and community reintegration.



CHAPTER 3

The Risk Screener Violence (RS-V): Retrospective Prediction of Violent and Aggressive Incident within the Prison Setting

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ABSTRACT

Physical and verbal violence toward staff or other detained individuals is a reoccurring problem within correctional facilities. Screening for violence risk within the prison setting could provide a valuable first step in the prevention of institutional violence. The brief and compact Risk Screener Violence (RS-V) has shown to be an efficient new method for assessing concerns regarding post-release violent offending for incarcerated persons. This study aimed to find out whether the RS-V is also able to predict future violent and aggressive incidents during imprisonment. The predictive validity of RS-V scores for future violent and aggressive incidents during a follow-up time of 4 months within prison was analyzed, using a file-based design. Violent incidents toward staff and other inmates (physical violence and violent threats), other aggressive incidents (aggression toward objects and verbal disruptive behavior), and both categories combined, were included as outcome measures based on disciplinary reports. The RS-V ratings showed medium to large predictive values for both violent and aggressive behavior during prison stay. In particular, good predictive values of RS-V scores were found for violence toward prison staff. This study shows that, besides post-release violent recidivism, the RS-V is able to accurately predict future violent and aggressive incidents during prison stay. By correctly differentiating between low concern and high concern individuals, the RS-V aims to contribute to more personalized interventions and risk management and, subsequently, to improved prison safety. Future studies using prospective prison practice data are needed to further support the validity of the RS-V regarding institutional violence.

Keywords: risk screening, violence risk, prison, institutional violence, aggression

INTRODUCTION

The incidence of violent behavior within prison settings has, besides disrupting the social/ward climate, major psychological and emotional consequences for detained individuals and personnel (Wooldredge, 1991). For instance, prison employees that experience prison violence are more likely to develop post-traumatic stress disorder (PTSD) or burn-out (Boudoukha et al., 2013; Lerman et al., 2022). Similar consequences apply for incarcerated individuals. Namely, victimization may diminish the level of safety inmates experience (Wolff & Shi, 2009), and appears to be associated with emotional distress (e.g., depressive or anxious symptoms), PTSD, and anti-social behavior (Boxer et al., 2009; Hochstetler et al., 2004). Even witnessing victimization may have similar adverse effects (Boxer et al., 2009; Daquin et al., 2016). Preventing the occurrence of institutional violent incidents is therefore of great importance.

Regarding the prevalence of in-prison violence, self-report data from the U.S. shows that 13% – 35% of the incarcerated individuals reported prisoner-to-prisoner physical assault, and 10% – 32% reported prisoner-to-staff physical assault within a time-frame of 6 months (Wolff et al., 2007). Furthermore, in 2020, a total of 24,617 reports of misconduct were made within the Dutch prison system, which roughly houses 35,000 individuals a year (Dekker, 2021). In total, 3% of these reports mentioned threats toward staff and in 2% of the cases, there was an occurrence of physical violence toward staff. It has been suggested that the actual rate of violent behavior within prisons is likely even higher (Byrne & Hummer, 2007). More importantly, every violent/aggressive incident is one too many.

Two prominent theories within prison practice aim to explain what causes detained individuals to act out in violent behavior. First, deprivation models suggest that the prison environment itself generates stress and frustration among inmates (Sykes, 2007). More specifically, prison specific factors cause detained individuals to develop negative attitudes toward the prison system, which in turn could lead to prison misconduct (Jiang & Fisher-Giorlando, 2002). Examples of these ‘pains of imprisonment’ are the loss of autonomy and security, and the pain of being confined and deprived from liberty (Jiang & Fisher-Giorlando, 2002; Vogelvang et al., 2016).

On the contrary, importation theories highlight that misconduct within prisons is caused by individual pre-prison factors (Irwin & Cressey, 1962). Meaning that unique personal and behavioral characteristics of a detained individual influence their adjustment to prison life. These characteristics are already present before institutionalization, such as acquired skills, thinking patterns, impulsivity, trauma, and previous offending

(Vogelvang et al., 2016). Individual characteristics determine the level of adjustment to the prison environment and whether an individual may, or may not, act violently in reaction to inevitable tensions that occur within the prison system. Although criticized, both deprivation theories and importation theories seem to explain variance within prison misconduct and should be viewed as complementary (Paterline & Petersen, 1999). Finally, situational factors (e.g., location, time and interactions with other detained individuals) are also viewed as relevant for explaining the occurrence of prison misconduct (Jiang & Fisher-Giorlando, 2002; Steinke, 1991).

Within the framework of the importation theories, several individual characteristics have proven to be associated with violent incidents during imprisonment. These are, for instance, previous violent behavior, drug and alcohol use, impulsivity and low self-control (Arbach-Lucioni et al., 2012; DeLisi et al., 2010; Gendreau et al., 1997; Jiang & Fisher-Giorlando, 2002). Other factors, such as motivation, social network support and aging have proven to be associated with a decrease of violent misconduct and may serve as a protective factor (Klepfish et al., 2022; Lai, 2019; Van Der Laan & Eichelsheim, 2013; Velarde, 2001). These risk and protective factors are often incorporated into risk assessment instruments. Risk assessment instruments are designed to estimate the risk of future (violent) offending and to eventually, if personalized interventions are implemented based on the observed risk level of an individual, help prevent violent behavior. Using validated instruments within the prison setting is important, since false negative predictions may potentially harm societal and prison safety (Kang & Wu, 2022). For instance, when individuals with a high violence risk are granted unjustified leave. At the same time, false positive predictions may have an unnecessary negative impact on prisoner mental health, due to overly restrictive risk management. From a deprivation perspective, this may in turn lead to an increased risk of violence. There is an ongoing debate about the ideal cost ratio of false positives (potential harm to the individual) versus false negatives (potential harm to others), which is also context dependent (Kang & Wu, 2022; Rice & Harris, 2005). Although criminal justice professionals and the general public opinion seem to prefer risk assessment models with a higher rate of false positives (Barnes & Hyatt, 2012; Kang & Wu, 2022; Netter, 2007).

Several well-known risk assessment instruments, such as the HCR-20^{V3}, the LS/CMI, the SAPROF, and the VRS have been validated and proven to be successful in predicting violent incidents within institutional settings (e.g., Abbiati et al., 2019; Belfrage et al., 2000; De Vries Robbé et al., 2016; Hogan & Olver, 2018; Persson et al., 2017). However, conducting extensive risk assessment with these instruments for all detained individuals is not always realistic due to the often limited behavioral expertise among the majority of prison employees, as well as constraints in time and resources (factors

that are, in part, a result of prison management) (Russo et al., 2020). Because only a subgroup of detained individuals is at high risk of acting out in violent behavior during imprisonment, it is also not necessary or efficient to administer comprehensive risk assessment tools for every individual. These issues regarding the administration of extensive risk assessment for all individuals also existed within the Dutch prison setting. As a result, structured in-prison risk evaluation was only conducted for a small group of incarcerated individuals (e.g., for individuals with severe psychiatric problems who reside within specialized prison units or for individuals with serious transgressive behavior). However, in recent years, improving risk evaluation and management for all detained individuals became a top priority within the Dutch prison setting (Dutch Custodial Institutions Agency, 2021). Therefore, the Dutch prison system explored options for implementing a compact and brief violence risk screening tool that is more suitable for wide scale consistent use for the larger prison population.

A few risk screening instruments have been developed that can also be applied within correctional settings, such as the screening version of the LSI-R (Andrews & Bonta, 2001), the DASA (Ogloff & Daffern, 2006), and the screener version of the VRS (Wong & Gordon, 2007). However, these instruments lack important attributes that were deemed highly relevant within Dutch prisons, such as the explicit incorporation of both risks and strengths for violent behavior. Within the prison system in the Netherlands, there was a desire and a need to develop a new risk screening instrument which contains both risk and protective factors, is scored based on Structured Professional Judgment (SPJ) assumptions, focuses specifically on the prediction and prevention of violent behavior, includes a multidisciplinary consensus conclusion regarding the results of the screening, and can be conducted by prison employees without specific behavioral expertise (i.e., prison workers who are not psychiatrists or psychologists). This led to the development of the new Risk Screener Violence (RS-V) (De Vries Robbé & Van den End, 2020). The RS-V has been implemented in all Dutch prisons in 2021 for the violence risk screening of every individual admitted to prison.

Research shows that a relatively small part of the prison population is responsible for a relatively large part of (violent) incidents within prison (Duwe, 2020). If, by administering the RS-V, an improvement can be made within the early differentiation between individuals for whom there are high concerns versus low concerns, accordingly, risk management can be allocated more efficiently and effectively, and as a result new violent incidents are more likely to be prevented. Furthermore, by serving as triage for administering further in-depth risk assessment (generally carried out during a later phase of detention) and by possibly improving the application of personalized

rehabilitative interventions, the RS-V might be able to contribute to an increase in internal prison safety.

The current study aims to find out whether RS-V scores are able to predict future violent incidents during imprisonment. More specifically, this study focuses on the predictive value of RS-V ratings for violent incidents (actual physical violence and violent threats) toward staff or fellow inmates, during a follow-up period of 4 months after the screening. Additionally, other aggressive incidents (aggression toward objects and verbal disruptive behavior) are included as an extra outcome measure to serve as a wider proxy of actual violent behavior. Furthermore, a third outcome measure is included, which comprises the combination of both outcome categories, violent and aggressive incidents.

The RS-V data included in this study are retrospective, meaning that the RS-Vs are scored by researchers based on file information of detainees from their prison records. Since a previous file-based pilot study on the RS-V has shown promising results regarding its psychometric properties for use during prison stay (De Vries Robbé et al., 2021), we expect sound predictive validity regarding institutional violence (toward staff as well as fellow inmates). Moreover, it is anticipated that aggressive behavior and both categories combined can also be predicted significantly by the RS-V. Further support for this hypothesis stems from the recent finding that the RS-V was scored with excellent interrater reliability and demonstrated successful in predicting violent offending after release (Smeekens et al., 2024b), and thus was able to predict actual violent behavior (see Chapter 5).

MATERIALS AND METHODS

Participants

The sample of incarcerated persons that was selected for this study, was derived from an earlier retrospective study that looked into the predictive validity of RS-V ratings for post-release violent offending (Smeekens et al., 2024b). The RS-Vs included by Smeekens et al. (2024b) were rated by researchers based on prison reports regarding behavior during the last few months of detention, prior to the moment of discharge. These RS-Vs were then linked to violent offending after release. The group of detained individuals included by Smeekens et al. (2024b) needed to adhere to several inclusion criteria. First, individuals needed to be released from a Dutch prison between September 2014 and September 2017, and they needed to have been formally convicted of the crime for which they received the corresponding prison sentence. Second, eligible individuals

needed to have sufficient file information to retrospectively rate all parts of the RS-V. In addition, after release, participants needed to have remained within the Netherlands, stayed out of prison or a forensic clinic for at least half of the follow-up period, and not have passed away. The final sample of the study consisted of 571 individuals from 25 Dutch prisons (Smeekens et al., 2024b).

For the current study, files were drawn from the previous study by determining which of the 571 incarcerated individuals had spent sufficient time in prison for the researchers to also be able to rate a RS-V shortly after admission. A detention period of at least 2 months was deemed necessary to retrospectively gather enough digital file information about each detainee in order to be able to reliably score the RS-V. Subsequently, 4 months of further prison stay was needed for the follow-up period (see section 'Violent and aggressive incidents within prison'). Thus, an individual needed to have a total detention period of at least 6 months in order to be included within this study.

In total, 256 individuals adhered to this inclusion criterion. Then, 75 participants were excluded because more than two factors of the RS-V were indicated as 'unknown' during the screening; these cases did not have sufficient file information to retrospectively score the RS-V after admission. Ultimately, 181 individuals (145 males, 36 females) adhered to all the inclusion criteria and were included in the current study. They had a mean age of 35 years ($SD = 11.17$, range = 18 – 66) and the mean duration of their detention period was 385 days ($SD = 204.90$, range = 179 – 1,215). The sample included 46 first-time detainees. See table 3.1 for more information about previous violent behavior among this sample.

The Risk Screener Violence

The RS-V is a risk screening instrument, initially developed for prison settings, that aims to estimate concerns for future violent behavior of an individual (De Vries Robbé & Van den End, 2020). The RS-V offers a first general impression regarding the most important risk factors and protective factors of each individual. The following definition of violent behavior is used within the RS-V: attempting, threatening with, or actually showing physical violence toward others (including sexual violence). The RS-V may be used within different custody levels and is scored with excellent inter-rater reliability and good predictive validity regarding post-release violent offending for males and females (based on retrospective data) (Smeekens et al., 2024b). Within prison practice, the RS-V is administered for every individual during the first 6 (in some prisons 9) weeks of incarceration and is administered again later on during detention when an individual qualifies for leave. In addition, the RS-V may be reassessed intermediately at any time whenever deemed useful (e.g., when a considerable amount of time has passed since

the last screening, when a severely aggressive incident has occurred, or when new risk-related information has become available). Within this retrospective file study, RS-Vs were rated based on behavioral reports regarding the first few months of imprisonment (see section 'Procedure'). The RS-V is more compact than extensive risk assessment instruments and consists of 10 factors and 3 final conclusions divided over 3 parts.

The first part of the RS-V consists of two historical risk factors. These are 'previous interpersonal violence outside prison' (H1), and 'previous interpersonal violence inside prison' (H2). Both factors are scored on a five-point scale (0 – 4) based on the frequency of the respective behavior within the entire past of the individual (see table 3.1). H1 is rated based on actual convictions within the official criminal record of an individual and H2 is rated based on disciplinary reports within the digital prison file of a detainee. As can be seen in table 3.2, the second part of the RS-V contains four dynamic risk factors (R1 to R4) and four dynamic protective factors (P1 to P4). These factors are scored on a three-point scale: 0 = 'not or hardly present', 1 = 'moderately present', or 2 = 'clearly present'. A higher score indicates the presence of a problem (risk factor) or a strength (protective factor). These dynamic factors are rated based on the behavioral observations of prison employees during the months prior to screening (since admission, or the past 6 months of prison stay). More specifically, digital records of, for example, urine test results and disciplinary reports are consulted, as well as reports from case managers, prison officers, nurses, and other prison staff. The rating of a factor is to be supported by sound argumentation, described by the assessor on the rating form. If relevant, additional case-specific historical and dynamic information related to the individual's violence risk may be added.

Table 3.1 The number of incarcerated individuals ($n = 181$) who demonstrated 1) previous convictions for interpersonal violence outside prison (in the community), and 2) previous disciplinary reports regarding interpersonal violence inside prison (during current or prior detentions)

Historical risk factors		
Frequency of conviction or disciplinary report	Factor H1 of the RS-V: Previous interpersonal violence (convictions) outside prison (n , %)	Factor H2 of the RS-V: Previous interpersonal violence (disciplinary reports) inside prison (n , %)
0	43 (23.8)	115 (63.5)
1	23 (12.7)	32 (17.7)
2 – 3	39 (21.5)	21 (11.6)
4 – 5	20 (11.0)	6 (3.3)
≥6	56 (30.9)	7 (3.9)

Table 3.2 The historical risk factors, dynamic risk factors, dynamic protective factors, and final conclusions included in the RS-V

Part 1. Historical risk factors
H1. Previous interpersonal violence outside prison
H2. Previous interpersonal violence inside prison
Part 2. Dynamic factors (past 6 months in prison)
Risk factors
R1. Recent interpersonal violence
R2. Substance use
R3. Negative/defiant attitude
R4. Impulsive behavior
Protective factors
P1. Following rules and agreements
P2. Coping with problems and frustrations
P3. Positive influences from social network
P4. Motivation for crime free future
Part 3. Final conclusions (coming 6 months)
Concerns regarding future
A. Violence inside prison
B. Violence outside prison after release
C. Violence outside prison during leave

The third part of the RS-V consists of three final conclusions. Within prison practice, these final conclusions are formulated during a multidisciplinary team meeting. Whereas in the current study, the conclusions were made by a single researcher that rated the RS-V. The three final conclusions are formulated based on the findings documented by the rater in part one (historical factors) and part two (dynamic factors) of the RS-V. The three final conclusions express concerns about future interpersonal violence regarding the following 6 months in an SPJ manner. This means that the RS-V aims to be valid for a period of 6 months. The final conclusions consider concerns regarding the risk of (A) in-prison violence, (B) post-release violence, and (C) violence during leave from prison (only rated in case of proposed leave during prison stay). They are rated as: 0 = 'low concerns'; 1 = 'moderate concerns'; or 2 = 'serious concerns'. Table 3.2 shows the factors and final conclusions that are included in the RS-V. A factor can be scored as 'unknown' if there is not enough information available for a reliable rating. When more than two factors in part one or part two are scored as unknown, the third part of the RS-V cannot be completed and the RS-V is considered invalid.

During the multidisciplinary team meetings in prison practice, possible follow-up measures are discussed for individuals for whom there are moderate or serious concerns regarding future violent behavior. Examples of these follow-up measures are: single-celling, contacting the prison psychologist regarding specific concerning

observations, offering targeted behavioral interventions such as anger management training or addiction treatment, conducting extensive risk assessment (e.g., by means of the HCR-20^{v3} and the SAPROF), informing decision-making regarding prison leave or other privileges, and discussing the RS-V results with the incarcerated person and/or with other professionals both inside and outside prison. For more information on the RS-V, see the study of Smeekens et al. (2024b).

Violent and aggressive incidents within prison

Since the RS-V has been developed to specifically predict violent behavior, this study included outcome measures that describe violent behavior or proxies thereof. Other types of misconduct during prison stay, such as positive urine tests or possession of contraband, were not included as outcome measures. The three dichotomous outcome measures included in this study were: (1) violent incidents: actual physical violence and violent threats toward other people; (2) aggressive incidents: aggression toward objects and verbal disruptive behavior; and (3) both the categories of violent incidents and aggressive incidents combined. Aggression toward objects was defined as aggressive behavior (such as slamming or kicking) toward objects, such as walls, doors, or trashcans. Verbal disruptive behavior was specified as verbally abusing, insulting, offending or challenging other detained individuals or staff, without explicit violent threats. Regarding violent incidents (physical violence or verbal threats), a distinction was made between the type of victim (other detained individuals or personnel) the aggression was directed at, for aggressive incidents it was not possible to make this distinction.

The violent and aggressive incidents were scored as 0 (no/not present) or 1 (yes/present) for each individual, within a timeframe of 4 months after rating the RS-V. Although some individuals showed multiple incidents of the same type during follow-up, these were counted as 1 (yes). Even though the final conclusions within the third part of the RS-V make predictions about the following 6 months, a follow-up period of 4 months was used for this study. A 4-month-follow-up period was deemed sufficiently long to be able to detect violent behavior, yet still ensuring a relatively large sample size, given that the majority of Dutch detained individuals is already released within 6 months.

The occurrence of violent and aggressive incidents (yes/no) during follow-up was scored based on reports within the central digital prison archive of the Dutch Ministry of Justice and Security, where researchers had access to the prison file information of each included detainee. Specifically, records regarding disciplinary write-ups and disciplinary decisions/measures were consulted. Table 3.3 shows the occurrence of violent and other aggressive incidents among the included sample of detained individuals. It also includes information regarding the victim of the violent behavior.

Table 3.3 The occurrence rates (yes/no) of the different types of incidents within prison during a 4-month follow-up period

Incident category	Number of detained individuals (<i>n</i> = 181)	%
Violent incidents	18	9.9
Toward staff	10	5.5
Physical violence	5	2.8
Violent threats	6	3.3
Toward other detained individuals	9	5.0
Physical violence	8	4.4
Violent threats	2	1.1
Aggressive incidents	23	12.7
Aggression toward objects	8	4.4
Verbal disruptive behavior	16	8.8
Any violent or aggressive incident	30	16.6

Note. Results between incident categories may overlap. Meaning that an individual could have committed incidents within different categories and that subcategories will not add up to the total

Procedure

The study protocol for this study was approved by the Ethics Committee of the Institute of Pedagogical Science of the University of Leiden (Reference Number: ECPW-2021/33). Data collection for this retrospective file-based study took place between January 2022 and December 2022. Within prison practice, the RS-V is completed by employees in prison. In the current study, the rating was done by researchers and graduate students (*n* = 4) trained in using the RS-V and the prison records.

The data collection consisted of three steps. The first step was to check whether an individual adhered to the inclusion criteria (see section 'Participants'). If more than two factors of the RS-V were scored as unknown within 2 months after admission, the researcher broadened the scope of the search within the digital file of the detainee by adding an extra month of prison documentation. Subsequently, the researcher checked again whether there was sufficient file information available. This process was repeated until there was enough information available to rate the RS-V. This process continued until a maximum of 5 months after admission. If, after 5 months of imprisonment, an individual still did not have enough available file information, the particular case was excluded from the dataset.

The second step of data collection consisted of scoring the RS-Vs for all the included incarcerated persons. In order to prevent bias when scoring the RS-V, the process of including an individual and the scoring of the RS-V was divided between the

researchers. The first researcher checked the inclusion criteria and scored factor H1. Then, the second researcher scored factor H2, factors R1 to R4, factors P1 to P4, and possibly additional historical and dynamic information. The dynamic factors were rated based on prison reports written during the beginning of the detention period: from admission until 2, 3, 4, or 5 months after admission (depending on the availability of file information, see above). The second researcher also scored part three of the RS-V: the final conclusions, based on the ratings on all factors (including H1) and the additional historical and dynamic information. However, since the outcome measures of the current study concern in-prison violence and aggression, we only included final conclusion A (concerns regarding violence inside prison) in our data analyses.

The third and final step of data collection was to score the outcome measures, violent and other types of aggressive incidents, based on incident reports within the digital file of each detainee. First, the correct timeframe was selected within the digital file: from the date of rating part three of the RS-V until 4 months later. The incident reports within that timeframe were then scored using a scoring form that included the date, type of incident, and, if applicable, at whom the violent incident was directed (prison staff or fellow detained individuals). While rating the RS-V and the final conclusions of the RS-V in step one and step two, raters were blind to the outcomes collected in step three.

Statistical design

The data were analyzed using IBM SPSS Statistics version 27. Missing values were replaced through pro-rating: each missing value received the mean score on the corresponding subscale for the individual case. On average, 1.4 factors were missing per incarcerated person. The protective factor P3 (positive influences from social network) had the largest number of missing values, namely 75.7%⁹ This shows that, within the prison records, the availability of information about the social network of an individual within the prison records was often not sufficient.

Within prison practice, the result of the screening is comprised of the final conclusions regarding concerns about future violence. However, for the purpose of the present empirical study, the ratings of the individual factors were added up into subscale scores and a total score. In order to be able to do so, the historical factors were transformed from a five-point rating scale to a three-point rating scale. The ratings 1 – 2 were changed into a score of 1 and ratings 3 – 4 into a score of 2. Subsequently, the historical and dynamic risk factors were added up, while subtracting the dynamic protective factors,

9 Due to the large amount of missing values of this particular factor, all ROC analyses were additionally run without P3. This only affected the AUC values to a negligible extent (.01). Therefore, the proposed pro-rated subscale scores and total score were deemed warranted.

to arrive at an overall total score of risk corrected for protection. A more negative total score on the RS-V indicates a greater presence of protective factors in comparison to risk factors. The adjusted subscale scores and RS-V total score were used in further analyses.

Descriptive analyses of the unadjusted individual factors, the adjusted subscale scores, the adjusted RS-V total score and the final conclusion A (concerns regarding violence inside prison) were conducted. Since for many detained persons protective factors were rated as more present than risk factors, the average RS-V total score resulted in a negative value of -1.92 ($SD = 4.45$, range = $-8 - 11.60$) (see table 3.4).

Table 3.4 The descriptive statistics (*M*, *SD*, Min., Max.) of the separate factors, the subscale scores, total score and final conclusion A of the RS-V for the total sample ($n = 181$)

	<i>M</i>	<i>SD</i>	Min.	Max.
H1	2.13	1.56	0	4
H2	.66	1.06	0	4
R1	.10	.34	0	2
R2	.60	.68	0	2
R3	.40	.66	0	2
R4	.52	.79	0	2
P1	1.50	.71	0	2
P2	1.39	.73	0	2
P3	1.18	.82	0	2
P4	.99	.78	0	2
Historical risk factors	1.67	1.38	0	4.80
Dynamic risk factors	1.51	1.74	0	8
Dynamic protective factors	5.11	2.19	0	8
RS-V total score	-1.92	4.45	-8	11.60
Final conclusion A: Concerns regarding violence inside prison	.48	.70	0	2

Note. The descriptive statistics of the individual factors are the unadjusted scores and the descriptive statistics of the subscales and total score are the adjusted scores (see section 'Statistical design')

In order to investigate the predictive validity of RS-V scores for violent and aggressive incidents, receiver operating curve (ROC) analyses were conducted. ROC analyses result in area under the curve (AUC) values, which, in this case, represent the ability for the RS-V to correctly identify whether an individual will commit future violent or aggressive incidents during the follow-up period in prison. AUC values can be classified as small (between .56 and .64), medium (between .64 and .71), or large (above .71) (Rice & Harris, 2005). For instance, an AUC value of .749 means that there is a probability of 75% that a randomly

selected violent individual will have a higher score on the RS-V than a randomly selected non-violent individual. Regarding the subscale of the dynamic protective factors, the AUC values were mirrored, indicating that higher AUC values reflect a protective effect against the occurrence of incidents. ROC analyses were conducted for violent incidents, aggressive incidents, and both of these incident categories combined. In addition, the category of violent incidents was further divided into violence toward staff and violence toward other detained persons, for which two separate further ROC analyses were conducted.

RESULTS

Descriptive statistics

Table 3.4 shows the means and standard deviations of the RS-V on the separate factors, the subscale scores, RS-V total score, and the final conclusion A. Overall, the dynamic protective factors were rated relatively high compared to the dynamic risk factors. In total, for 65% of the detained individuals included in the current study, the researchers had 'low concerns' regarding future violent behavior inside prison. While 23% of the detainees' final conclusion A was rated as 'moderate concerns', and 12% as 'serious concerns'.

Predictive validity of RS-V ratings for violent and aggressive incidents within prison

The true positives, true negatives, false positives, and false negatives regarding the occurrence of violent incidents within prison can be found in table 3.5. This table shows that, based on final conclusion A, there are relatively more false positive predictions than false negative predictions regarding violent incidents within prison during the 4-month-follow-up period. Additionally, 4.3% of the individuals with low concerns committed a violent incident, for the group with moderate concerns this was 14.3%, and for the group with serious concerns this was 31.8%.

Table 3.5 The concerns expressed within final conclusion A (concerns regarding violence inside prison) in contrast to the actual occurrence of violent incidents during a 4-month follow-up period within prison

Final conclusion A (concerns regarding violence inside prison)	No violent incident (n, % of total)	Violent incident (n, % of total)	Total (n, % of total)
Low concerns	112 (61.9)	5 (2.8)	117 (64.6)
Moderate concerns	36 (19.9)	6 (3.3)	42 (23.2)
Serious concerns	15 (8.3)	7 (3.9)	22 (12.2)
Total	163 (90.1)	18 (9.9)	181 (100)

Table 3.6 The Area Under the Curve (AUC) and 95% Confidence Intervals (CI) of the subscale scores, total score and final conclusion A (concerns regarding violence inside prison) of the RS-V for different types of incidents regarding a 4-month follow-up period during imprisonment

	Historical risk factors			Dynamic risk factors			Dynamic protective factors			RS-V total score			Final conclusion A: Concerns regarding violence inside prison		
	AUC	95% CI		AUC	95% CI		AUC	95% CI		AUC	95% CI		AUC	95% CI	
Violent incidents (prevalence = 10%)	.604	(.46, .75)		.749***	(.64, .86)		.664*	(.53, .80)		.711**	(.58, .84)		.732***	(.60, .86)	
Toward staff (prevalence = 6%)	.670	(.62, .94)		.808***	(.71, .91)		.694*	(.55, .84)		.781**	(.68, .89)		.778**	(.62, .94)	
Toward other detained individuals (prevalence = 5%)	.531	(.33, .73)		.687	(.50, .88)		.646	(.44, .85)		.642	(.42, .86)		.684	(.50, .87)	
Aggressive incidents (prevalence = 13%)	.686**	(.57, .80)		.681**	(.56, .80)		.686**	(.58, .79)		.711***	(.60, .83)		.718***	(.60, .84)	
Violent incidents and aggressive incidents (prevalence = 17%)	.684***	(.58, .79)		.733***	(.63, .83)		.697***	(.60, .79)		.744***	(.65, .84)		.759***	(.66, .86)	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.6 displays the AUC values of the RS-V regarding the prediction of violent and aggressive incidents. Most of the subscale scores, the RS-V total score and the final conclusion A (concerns regarding violence inside prison) were significant predictors of violent incidents, aggressive incidents, and both incidents categories combined. The significant AUC values were moderate to large (AUC = .664 – .759). Only the subscale score of the historical risk factors was a non-significant predictor of violent incidents. The same result was found for the smaller category of violence toward staff: all factors except the historical risk factors were significant predictors of violent incidents toward personnel. However, none of the subscales of the RS-V were significant predictors for violence toward other detained persons specifically.

DISCUSSION

This study aimed to find out whether a newly developed risk screening instrument, called the RS-V, is able to predict in-prison violent and aggressive incidents. As such, this study contributes to the further validation of the RS-V based on retrospective data. A previous study found promising results for the RS-V regarding the prediction of post-release violent offending (Smeekens et al., 2024b). The current study reveals that the RS-V is also able to adequately predict violent behavior within the prison setting at 4 months follow-up. More specifically, the predictive validity of RS-V ratings for violent incidents (physical violence and violent threats toward others), aggressive incidents (aggression toward objects and verbal disruptive behavior), and both categories of incidents combined was large for the RS-V total score and final conclusion A regarding in-prison violence. The AUC value of the RS-V total score (.74) and final conclusion A (.76) found within this study for the combined aggression outcome, are comparable to the AUC values related to more extensive risk assessment instruments that are used within Dutch forensic practice to predict institutional violence (e.g., HCR-20^{V3} total score = .77, SAPROF total score = .76, and SAPROF overall final risk judgment = .74; De Vries Robbé et al., 2016). For the ratings on the subscale scores, moderate to large predictive validities were found, apart from the historical subscale, which was not significant for the prediction of interpersonal in-prison violence. Overall, this study found sound predictive values of RS-V scores for violent incidents toward prison staff, whereas none of the ratings on the scales of the RS-V demonstrated significant predictive value for violence toward fellow detained individuals. However, this result should be interpreted carefully due to the relatively low base rate of incidents within this category.

The descriptive statistics show that, overall, the dynamic protective factors are rated relatively high compared to the dynamic risk factors. This seems to indicate that,

on average, the majority of the prison sample included in this study behaved fairly well during the first months of their prison stay. Based on final conclusion A of the RS-V, approximately 1 out of 10 participants received high concerns for future violent behavior within prison. Accordingly, the base rates of violent and aggressive incidents were also relatively low. Nevertheless, the RS-V was able to predict quite accurately which individuals would cause aggressive incidents and which individuals would not. In addition, this study shows that the concerns expressed within final conclusion A lead to more false positive predictions than false negative predictions regarding violent incidents. This ratio is generally preferred for risk assessment tools (Barnes & Hyatt, 2012; Kang & Wu, 2022; Netter, 2007). Moreover, false positive predictions may not necessarily be problematic for the individual, as it could result in enhanced attention on ensuring a safe reintegration into society, accompanied by appropriate individualized interventions. The results of this study reveal that the subscale scores, total score and final conclusion A (concerns regarding violence inside prison) of the RS-V are almost all significant (medium to large) predictors for violent incidents toward others, aggressive incidents, and both incidents combined. This is in line with our hypothesis, previous findings regarding the RS-V, and previous research that shows that other risk screening instruments are also predictive of short-term institutional aggression (i.e., the DASA), and disciplinary infractions (i.e., the LSI-R:SV) (Chu et al., 2013; Griffith et al., 2013; Walters & Schlauch, 2008). These results therefore indicate that the use of risk screening instruments within the prison setting appears applicable.

Our study did not find specific predictive value of the ratings on the historical risk factors subscale for violent incidents within prison. Although this result seems somewhat surprising, it could be explained by deprivation models, which suggest that being imprisoned and being deprived from freedom may cause stress and frustration among detained persons which could lead to them acting out in violent behavior (Jiang & Fisher-Giorlando, 2002; Sykes, 2007). In fact, looking more closely, it appears especially previous violence outside of the prison context (ratings on factor H1) has limited predictive value for behavior during imprisonment. It could be that specific situations, that are only present within the prison setting, cause people to be violent and act differently than when being in the community, where these specific situational factors are not or less present. Similarly, it could also be the case that the prison context in general has a protective effect and that specific triggers for committing violence, which are present outside of the prison context, are less present within the prison setting. These findings will have to be studied more closely prospectively within the prison context.

The importation models, on the other hand, may explain the sound predictive value of the ratings on the dynamic subscale scores for future violent and aggressive misconduct

in prison. The dynamic risk factors subscale consists of specific personal and behavioral characteristics, such as impulsive behavior and substance use, which are supposedly associated with an increase in violent behavior (Arbach-Lucioni et al., 2012; Gendreau et al., 1997). On the contrary, the dynamic protective factors subscale is comprised of personal characteristics that are potential protectors against violent misconduct, such as social network support and motivation (Klepfish et al., 2022; Lai, 2019; Van Der Laan & Eichelsheim, 2013). The presence or absence of individual dynamic factors largely determines whether an individual may act out in violent behavior within prison, as stated by the importation models.

It was expected that the RS-V would predict both violence toward staff and violence toward other incarcerated individuals. This retrospective study found that RS-V scores were primarily predictive of the former. The behavioral reports included in the files of detainees, that are used to score the RS-V, are filled in by different prison employees (e.g., administrator, prison officer, case manager, and nurse). It could be that prison staff is not fully able to observe all the interactions that occur between prisoners, in contrast to aggression toward employees, resulting in so-called 'dark numbers'. Meaning: violent and aggressive incidents among detained individuals that did occur may not be present within the digital prison records and therefore not reported in this study. This could influence the reliability of the documentation of violent incidents between prisoners. Especially when it comes to violent threats among incarcerated individuals, which had a base rate of only 1.1% (compared to 3.3% toward staff). This study did not investigate the quality and quantity of the reports within the prison records. In general, the results regarding differences between staff and fellow inmate violence should be interpreted with caution due to the relatively low base rate in each group separately. In order to draw more firm conclusions regarding the predictive value of RS-V ratings for violence toward staff versus violence toward other detained individuals, this study should be replicated with a larger sample size. A prospective study that is currently being conducted (see Chapter 4), analyzing a large number of RS- Vs filled in by prison employees, may give more insight into this distinction.

Limitations

Despite carefully conducting this study, some limitations need to be mentioned. The first limitation concerns the availability of information within the digital prison records. Within this study, there was a relatively high number of cases that were excluded due to a limited amount of file information during the first few months of imprisonment (72 of 255 cases, 28%). This can be explained by the retrospective design, since the RS- Vs included in this study were scored by researchers and not by prison employees, the scoring of the RS-V depended on the quality and quantity of the reports that were

available within the file of a detainee. Moreover, these files concerned data from before the implementation of the RS-V within Dutch prison practice. It would be expected that since the implementation of the RS-V, record keeping regarding specific risk and protective factors has improved significantly. Future prospective studies in prison practice will be able to investigate this assumption. In addition, scoring the occurrence of violent and aggressive incidents also depended on the completeness of information within the digital central archive. Furthermore, although the researchers were well trained in the use of the RS-V, they did not have first-hand experience working with incarcerated individuals in the prison setting. This may have dampened the predictive validity findings regarding the final conclusions. Using prospective data (actual RS-Vs from prison practice) will possibly overcome this problem because of the richness of information about each individual.

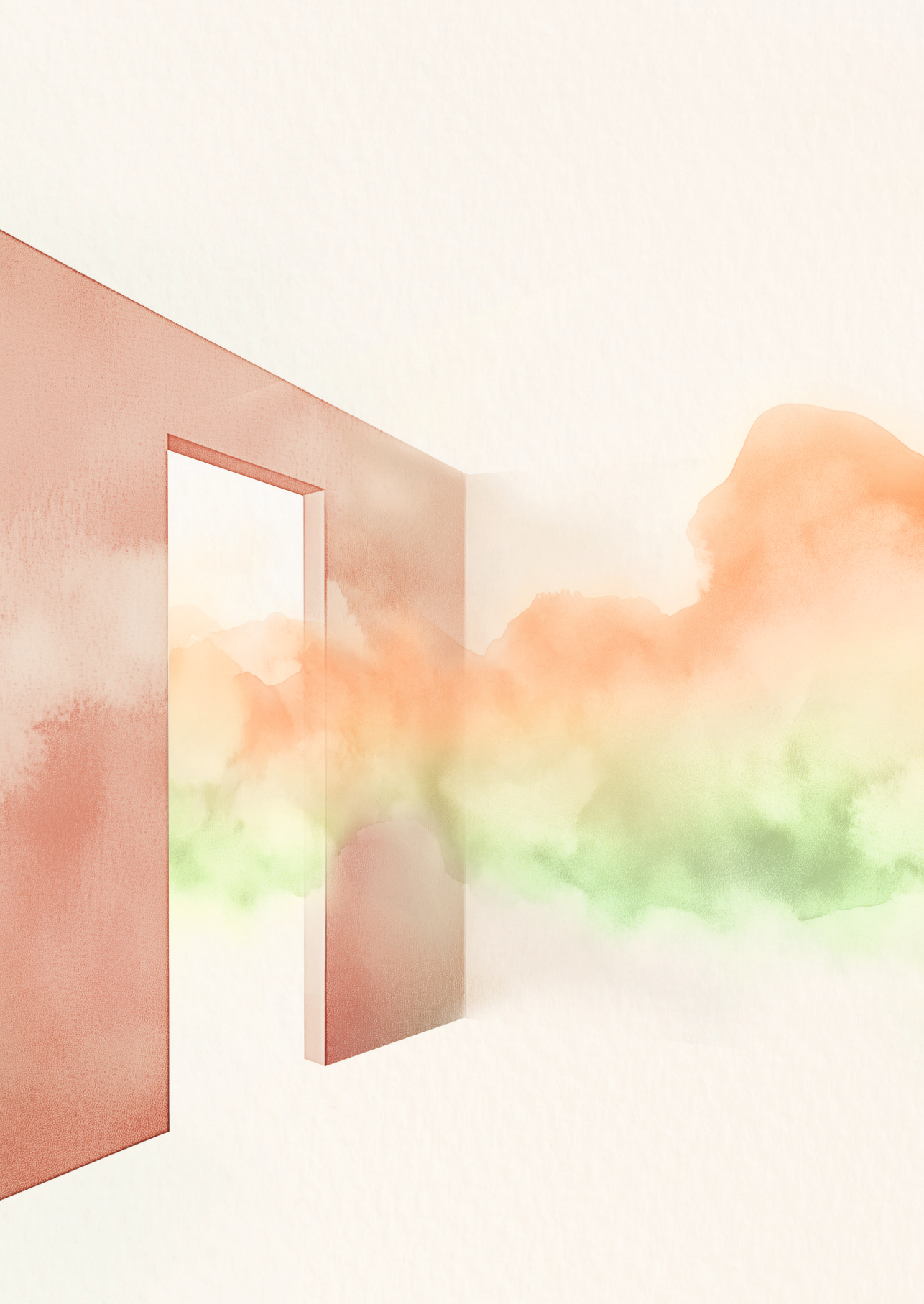
Another limitation of this study is that the RS-Vs were scored based on reports during the first few months of imprisonment. It could be that individuals may show different behavior during the first weeks of imprisonment than during a later phase of detention. Possible reasons as for why these behavioral differences may occur could be that an individual is experiencing withdrawal symptoms from an addiction, the new prison environment may be stressful, or the individual simply needs to get used to the prison setting. It is therefore recommended to routinely score the RS-V of an individual again over time to gain insight into possible changes in dynamic risk and protective factors, in order to be able to accurately re-evaluate concerns regarding violent behavior periodically.

A final limitation of this study is the included sample of relatively long-term detainees. Even though the follow-up period for detecting violent behavior in this study was shortened to 4 months instead of 6 months (which is the intended prediction time-frame of the RS-V, see section 'Materials and methods'), this study still included a large number of relatively long-term detainees. Most detained individuals (69%) within the prison system in the Netherlands are released within 3 months (Dutch Custodial Institutions Agency, 2022). The individuals included in this study, with an average detention period of 385 days, are thus in reality a minority of the total prison population within the Netherlands. However, including individuals with a longer detention duration was necessary to score the RS-V and collect reliable outcome data (see section 'Materials and methods'). In addition, since the RS-V is initially developed to make predictions about the following 6 months, future research could look into including longer follow-up periods to find out whether the RS-V is able to predict violent behavior within prison in the longer- term.

Conclusion

To summarize, this study contributes to the further validation of the RS-V by showing that the RS-V is not only able to predict future violent offending post-release but also future interpersonal violence and general aggression within the prison setting. By correctly differentiating between low concern and high concern individuals, the RS-V aims to contribute to the implementation of more tailored interventions and risk management and, subsequently, to a decrease in violent incidents and an increase in internal prison safety. Diminishing victimization and improving internal safety is an important goal within institutional settings, as this will most likely contribute to the prevention of the development of serious psychological problems, emotional distress, and/or further adverse and criminological outcomes among detained persons. Furthermore, it will improve the safety and wellbeing of prison staff and their overall work satisfaction. Implementing the RS-V as a global screening instrument could potentially be a valuable addition in achieving these goals. However, conducting prospective studies with RS-Vs that are rated by prison personnel are necessary to determine the robustness of the results of the current study.

An important implication for prison practice is to actively use the results of the RS-V and discuss how personalized interventions can be tailored to these concerns. The way prison staff responds to the observed concerns regarding in-prison violence is essential in the prevention of future violent incidents. For example, if an individual shows serious concerns regarding future violence, they might be in need of anger management training or, in case of forthcoming release, aftercare facilities need to be informed and in-depth comprehensive risk assessment may be advisable. Achieving an effective response of prison employees based on the results of the RS-V, may require the development of new expertise through risk management training and improved intervention initiatives within the prison setting. This is a challenging task for prison practice, but it seems well worth investing in when aiming to improve prison safety. The succession of the results of the RS-V requires ongoing attention and research within prison practice. Future studies could look into whether personalized interventions are actually applied and implemented in line with the final conclusions of the RS-V. Another important next step is to investigate RS-Vs that are filled in by prison employees. Since the RS-V has been implemented in all 25 Dutch prisons in 2021, it will be possible to prospectively analyze data regarding these RS-Vs from prison practice in future studies and compare the results between retrospective and prospective studies with the RS-V.



CHAPTER 4

Prospectively Predicting Violent and Aggressive Incidents in Prison Practice with the Risk Screener Violence (RS-V): Results from a Multisite Prison Study

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ABSTRACT

Preventing in-prison violence and maintaining a safe environment is an important goal within prison settings. Screening for violence risk may provide a valuable addition to reach this goal. Within the Dutch prison system, the Risk Screener Violence (RS-V) has become an important new element in overall risk management. Prior research shows that RS-V scores are a sound predictor of institutional violence and aggression of incarcerated persons. Whereas previous studies predominantly analyzed retrospective file-based data, the present study includes RS-Vs rated by prison employees in real-life prison practice shortly after implementation. The RS-Vs of 956 detained individuals from 25 Dutch prisons were analyzed. Disciplinary reports were consulted to measure violent and aggressive incidents during 4 months after the screening. In addition, detention duration (length of stay in prison before the screening) was included as an additional variable. Results of the present prison practice study show good predictive values of the RS-V ratings for violent and aggressive incidents during prison stay. The predictive validity was similar for prisoner-to-prisoner assault as well as prisoner-to-staff assault. In addition, the predictive validity of the RS-V scores did not differ between individuals with a longer detention duration versus individuals with a shorter detention duration. This multisite prison practice study is an important step in the further validation of the RS-V and shows that the RS-V is a valuable tool in determining who is more likely to show institutional violence. Nonetheless, it remains important to continually monitor the implementation and correct application of the RS-V in prison practice.

Keywords: prison, risk screening, violence, aggression, detention duration

INTRODUCTION

The prison setting can be an unpredictable environment for detained individuals. The (sudden) deprivation from freedom and autonomy, overcrowding, lack of privacy, and sometimes solitary confinement inherently foster the occurrence of stress and possible interpersonal conflicts. This phenomenon has been studied widely. Namely, individuals who are incarcerated have a higher probability of being exposed to violent behavior than individuals within the overall population (Wolff et al., 2009). In addition, being exposed to violence reinforces violence: detained individuals who witness violent behavior are more likely to act out violently themselves (McGrath et al., 2012). Consequently, preventing institutional violence and maintaining a safe environment is an important goal within prison settings. Specifically, because the violent behavior of incarcerated persons may have a major impact on the psychological well-being of other imprisoned individuals and prison employees (Boudoukha et al., 2013; Boxer et al., 2009; Hochstetler et al., 2004; Lerman et al., 2022; Wooldredge, 1991). The present study aims to contribute in preventing such violence by investigating whether ratings on a newly developed risk screening tool, the Risk Screener Violence (RS-V), are able to predict future violent and aggressive incidents of detained individuals during a 4-month follow-up period in prison. A previous study based on retrospective data demonstrated that RS-V scores are able to predict these types of incidents (Smeekens et al., 2024c). The present study intends to replicate these findings but instead focuses on RS-Vs completed by employees in real-life prison practice and includes prospective data on the occurrence of violence and aggression.

A prominent theory that attempts to explain the occurrence of violent behavior from a social-psychological perspective is the general strain theory (GST) of crime and delinquency (Agnew, 1992; Agnew & White, 1992). In this model, strains are referred to as 'negative or adverse relations with others'. The GST focuses on the individual and his or her (perspective of) negative social relationships with other individuals. The theory describes three major types of actual or anticipated strains: (a) failure to achieve positively valued goals; (b) removal of positively valued stimuli; and (c) the presentation of negatively valued stimuli. The negative emotions, such as anger or fear, which result from these strains, may pressure someone into delinquency or even violence. The GST also mentions that the degree to which an individual can or cannot cope with certain strains determines whether they will actually act out in delinquent behavior. The GST seems particularly applicable to the prison setting (Blevins et al., 2010). Earlier studies show that there is indeed an association between certain prison strains (e.g., victimization, hostile relationships with prison employees, and the proportion of incarcerated individuals convicted of a violent offense) and the occurrence of both institutional misconduct and community recidivism (Listwan et al., 2011; Morris et al., 2012).

Another possible strain is the time individuals spend in prison. Some researchers suggest that the length of the imposed prison sentence may increase feelings of conflict and hopelessness among incarcerated individuals (Dhami et al., 2007; Seeds, 2022; Thompson & Loper, 2005), possibly resulting in prison misconduct. Studies investigating variables that are associated with prison misconduct indeed found that individuals with a longer overall sentence length or time served thus far were more likely to show (violent) incidents than individuals with a shorter overall sentence length or time served thus far (Dhami et al., 2007; Marcum et al., 2014; Sorensen & Cunningham, 2007). These studies selected a (random) sample of incarcerated individuals from prison and investigated the number of disciplinary infractions thus far. On the contrary, other research reports indicate that individuals with a shorter overall detention duration had a higher incidence of disciplinary infractions and violence than individuals with a longer overall detention period (Flanagan, 1980; Jiang & Fisher-Giorlando, 2002; Zamble, 1992). The researchers of these studies looked at prison misconduct during, respectively, the whole prison sentence, a time period of 6 months, and a time period of 7 years. The third study also found that the number of disciplinary infractions was lower during the last period of detention compared to the start of detention (Zamble, 1992).

In an attempt to prevent future violent behavior of incarcerated individuals, prisons aim to evaluate individual violence risk levels by making use of risk assessment instruments and/or risk screening instruments. These instruments are designed to bring forth an estimation of the chance that an individual will show future (violent) criminal behavior (both during imprisonment and thereafter), based on several risk and/or protective factors. For instance, the risk factor 'history of violence' and the protective factor 'motivation for intervention'. Whereas extensive risk assessment instruments (e.g., the Historical-Clinical-Risk Management Version 3, HCR-20^{V3}; Douglas et al., 2013, and the Structured Assessment of Protective Factors for violence risk, SAPROF; De Vogel et al., 2012a) give a comprehensive analysis of the risk and/or protective factors of an individual, shorter screening instruments (e.g., the Level of Service Inventory-Revised: Short Version; Andrews & Bonta, 2001, and the Violence Risk Scale-Screening Version; Wong & Gordon, 2007) offer an initial global impression of the most important risks and/or strengths of an individual. Test scores on the majority of both types of instruments have shown to be able to predict future violent behavior of (previously) detained individuals, within prison and/or within the community (Campbell et al., 2009; Desmarais et al., 2018; Nqwaku et al., 2018). However, wide-scale use of these tools is not always attainable due to financial, personnel, or time constraints.

Within the Netherlands, a novel tool was developed in 2020 to make structural risk screening for violent behavior both inside and outside prison feasible for all individuals

within the prison context. This tool is called the Risk Screener Violence (RS-V) (De Vries Robbé & Van den End, 2020). The RS-V is a brief screening tool that consists of two historical risk factors, four dynamic risk factors, four dynamic protective factors, and three final conclusions regarding concerns about future violent behavior (inside and outside of prison). The final conclusions of the RS-V are discussed during a multidisciplinary team meeting, following a Structured Professional Judgment (SPJ) approach. If, following from this multidisciplinary discussion, there are moderate or high concerns regarding the occurrence of violence in the coming months, individually tailored risk management can be instated. The RS-V may serve as triage for the necessity to carry out more extensive risk assessment instruments such as the HCR-20^{V3} and the SAPROF. In this manner, the RS-V is complementary to more extensive risk tools. In addition, the RS-V aims to guide decision making regarding granting temporary leave from prison or the placement of individuals on specific wards, in a double or single cell. Moreover, the results of the screening may provide guidance to implement personalized interventions, such as aggression replacement training or treatment for addiction problems. Finally, the RS-V screening may promote risk communication and serves as a medium for transferring risk information between prison staff and with aftercare programs. This sharing of knowledge regarding risk profiles and subsequent personalized risk management is anticipated to contribute to prison and community safety. After a pilot study in seven Dutch prisons, the RS-V has been implemented within all Dutch prisons in 2021 (De Vries Robbé et al., 2021). For more information about the RS-V and the background regarding its development and intended use, see Smeekens et al. (2024b, 2024c).

Previous studies have shown that RS-V scores are able to predict both violent recidivism after release and violent and aggressive incidents during imprisonment (Smeekens et al., 2024b, 2024c). However, these initial validation studies analyzed retrospective data; they included RS-Vs rated by researchers based on file information of detained individuals (see Chapter 3 and Chapter 5). Since the RS-V has been implemented within the Dutch prison system and is now being conducted for every single new person who enters a Dutch prison, a large amount of data from prison practice is available for prospective research. Therefore, this study analyzes RS-Vs completed by prison employees in all 25 prisons within the Netherlands. The predictive validity of the ratings on these RS-Vs is tested for violent and aggressive incidents during a 4-month follow-up period in prison. More specifically, we investigate the predictive validity of the scores on the RS-V subscales, the RS-V total score, and the rating of final conclusion A (concerns regarding future violence inside prison) for both types of incidents. In prison practice, prison employees solely work with the qualitative labels of the individual RS-V factors and the final SPJ conclusions; the numerical subscale scores and total scores described in the present study are calculated

for research purposes only. Since this is a prospective study, including RS-Vs rated by prison employees in real-life prison practice, the results of the screening may have led to subsequent follow-up measures in order to prevent future violence. However, this study does not specifically look into which risk management strategies are instated based on the results of the RS-V and whether they were effective.

Based on findings in the before mentioned retrospective research on incidents during prison stay (Smeekens et al., 2024c), we expected that the RS-V ratings by prison employees would have sound predictive validity for violent and aggressive incidents occurring within the prison setting. Since a previous retrospective study found that test scores on the RS-V were specifically able to predict violent incidents directed at prison staff rather than incidents directed at other incarcerated individuals (Smeekens et al., 2024c), this prospective study aimed to further investigate whether the predictive validity of the RS-V scores varies between victim types in prison practice. Furthermore, previous research has been inconclusive regarding the association between the occurrence of violent behavior and detention duration. Therefore, this association is also included as an exploratory research question within the present study, by adding the length of stay in prison before the moment the screening took place as an additional variable. It was expected that the time individuals have spent in prison thus far would influence the predictive validity of the RS-V ratings for violent and aggressive incidents during confinement. More specifically, we anticipated that adding detention duration would improve the prediction accuracy of the final conclusion ratings of the RS-V in such a way that the predictive validity is stronger for individuals who have been incarcerated longer. First, this is expected because prison staff generally know an individual better if he or she has been incarcerated longer. Therefore, the information that is included into the RS-V will likely be more reliable. Second, incarcerated individuals may need some time to ‘settle down’ and get used to the (strains within) prison environment, making them less unpredictable over time.

METHOD

Transparency and openness

This study’s design and its analyses were not preregistered. The analysis code for this study is available upon the reasonable request of the corresponding author.

Participants

The participants in this study were detained individuals from all 25 Dutch prisons. Within the Netherlands, roughly three prisons have a relatively small capacity of less

than 200 individuals, 18 prisons have a moderate capacity between 200 and 500 individuals, whereas four prisons are relatively large with a capacity of more than 500 individuals. Approximately 8,500 individuals (54 out of 100,000 Dutch inhabitants in 2022) reside within these prisons on a daily basis (Statista Research Department, 2023). The average detention duration within the Netherlands is 4 months (Dutch Custodial Institutions Agency, 2023a). The incarceration rates within the Netherlands are relatively small compared to the incarceration rates in countries such as England and Wales (159 – 100,00 inhabitants in 2023) or the United States (531 – 100,000 inhabitants; (Ann Carson & Kluckow, 2023; Sturge, 2023). In addition, within these countries, the prison capacity and the length of sentences of prison inhabitants are relatively large compared to Dutch prisons.

The detained individuals included in this study had RS-Vs that were completed during the first 6 months after implementation of the RS-V within the Dutch prison system, which is September 2021 up to and including February 2022. In one of the prisons, implementation of the RS-V commenced earlier. Hence, for this particular prison, RS-Vs from April 2021 onward were included. Participants could be included in the study if they adhered to several inclusion criteria. First, an individual was required to have a complete RS-V, consisting of a filled-in part one, part two, and part three (see the following paragraph), with not more than two factors scored as unknown. Second, regarding the follow-up period, a participant for whom the RS-V was completed needed to have remained in prison for at least 4 months (120 days) after the rating of the final conclusions, part three, of the RS-V. The final inclusion criterion concerned participants to have been formally convicted for the offense that led to the corresponding (current) prison sentence, as opposed to individuals still awaiting court decisions.

The final sample consisted of 850 male and 106 female detained individuals, 956 in total. At the start of their detention period, the included detainees were 40 years old on average ($SD = 11.69$, range = 19 – 78). The average number of days they spend in prison, from the start of their detention until the rating of the final conclusions of the RS-V (part three), was 525 days ($SD = 967.83$, range = 20 – 10,945). Approximately a quarter (25.5%) of the sample was a first-time detainee. Table 4.1 displays information about previous violent behavior among the included participants (see the following paragraphs for more information about factors H1 and H2).

Table 4.1 Previous violent behavior of the detained individuals included within this study ($n = 956$)

Frequency of offense/incident	Historical risk factor	
	Historical risk factor 1 (H1) of the RS-V: Previous interpersonal violence (convictions) outside prison (n , %)	Historical risk factor 2 (H2) of the RS-V: Previous interpersonal violence (disciplinary reports) inside prison (n , %)
0	175 (18.3)	660 (69.0)
1	159 (16.6)	91 (9.5)
2 – 3	204 (21.3)	111 (11.6)
4 – 5	159 (16.6)	33 (3.5)
≥ 6	255 (26.7)	53 (5.5)

Note. Factors H1 and H2 contained 4 and 8 missing values, respectively

The RS-V and the administration process within Dutch prison practice

The RS-V is a screening instrument that facilitates the structured evaluation of violence risk of all adult prisoners (De Vries Robbé & Van den End, 2020). The aim of this instrument was to create more insight into the most relevant risk and protective factors for each individual and to subsequently draw conclusions regarding concerns about the future violent behavior of that individual. The definition of violence that is used within the RS-V is as follows: attempting, threatening with, or actual physical violence toward others (including sexual violence). The RS-V is rated based on SPJ assumptions and consists of three parts. Within Dutch prison practice, these three parts are rated by different assessors at different time points during the beginning of incarceration. Generally, employees who rate the RS-V subsequently remain continuously involved with this individual. After the initial assessment at the start of incarceration, the RS-V may be reassessed later on during prison stay. This is done to assist decision making when (longer term) leave from prison are proposed. In addition, reassessment may be carried out whenever deemed necessary by prison staff in order to monitor changes in violence risk concerns. For an overview of the content of the RS-V and the administration process within prisons in the Netherlands, see table 4.2.

Table 4.2 The content of the RS-V and an overview of the administration process of the RS-V within Dutch prison practice

Part	Content	Qualitative label and rating	Moment of evaluation	Assessor
1	Historical risk factors subscale H1. Previous interpersonal violence outside prison H2. Previous interpersonal violence inside prison	0x (0) 1x (1) 2 – 3x (2) 4 – 5x (3) ≥6x (4)	Within one or two days after admission	Back office employee
2	Dynamic risk factors subscale (past 6 months in prison) R1. Recent interpersonal violence R2. Substance use R3. Negative/defiant attitude R4. Impulsive behavior Dynamic protective factors subscale (past 6 months in prison) P1. Following rules and agreements P2. Coping with problems and frustrations P3. Positive influences from social network P4. Motivation for crime free future	Not or hardly present (0) Moderately present (1) Clearly present (2)	1. Within 6 weeks 2. Prior to proposed leave 3. When deemed necessary	Case manager
3	Final conclusions (coming 6 months). Concerns regarding future: A. Violence inside prison B. Violence outside prison after release C. Violence outside prison during leave	Low concerns (0) Moderate concerns (1) Serious concerns (2)	1. Within 6 weeks 2. Prior to proposed leave 3. When deemed necessary	Multidisciplinary

Part 1: Historical risk factors

Part one of the RS-V consists of two historical risk factors. These are 'previous interpersonal violence outside prison' and 'previous interpersonal violence inside prison'. Both factors are scored on a 5-point scale (see table 4.1). Previous interpersonal violence outside prison within factor H1 was defined as formal convictions (excluding dismissals and acquittals) for a violent offense within the community. Whether an offense is categorized as violent, is based on the penal code given to the offense as stated on the criminal record of a detainee. These violent convictions may include, for example, (attempted) manslaughter, (aggravated) assault, (attempted) sexual violent offenses, verbal violent threats, stalking, and arson with immediate danger for other persons. Harmful behaviors that do not concern interpersonal violence are not included in this study, such as hands-off sexual offenses, verbal abuse without a specific threat, the (deliberate) destruction of goods, or self-harm. Factor H2 was operationalized in the same manner as the violence outcome measure used within this study (see section 'Violent and aggressive incidents within prison').

The historical risk factors are rated by a back office employee as soon as possible after admission, usually within 1 or 2 days. Within Dutch prisons, back office employees perform administrative tasks regarding the admission process, possible transfers, reintegration, and eventually the release of a detainee. With regard to part one of the RS-V, the back office employee searches within the official criminal record and prison record of a new detainee whether they committed any previous violent offense(s) in the community or violent incident(s) during previous prison stays. Based on the information within these records, part one of the RS-V is completed. In case the individual has displayed previous violent behavior during prison stay, a message containing this information is sent to the head of the ward/department where this individual is currently being detained. By doing so, the employees of that ward immediately know whether a newly detained individual, for instance, might need extra attention or should be approached in a cautious manner. Part one of the RS-V is administered for all individuals who enter a Dutch prison.

Part 2: Dynamic factors

Part two of the RS-V entails four dynamic risk factors and four dynamic protective factors. These factors are rated on a 3-point scale, where a higher score indicates the presence of a problem when it concerns a risk factor or a strength when it concerns a protective factor. Namely, not or hardly present (rated as 0 in the present study), moderately present (rated as 1), or clearly present (rated as 2). The dynamic factors are assessed by the case manager. A case manager within the Dutch prison system has their own caseload and is responsible for the detention and resocialization process of a

small group of incarcerated persons. The case manager rates the eight dynamic factors based on their own behavioral observations of the detainee and on the behavioral reports within the digital file of a detainee since admission or the past 6 months of prison stay. These behavioral reports are filled in by different prison employees (e.g., administrator, prison officer, ward manager, work supervisor, or sports teacher). The case manager writes down arguments for each of the factors, based on which the ratings are selected. Besides assessing each of the eight dynamic factors, the case manager may include additional violence-related information if this is deemed relevant for the individual case. Since, naturally, it takes some time to gather information about an incarcerated person and observe their behavior within the prison, part two of the RS-V is generally completed within 6 weeks (some prisons 9 weeks) after admission. As a consequence, for individuals who have a detention duration of less than 6 weeks, only part one of the RS-V is rated.

Part 3: Final conclusions

The final part of the RS-V, part three, contains three final conclusions regarding concerns about future interpersonal violent behavior of a detained individual during the following 6 months: (A) within prison, (B) post-release, and (C) during leave. The final conclusions are rated on a 3-point scale: low concerns (in this study converted to 0), moderate concerns (1), or serious concerns (2). These conclusions are based on the ratings, argumentation, and possible additional violence-related information included in part one and part two of the RS-V. Consensus regarding the final conclusions of the RS-V between different prison workers (e.g., unit supervisors, case managers, prison officers, administrators) is reached through discussion during a multidisciplinary team meeting. Each individual is discussed at least every 4 weeks during these meetings. Final conclusion A (concerns regarding interpersonal violence inside prison) and final conclusion B (concerns regarding interpersonal violence outside prison after release) of the RS-V are rated during the second multidisciplinary team meeting after admission of a detainee, which occurs after 6 weeks (when part two of the RS-V is completed). In addition to final conclusions A and B, final conclusion C (concerns about interpersonal violence outside prison during leave) is completed in case (long-term) leave is proposed.

Naturally, all parts of the RS-V are updated whenever the RS-V is reassessed later during prison stay to maintain an accurate and up-to-date overview of the current risk and protective factors of an individual. Because the final conclusions are formed in a multidisciplinary manner, this offers an opportunity for prison employees to subsequently discuss follow-up measures regarding the findings from the RS-V. For instance, discussing what interventions would be beneficial to support an individual in targeting specific risk or protective factors, contemplating on what risk management

measures could be utilized to be able to grant (un)supervised leave to an individual for whom there are moderate or serious concerns, or considering whether more comprehensive violence risk assessment is needed to gain a better understanding of the serious concerns regarding violence in a specific case.

Violence and aggressive incidents within prison

The main goal of the RS-V is to predict and prevent future violent behavior. Hence, we included three main outcome measures of violent behavior and proxies thereof during prison stay: (a) violent incidents, (b) aggressive incidents, and (c) both categories of violent and aggressive incidents combined. The category of violent incidents was defined as actual physical violence and/or violent threats toward other people and was further divided into violence toward staff or violence toward other detained individuals. Aggressive incidents consisted of aggression toward objects (such as damaging property or severely slamming or kicking walls and doors) and verbal disruptive behavior (such as insulting others or verbally abusive behavior; without an explicit violent threat). The violent and aggressive incidents were measured during a 4-month (or 120-day) follow-up period within the prison setting, from the date of the rating of part three of the RS-V until 4 months later. The incidents were scored as 0 (no/not present) or 1 (yes/present) per outcome category for each individual. The frequency of the incidents within each category was not included within this study. For example, if an individual committed several incidents of physical assault during the follow-up period, these incidents were still counted as 1 (yes) for the outcome category of violent incidents and then automatically also as 1 (yes) for the combined outcome category of violent and/or aggressive incidents. Information regarding the occurrence of violent and aggressive incidents was based on individual detainee reports within the central digital prison archive of the Dutch Ministry of Justice and Security.

The reported incidence of violent or aggressive behavior among females was too low to run separate analyses for this group of incarcerated individuals. More specifically, only two (1.9%) females committed a violent incident, four (3.8%) showed an aggressive incident, and five (4.7%) females displayed any violent or aggressive incident during the 4-month follow-up period. On the contrary, among the males, 99 (11.6%) individuals committed a violent incident, 95 (11.2%) individuals showed an aggressive incident, and 138 (16.2%) individuals displayed at least one violent or aggressive incident during follow-up. Table 4.3 shows the occurrence rates of violent and aggressive incidents among the total sample, females included.

Table 4.3 The occurrence rates (yes/no) of the different types of incidents within prison during a 4-month follow-up period

Incident category	Number of detained individuals (n = 958)	%
Violent incidents	101	10.6
Toward staff	58	6.1
Physical violence	14	1.5
Violent threats	51	5.3
Toward other detained individuals	59	6.2
Physical violence	43	4.5
Violent threats	19	2.0
Aggressive incidents	99	10.4
Aggression toward objects	36	3.8
Verbal disruptive behavior	85	8.9
Any violent or aggressive incident	143	15.0

Note. Results between incident categories may overlap. Meaning that an individual could have committed incidents within different categories and that subcategories will not add up to the total

Detention duration

Following the implementation of the RS-V in September 2021, prison employees conduct an RS-V for each individual that enters a Dutch prison. As can be read in the previous section, the initial RS-V is completed at the start of incarceration, and reassessments can be done later on. However, at the beginning of the implementation process, all prisoners who were imprisoned at that moment received an RS-V rating, which means that for individuals who just started their detention period but also for individuals who were imprisoned for a longer time period, an RS-V was conducted. Therefore, it should be noted here that the current sample had a relatively lengthy average prison stay of 1.5 years at the time of screening. The benefit of this for the present study was that there was a wide distribution in length of prison stay, which made it possible to study the influence of length of stay on the predictive validity of RS-V ratings.

In the present study, detention duration is defined as the number of days an individual spends in prison until the moment the RS-V is conducted. Detention duration was operationalized as a dichotomous measure based on the median (see section 'Statistical design'). An imprisonment of 137 days or less represented a 'short' detention duration (n = 480), and an imprisonment of 138 days or more represented a 'long' detention duration (n = 476). Information regarding the detention duration of detained individuals was retrieved from the digital central archive of the Dutch Ministry of Justice and Security.

Procedure

This study protocol was approved by the ethics committee of the Institute of Pedagogical Science of the University of Leiden (Reference Number: ECPW-2021/33). The study design of the current research is similar to the study design of Smeekens et al. (2024c). This previous retrospective study included RS-Vs completed by researchers based on file information of detained individuals. These individuals were released from a Dutch prison between 2014 and 2017, thereby reflecting the retrospective nature of this study because during this time period, the RS-V was not yet developed nor implemented within the Dutch prison system, and individuals were already released from prison during data collection. On the contrary, the present study includes RS-Vs rated by prison employees in real-life prison practice shortly after implementation of the RS-V in 2021, and the concerned detained individuals were still imprisoned during data collection. However, within both studies, the same outcome measures regarding violence and aggression were included, a similar follow-up period of 4 months¹⁰ was used, and the subscale scores and RS-V total scores were calculated in the same manner (see sections 'Violent and aggressive incidents within prison' and 'Statistical design').

The data collection for this multisite prison study occurred from January 2023 until June 2023, for all 25 Dutch prisons. The first step of data collection was to retrieve the RS-Vs of detained individuals, rated by prison employees, from the MetIS digital system. MetIS is the central data warehouse of the Dutch Custodial Institutions Agency, where information from different sources and systems is stored in a centralized manner. Researchers checked whether the detainees/RS-Vs adhered to the inclusion criteria (see section 'Participants'). Information about demographic variables and detention duration was also retrieved from MetIS.

The second step of data collection consisted of retrieving and rating the outcome measures based on incident reports within the digital detainee files. First, reports concerning the follow-up period were selected (from the date of rating part three of the RS-V until 4 months later). Second, information about violent and aggressive incidents was acquired by filling in a scoring form that contained the date, type of incident, and, if applicable, whether the violent incident was directed at personnel or fellow incarcerated persons. The outcome measures were scored by five different researchers in close collaboration. Frequent discussions took place regarding the inclusion of incidents,

10 According to the RS-V manual, the final conclusions of the RS-V concern the following six months. However, since the majority of prisoners in the Netherlands are already released within six months, Smeekens et al. (2024c) decided to use a 4-month follow up period in order to be able to detect in-prison violent and aggressive behavior, yet still ensuring a relatively large sample size. The current study uses the same 4-month follow-up period for replicability reasons.

leading to a final decision regarding the inclusion or exclusion of a certain incident, which enhanced the reliability of the outcome measures. Last, the data containing individual RS-Vs were matched with the data regarding violent and aggressive incidents during the 4-month follow-up period for each individual.

Statistical design

Data preparation and data analyses were conducted using IBM SPSS Statistics Version 28 and R Version 4.4.0. Within this study, numerical subscale scores and the numerical total score of the RS-V were calculated. These numerical scores were calculated for research purposes only (in order to gain insight into the average ratings and predictive validity of the different subscale scores and the RS-V total score). Within prison practice, these numerical ratings are not used, and prison employees solely work with the qualitative labels of the individual factors (not or hardly/moderately/clearly present) and the final conclusions (low/moderate/serious concerns), including sound argumentation. Following the SPJ methodology, these qualitative ratings and arguments are subsequently used to discuss follow-up measures.

The subscale scores concerned the historical risk factors, the dynamic risk factors, and the dynamic protective factors. Since the historical risk factors are scored on a 5-point scale and the dynamic factors are scored on a 3-point scale, we collapsed the historical risk factors into a 3-point scale in order to be able to compose an overall total score on the RS-V. The historical risk factors ratings of 1 – 2 were recoded into 1 and the ratings of 3 – 4 were recoded into 2. The total score of the RS-V is calculated by adding up the historical risk factors and the dynamic risk factors and subsequently subtracting the dynamic protective factors. Therefore, a negative total score of the RS-V indicates a greater presence of protective factors in comparison to risk factors and vice versa.

Out of the 10 RS-V factors, 0.58 factors were missing per individual on average. The majority of factors contained less than 5% missing values. Except for the factor P3 (positive influences from social network), which contained 24% missing values, and the factor P4 (motivation for crime-free future), which contained 22% missing values. To correct for these missing values, the method of pro-rating was used: each missing value received the mean score on the corresponding subscale for the individual case. The adjusted subscale scores and the adjusted RS-V total score were used in the predictive validity analyses. Descriptive statistics of the ratings on the unadjusted individual RS-V factors and final conclusion A and the adjusted subscale scores and RS-V total score were retrieved. In order to analyze the possible association between detention duration and violent/aggressive incidents within the prison, we included detention duration as a dichotomous variable. The dichotomous detention duration variable was created by

splitting the group of participants into two groups based on the median: one group with a shorter detention period (20 – 137 days) and one group with a longer detention period (138 – 10,945 days). Chi-square tests were used to test the difference between these two groups with regard to the occurrence of a violent, aggressive, or any violent/aggressive incident.

To investigate whether RS-V test scores are able to correctly identify/predict whether a detained individual will show violent or aggressive behavior during imprisonment, receiver operating curve (ROC) analyses were conducted. More specifically, we looked at the predictive validity of the subscale scores, the RS-V total score, and the final conclusion A rating (concerns regarding violence inside prison) for violent and aggressive incidents within prison during a 4-month follow-up period. Final conclusions B and C are reflecting concerns regarding violence outside the prison and are therefore not included as predictors within this prison practice study. ROC analyses result in area under the curve (AUC) values. These values may vary between 0 and 1, where a score of 0.5 means the instrument performs at the chance level and a value of 1 reflects a perfect prediction. Furthermore, AUC values can be classified as small (between .56 and .64), medium (between .64 and .71), or large (above .71; Rice & Harris, 2005). The AUC values of the subscale of dynamic protective factors were mirrored, meaning that a higher AUC demonstrates a protective effect against the incidence of violence and/or aggression. Separate ROC analyses were run for violent incidents, aggressive incidents, and both categories combined. Moreover, two additional separate ROC analyses were conducted for violent incidents toward staff and violent incidents toward other detained individuals.

Statistical differences between AUC values were tested using the DeLong test (DeLong et al, 1988). This was done for the AUC value of the RS-V total score versus the AUC value of final conclusion A for all three main outcome measures (violent incidents, aggressive incidents, or any incident). In addition, including the same outcome measures, the AUC values of all three subscale scores were compared with one another. Furthermore, the AUC values of all predictors (historical risk factors, dynamic risk factors, dynamic protective factors, RS-V total score, and final conclusion A) were statistically compared regarding the outcome measure violence toward staff versus the outcome measure violence toward other detained individuals.

Finally, three further additional ROC analyses were performed to find out whether there was a difference in the predictive validity of the RS-V scores (the subscale scores, the RS-V total score, and the final conclusion A rating) for violent incidents, aggressive

incidents, or any incident between the group of individuals with a short detention period and the group of individuals with a long detention period.

RESULTS

RS-V scores

Table 4.4 displays the mean and standard deviations of the included RS-Vs on the individual factors and the adjusted subscale scores of the RS-V. The dynamic risk factors are rated relatively low compared to the dynamic protective factors, which is reflected in the negative average RS-V total score. Meaning that, on average, there was a greater presence of protective factors in comparison to risk factors in the included sample and that, overall, detained individuals in the present sample behaved relatively well during their prison stay. Regarding final conclusion A, for 74.2% of the individuals, the prison employees had 'low concerns' regarding future violent behavior within the prison. While, for 15.8% and 10.0%, respectively, they had 'moderate concerns' and 'serious concerns'.

Violent incidents, aggressive incidents, and detention duration

The chi-square analyses showed that there was a significant association between detention duration and aggressive behavior ($\chi(1) = 3.892$, $p = .049$, std. residual min = 1.97, std. residual max = 1.97). More specifically, detained individuals within the short detention duration group (12.3%) were more likely to show an aggressive incident than the detained individuals within the long detention duration group (8.8%). For violent incidents or any incident, the differences between the two groups were not statistically different (respectively: $\chi(1) = 3.042$, $p = .081$, std. residual min = 1.74, std. residual max = 1.74; $\chi(1) = 3.423$, $p = .064$, std. residual min = 1.85, std. residual max = 1.85).

Table 4.4 The mean and standard deviations of the included RS-Vs on the unadjusted individual factors and final conclusion A, and the adjusted subscales and RS-V total score.

Statistic	Historical risk factor subscale	Dynamic risk factor subscale	Dynamic protective factor subscale	RS-V total score	Final conclusion A: Concerns regarding violence inside prison					
<i>M</i>	1.70	1.07	6.18	-3.41	.36					
<i>SD</i>	1.35	1.60	2.11	4.04	.84					
Min. -Max.	0 – 4.80	0 – 8.00	0 – 8.00	-8.00 – 12.20	0 – 2					
Individual factors	Factor H1: Previous interpersonal violence inside prison	Factor R1: Recent interpersonal violence	Factor R2: Substance use	Factor R3: Negative/defiant attitude	Factor R4: Impulsive behavior	Factor P1: Following rules and agreements	Factor P2: Coping with problems and frustrations	Factor P3: Positive influences from social network	Factor P4: Motivation for crime free future	
<i>M</i>	2.17	.66	.14	.42	.30	.22	1.61	1.58	1.47	1.54
<i>SD</i>	1.45	1.16	.43	.69	.62	.54	.67	.67	.73	.68
Min. -Max.	0 – 4	0 – 4	0 – 2	0 – 2	0 – 2	0 – 2	0 – 2	0 – 2	0 – 2	0 – 2

Note. The historical risk factors were recoded into a 3-point scale in the calculation of the total score.

Table 4.5 The Area Under the Curve (AUC) and 95% Confidence Intervals (CI) of the RS-V regarding violent and aggressive incidents within prison

Incident	Historical risk factor subscale		Dynamic risk factor subscale		Dynamic protective factor subscale		RS-V total score		Final conclusion A: Concerns regarding violence inside prison	
	AUC	95% CI	AUC	95% CI	AUC	95% CI	AUC	95% CI	AUC	95% CI
Violent incidents (prevalence = 11%)	.746	(.70, .79)	.756	(.70, .81)	.729	(.67, .79)	.805	(.76, .85)	.734	(.68, .79)
Toward staff (prevalence = 6%)	.744	(.68, .80)	.792	(.73, .86)	.770	(.70, .84)	.836	(.79, .89)	.734	(.66, .81)
Toward other detained individuals (prevalence = 6%)	.738	(.68, .80)	.741	(.67, .81)	.710	(.64, .78)	.783	(.72, .85)	.739	(.67, .81)
Aggressive incidents (prevalence = 10%)	.736	(.69, .79)	.775	(.72, .83)	.736	(.68, .79)	.816	(.78, .86)	.694	(.63, .75)
Violent incidents and aggressive incidents (prevalence = 15%)	.731	(.69, .78)	.743	(.70, .79)	.724	(.68, .77)	.795	(.76, .83)	.695	(.64, .75)

Note. All p-values were <.001.

Predictive validity of RS-V ratings for violent and aggressive incidents within prison

The AUC values reflecting the predictive validity of the subscales scores, the total score, and the rating on final conclusion A of the RS-V for violent and aggressive incidents are displayed in table 4.5. All AUC values were statistically significant ($p < .05$), and the majority was large, ranging from .694 to .836. The AUC value of the RS-V total score was significantly higher than the AUC value of the final conclusion A score (concerns regarding interpersonal violence within the prison) for violent incidents, aggressive incidents, and any incident, respectively: $Z = 2.99$ ($p = .003$, 95% CI [0.024, 0.117]); $Z = 5.29$ ($p < .001$, 95% CI [0.077, 0.167]); and $Z = 4.89$ ($p < .001$, 95% CI [0.060, 0.140]). On the contrary, the AUC values of the subscale scores did not significantly differ from each other. In addition, there was no statistical difference between the AUC values of each subscale score, the RS-V total score, and final conclusion A regarding violence toward staff versus violence toward other detained individuals. Finally, there were no significant differences in the predictive validity of the subscale scores, the RS-V total score, and the final conclusion A score (concerns regarding violence inside prison) for violent incidents, aggressive incidents, or any incident between the group of individuals with a shorter detention period and the group of individuals with a longer detention period.

DISCUSSION

This study investigated whether test scores on the novel RS-V are able to predict future violent and aggressive incidents of incarcerated individuals during a 4-month follow-up period within prison. Whereas previous studies included RS-Vs rated by researchers based on digital prison reports retrospectively (Smeekens et al., 2024b, 2024c), this study analyzed RS-Vs from real-life prison practice (i.e., completed by prison employees)¹¹ and prospective data on violent and aggressive incidents. The results show that the subscale scores, the RS-V total score, and the final conclusion A rating (concerns regarding violence inside the prison) have good to excellent predictive validity for violent incidents, aggressive incidents, and both categories combined. In addition, RS-V scores are predictive of violence and aggression toward staff members as well as violence and aggression toward other incarcerated individuals. Moreover, we found no difference in the predictive validity of RS-V ratings between the group of detained

11 Within the Discussion section, the results of the present prison practice study are compared to the results of two previously conducted retrospective file-based studies. One study investigated the predictive validity of RS-V scores for violent recidivism after release (Smeekens et al., 2024b). The other study had a study protocol similar to that of the present study (Smeekens et al., 2024c), thus analyzing the predictive validity of the RS-V scores for violent and aggressive incidents within prison.

individuals with a short detention duration versus the group of detained individuals with a long detention duration.

The predictive values within this prison practice study were somewhat higher compared to the predictive values within a similar retrospective file-based study (Smeekens et al., 2024c). This suggests that prison employees (without formal training as behavioral experts) who work with detained individuals on a daily basis are able to (more) accurately rate the RS-V based on information available in prison practice. The good predictive validity of RS-V ratings by prison staff may in part be due to their firsthand observations and hands-on experience working with incarcerated individuals in prison practice. This differed from the previous retrospective study, as RS-Vs in that study were completed by researchers who work remotely and rated the RS-Vs based on file information alone. As such, the present study indicates that the RS-V can be completed successfully by general prison staff without specific behavioral expertise.

The predictive validity of the RS-V total score and the final conclusion A rating are both large. However, the discriminant ability of the final conclusion A score is statistically smaller than the discriminant ability of the RS-V total score. A possible explanation for this difference could be that the multidisciplinary discussion of the final conclusions by prison workers is in need of further improvements. Actively discussing possible concerns regarding individual violence risk during multidisciplinary team meetings is a relatively new process within Dutch prison practice, and the implementation process of a new risk screening tool is not a quick and easy endeavor. Instead, it is a process that takes time and requires ongoing attention, user support, and guidance (e.g., regular evaluations). Further monitoring and improving the discussion of the final conclusions by prison workers during the multidisciplinary meetings is an important implication for prison practice. Applying this SPJ-based method for the final conclusions is still preferred above an actuarial method in order to, among others, incorporate the professional judgment and expertise of multidisciplinary prison personnel, to provide the opportunity to include additional personal risk-related information, to further individualize the risk screening, and to facilitate subsequent multidisciplinary discussions regarding follow-up measures. Future studies may offer insight into whether the predictive validity of the final conclusion A rating improves over time as team discussions become more in-depth. Notably, one would expect the predictive validity of the RS-V scores to become lower over time since, if applied correctly, based on the RS-V findings tailored risk management follow-up measures are taken in order to prevent future institutional violence. The good predictive validities of the RS-V test scores, found in the present prospective study, may indicate that risk management was not (yet) fully executed properly during the first months after implementation.

Whereas the previous retrospective file study found that RS-V ratings were only significantly predictive of violence toward staff rather than violence toward fellow incarcerated persons (Smeekens et al., 2024c), the present study found the RS-V scores to be significantly predictive of violence toward both types of victims. These results show that the RS-V can be used to predict individual violent and aggressive incidents, regardless of at whom this behavior is directed (staff or fellow detainees).

Analyses revealed that individuals with a shorter detention duration (until the moment of the screening) were more likely to act out aggressively during the 4-month follow-up than individuals with a longer detention period. This result contradicts previous studies regarding prison misconduct, which found that the incident rate increased with detention duration (Dhami et al., 2007; Marcum et al., 2014; Sorensen & Cunningham, 2007), but supports prior research that found similar results (Flanagan, 1980; Jiang & Fisher-Giorlando, 2002; Zamble, 1992). The finding that a shorter detention period is associated with relatively more aggressive incidents could be explained by the GST. Namely, as individuals spend more time within prison, they may adapt to the prison environment, which makes them better able to cope with the strains that are part of this environment. This improved coping with prison strains over time, may in turn lead to a reduction of aggressive incidents toward others. Research by Zamble, (1992) supports this hypothesis; incarcerated individuals showed improved adaptation during the course of 7 years of imprisonment, which was accompanied by a decrease in disciplinary incidents.

Against our hypothesis, we found no significant differences regarding the predictive validity of the RS-V scores between the group of individuals with a longer detention duration and the group of individuals with a shorter detention duration. More specifically, it seems that the sentence length until the moment of the screening does not influence the predictive validity of the RS-V test scores. This result indicates that the RS-V may be conducted at different time points during incarceration while providing equally reliable and predictive results regarding future institutional violence.

This study showed similar results with the file-based study regarding the occurrence rates of violent incidents, aggressive incidents, and both categories combined (Smeekens et al., 2024c), making these results more robust. Like this file-based study, the present study found rather low base rates of physical violence and violent threats toward other detained individuals (see section 'Limitations and constraints on generality').

This study also looked at the RS-V scores of the included individuals. First, similar to the studies by Smeekens et al. (2024b, 2024c), the results show that the dynamic risk factors are scored relatively low compared to the dynamic protective factors. Second, the two protective factors P3 (positive influences social network) and P4 (motivation crime-free future) contained the most missing values. The number of missing values of the current prison practice study is substantially lower compared to the previous retrospective studies (Smeekens et al., 2024b 2024c). However, it still seems that prison employees sometimes lack information of detained individuals regarding their supportive social network and their motivation to stay out of prison in the future. Therefore, an exploration within Dutch prison practice on how to improve prison workers' knowledge about the social network and motivation for a crime-free future of incarcerated individuals would be useful. For instance, by actively discussing these matters with the detained individual. Enhancing the richness of information used to rate the RS-V will likely further improve its predictive accuracy as the final conclusions are derived from more comprehensive information.

Limitations and constrains on generality

This study has some limitations that should be mentioned. For replicability reasons, based on the study protocol by Smeekens et al. (2024c), the same follow-up period of 4 months regarding violent and aggressive incidents was used. Future studies could include longer follow-up periods (e.g., 6 months, 1 year, or longer) in order to find out whether the RS-V is also able to predict institutional violence on the long term.

A second limitation relates to the included sample of incarcerated persons. In the Netherlands, 69% of the incarcerated persons are released within 3 months (Custodial Institutions Agency, 2022), and the average overall detention duration of Dutch detainees is 4 months (Dutch Custodial Institutions Agency, 2023a). On the contrary, the included sample within this study had an average detention duration of 17 months (until the moment of the screening), which is substantially longer. This is due to the applied inclusion criteria within this study. In order to measure violent and aggressive incidents occurring within prison, we merely included individuals who were still in prison 4 months after the screening. In addition, part three of the RS-V is completed during the second multidisciplinary team meeting (usually within 6 weeks after admission), and we only included fully completed RS-Vs. Furthermore, many of the RS-Vs that were included in this study stem from a period shortly after implementation of the RS-V in prison practice (see section 'Method'). At the time of the implementation, it was agreed that screening with the RS-V would be carried out for all individuals incarcerated at that moment, meaning that these RS-Vs concerned a relatively high number of longer stay individuals that had previously never been screened before. Therefore, the participants

in this study have a relatively long detention period. As a consequence, the findings of this study generalize well to detained individuals who are in need of longer term risk management, but the results may not generalize as well to those with shorter detention stays.

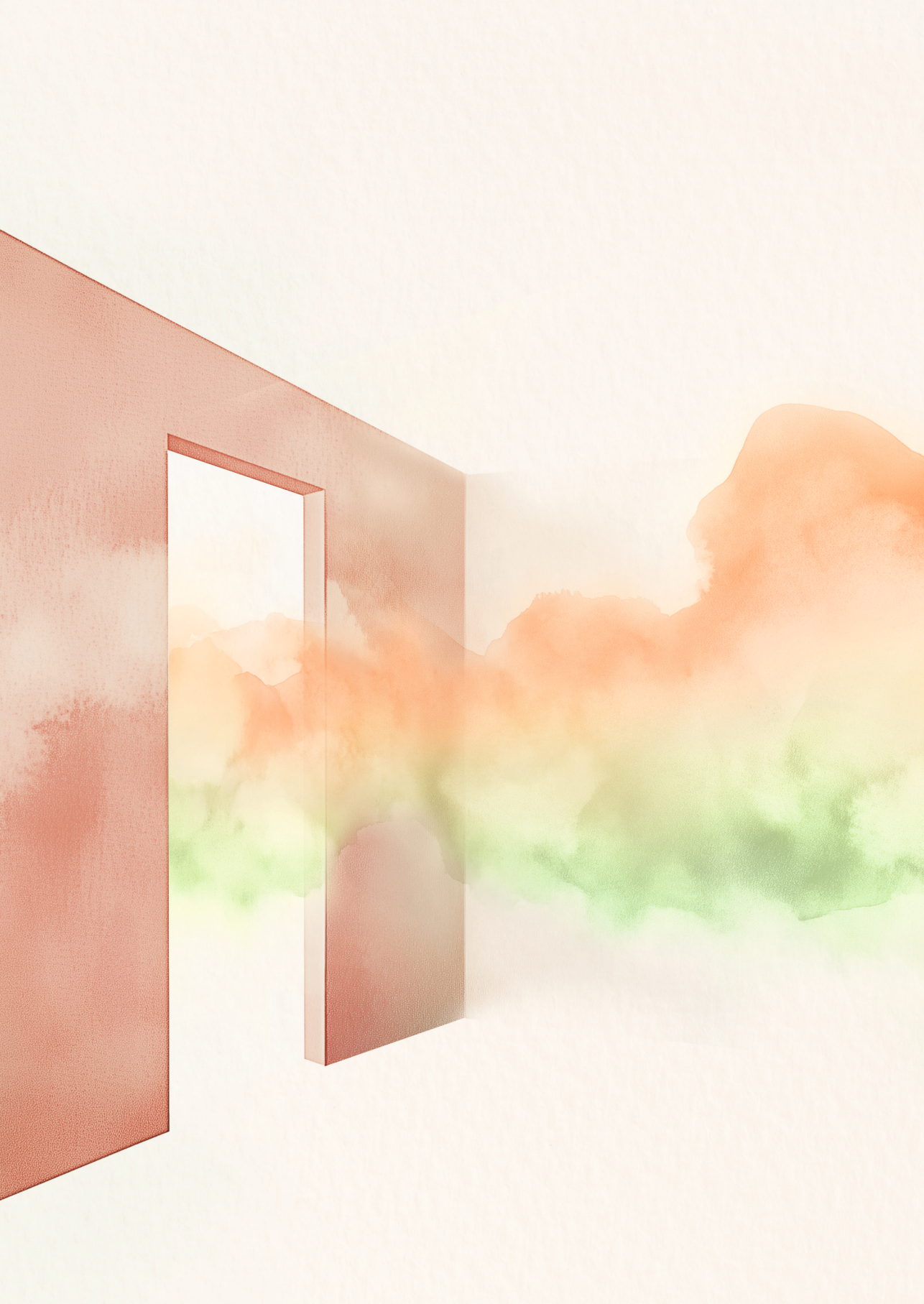
A third limitation that should be mentioned is related to the occurrence rates of the incidents that were retrieved from the digital detainee files. We were not able to run separate analyses for the group of females due to the low base rates of violence and aggression within this subgroup. Furthermore, within U.S. prisons, approximately 21% of the males and females reported prisoner-to-prisoner physical violence during a time frame of 6 months (Wolff et al., 2007), and in England, 33% of the incarcerated individuals indicated that they had received a violent threat at some time during their prison stay (King & McDermott, 1995, as cited in Bottoms, 1999). As can be seen in table 4.3, relatively low base rates of physical violence and violent threats are found within this study. It may be the case that this is an underrepresentation of the actual violence base rates, especially for women, or perhaps violent behavior is less common in general in Dutch prisons. What is more, the results of the screening could have subsequently led to individual differences in personalized risk management strategies in order to prevent future violent behavior. These strategies may have been of possible confounding influence on our violence base rates and may in fact have had a dampening effect on the predictive validity findings in this study. For whatever reason, the differences in violence base rates between settings may dampen the transferability of the current findings. Further empirical validation studies in other settings and countries are therefore recommended. In addition, future research could look into which follow-up measures are instated based on the findings of the RS-V and how these may have had a preventive effect on violent incidents occurring.

Conclusion

This multisite prison practice study regarding the predictive validity of the RS-V test scores for violent and aggressive incidents of incarcerated individuals is an important step in the further validation of this tool for use within prison practice. It can be concluded that, both retrospectively and prospectively, RS-V scores are able to predict the occurrence of future violent and aggressive behavior of individuals within the prison. In addition, this study reveals that RS-V ratings are able to predict inmate-on-inmate physical assault as well as inmate-on-staff physical assault. Finally, the RS-V may be administered at different time points during incarceration without the predictive validity of its scores being affected. Therefore, together with the previous retrospective studies, the present study provides further evidence that the RS-V, as a relatively new risk screening instrument, is able to be utilized as a valuable support tool in overall

risk management (provided that follow-up measures are taken when concerns about future violence are serious).

This study explained the specific administration process of the RS-V within Dutch prison practice. This description may be a useful example for other prison settings who wish to implement the RS-V in their work processes. The RS-V may serve as a relevant initial evaluation of the most important risk and protective factors, which aims to enhance prison safety and improve personalized intervention efforts. It could also provide triage on the basis of which more extensive risk assessment instruments or the involvement of behavioral experts is recommended. To ensure proper use of the tool and maximize its value for prison practice, continually monitoring the correct application of the RS-V and providing ongoing user/implementation support in Dutch prison practice remains important. Since the RS-V also aims to address concerns regarding future violent behavior in the community after release (final conclusion B), an important next step is to find out whether RS-Vs completed prospectively by prison employees are also predictive of future violent recidivism after release from prison.



CHAPTER 5

The Predictive Validity of the Risk Screeners Violence (RS-V) for Adults in Prison Regarding Post-Release Violent Recidivism: A File-Based Study

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ABSTRACT

Within the prison system, it is often not feasible to administer comprehensive risk assessment for all incarcerated persons because of limited time and resources. To enhance prison safety and facilitate the structured evaluation of concerns about violence risk for all individuals, the Risk Screener Violence (RS-V) was developed. The goal of this study was to evaluate whether RS-V scores ($n = 571$) are able to retrospectively predict post-release violent (re)offending for males (81%) and females (19%). The RS-V was scored with excellent interrater reliability and demonstrated medium to large predictive validity for all follow-up periods. Surprisingly, the predictive validity for females was even stronger than for males. This study demonstrates that the RS-V offers a promising new method for the efficient screening of concerns regarding violent behavior among incarcerated males and females. Further prospective studies in prison practice will have to consolidate these findings.

Keywords: violence risk assessment, prison, recidivism, gender differences, predictive validity

INTRODUCTION

The reoccurrence of criminal behavior is a widely known problem within society as well as within the prison system. Worldwide, reconviction rates range from 20% to 63% within 2 years after release from prison (Yukhnenko et al., 2020). Within the Netherlands, almost half (47%) of the ex-detainees is reconvicted for criminal activity within 2 years post-release, while 27% is also reincarcerated (Dutch Custodial Institutions Agency, 2022). The prevention of reoffending by ex-detainees requires ongoing attention from governmental institutions and the criminal justice system, especially when it comes to violent crimes, as these types of crimes have a great impact on victims and society at large. The goal of the current study is to investigate the extent to which ratings on a newly developed risk screening tool are able to predict actual violent (re)offending. If this is the case, application of the tool could offer improved insight regarding violence risk and contribute to violence prevention.

Risk assessment within the prison setting

To counteract and prevent future (violent) criminal behavior, custodial settings use risk assessment instruments to estimate the likelihood of an individual committing a new offense. These instruments generally contain risk factors that are known to be associated with the occurrence of criminal behavior, and in particular violent behavior (Bonta & Andrews, 2016). Risk assessment instruments are often composed of static risk factors, historical vulnerabilities unchangeable through intervention such as past offenses and age at first offense, and dynamic risk factors, changeable through intervention such as substance misuse and impulsivity (Plaisier & Van Ditzhuijzen, 2008). Commonly used risk assessment instruments within prisons are, for example, the Level of Service/Case Management Inventory (LS/CMI; Andrews et al., 2004), aimed at general recidivism, and the Historical, Clinical, Risk Management Version 3 (HCR-20^{v3}; Douglas et al., 2013), which is specifically aimed at determining the risk of violence. Other comprehensive tools frequently used in the prison system that exclusively focus on predicting violence are the Violence Risk Scale (VRS; Wong & Gordon, 2006), and the Violence Risk Appraisal Guide (VRAG; Harris et al., 1993).

Besides risk factors, protective factors have become widely used for gaining a more complete overview of the risk level of an offender. Protective factors are assumed to be associated with a decrease of offending (De Vogel et al., 2012a), and are deemed vital for an accurate evaluation of risk (De Vries Robbé & Willis, 2017). An increasingly commonly used risk assessment instrument, both in forensic psychiatry and within prison settings, that exclusively focuses on measuring protective factors is the Structured Assessment of Protective Factors for violence risk (SAPROF; De Vogel et al., 2012a). A recent meta-

analysis showed that its protective factors have incremental predictive validity when used in combination with a risk-focused tool (Burghart et al., 2023). Therefore, the SAPROF is often administered in conjunction with the HCR-20^{V3} or the LS/CMI, to create a comprehensive assessment of risks and strengths for each individual. Another example of an integrated focus on risks and strengths is the Short-Term Assessment of Risk and Treatability (START; Webster et al., 2004), which is applied for short-term risk evaluations in forensic psychiatry.

Conducting risk evaluation, on one hand, increases insight into underlying and sometimes persistent criminogenic factors of an individual and, on the other hand, contributes to the prediction of future offending. For risk evaluation tools to be useful for violence prevention, a sound predictive validity is required. If this is the case, practitioners are able to make more accurate and reliable judgments regarding the potential risk of future offending. Subsequently, they are able to make suitable decisions regarding the implementation of individually tailored interventions to prevent recidivism. Structured risk evaluation is, therefore, an important tool in achieving one of the main goals of imprisonment, reducing recidivism, because it aims to differentiate between high-risk offenders and low-risk offenders (Bonta & Andrews, 2016). Most of the comprehensive risk assessment instruments used within prison settings are validated and are able to predict both community violence and institutional violence (Campbell et al., 2009).

Risk assessment tools are an important element of risk management. However, within the Dutch prison system, it is often not feasible to administer comprehensive risk assessment for all individuals because of limited time and resources (Russo et al., 2020). For instance, 69% of the individuals incarcerated in a Dutch prison are released within 3 months, which makes time-consuming risk assessment difficult (Dutch Custodial Institutions Agency, 2022). In addition, risk assessment instruments need to be conducted by a trained behavioral professional (i.e., a psychiatrist or psychologist), while most employees within prisons are not equipped with the required behavioral expertise (Russo et al., 2020). As a result, comprehensive risk assessment is rarely carried out within the Dutch prison system. In-depth risk assessment is only applied for the relatively small group of individuals who reside within specialized units for psychiatrically disordered individuals, and for individuals who are transferred to forensic psychiatric care after their prison stay. In addition, extensive risk assessment might be conducted when leave is proposed and/or serious concerns exist regarding internal or external safety. However, for most individuals within the prison setting, conducting comprehensive risk assessment is simply not realistic. Besides not being feasible, gaining in-depth knowledge into a wide variety of possible risk and protective factors may not always be necessary and efficient for each detained person.

Risk screening instruments

Nonetheless, regardless of the detention duration, the time individuals spend in prison offers a window of opportunity to intervene and offer support to diminish the likelihood of future violent incidents and recidivism. To achieve the safe rehabilitation of ex-detainees, it is highly beneficial to gain insight into the most important risk and protective factors for each individual. Given the mentioned challenges regarding the use of comprehensive risk assessment, conducting simplified risk screening instruments may provide a more suitable alternative to realistically accomplish this for all individuals in prison practice.

Screening instruments are designed to give a first general indication of the presence of a certain condition or problem and they do not necessarily underperform compared with more extensive instruments (Gray et al., 2007; Nicholls et al., 2004; Roaldset et al., 2012). Screening instruments that have been specifically developed for screening prison populations are, for instance, the Jail Screening Assessment Tool (JSAT; Grisso, 2006), aimed at screening for mental illness, and the UNCOPE, which screens for alcohol and drug dependencies (Campbell et al., 2005). In addition, there are some recidivism risk screening instruments available for use within correctional facilities. For example, the Level of Service Inventory-Revised risk assessment instrument also has an actuarial purely risk screening version for general criminality (LSI-R:SV; Andrews & Bonta, 2001), the actuarial Dynamic Appraisal of Situational Aggression (DASA) can be applied for screening the acute risk of imminent violence (Ogloff & Daffern, 2006), and the VRS-Screener Version (VRS-SV; Wong & Gordon, 2007), and a later suggested even more compact version thereof (Ogloff et al., 2018), comprise short variations of the more elaborate actuarial risk-focused VRS for the assessment of violent reoffending. However, after careful consideration, these instruments were not deemed suitable for widespread use within the Dutch prison system for the purpose of initial risk screening for violence.

The mentioned risk screening instruments each have their own specific features, advantages, and shortcomings, which have been considered carefully in light of the Dutch prison context. An important consideration in this regard is that the prison setting within the Netherlands is currently attempting to establish a culture shift toward a more recovery and rehabilitation focused approach. Therefore, a focus on strengths as well as risks is deemed important for risk evaluations within this context. In addition, in an attempt to improve shared decision-making and a common understanding of important risk and protective factors among Dutch prison workers, risk screening should ideally incorporate a Structured Professional Judgment (SPJ) approach, where consensus regarding the final conclusions of the screening is drawn in a multidisciplinary way. For more information on

the assumptions of SPJ and the grounds for these assumptions, see the study by Hart and colleagues (2016). Moreover, as most Dutch prisons are large institutions that employ few behavioral experts, risk screening should be fairly simple and, therefore, feasible to administer by general prison workers. Finally, because the prevention of future violent offending is one of the primary aims in achieving a safe prison ward climate and safe societal reintegration, using a risk screening instrument that specifically focuses on the prediction and prevention of violent behavior is deemed important within the prison population. None of the existing risk screeners complies with all of these requirements. Therefore, it was decided to develop a new violence risk screener for this specific purpose.

The Risk Screener Violence

To facilitate the structured initial and periodic evaluation of violence risk for all Dutch adult incarcerated individuals, a new and easy-to-administer risk screening tool was developed in the Netherlands in 2020 (De Vries Robbé & Van den End, 2020). This instrument, the Risk Screener Violence (RS-V), which includes both risks and strengths, is administered based on the SPJ approach. The SPJ approach allows assessors (i.e., prison workers), based on their own professional expertise and gathered knowledge about the case at hand, to evaluate which specific factors are most important for the individual and subsequently draw conclusions about concerns regarding violent behavior (including sexual violence; De Vries Robbé & Van den End, 2020). This means that for some individuals certain factors may weigh more heavily or moderately than for other individuals. This process of drawing conclusions regarding concerns about future violence is carried out in a multidisciplinary consensus manner during periodic evaluation meetings.

Importantly, the RS-V is not an extensive risk assessment instrument, but a brief risk screening tool, which offers a first impression of the most important risk factors (e.g., previous interpersonal violence outside prison and substance use) and protective factors (e.g., following rules and agreements and motivation for crime free future). As the RS-V can be conducted for all incarcerated persons, it aims to promote internal safety within prison as well as external societal safety during leave and after discharge. In addition, the results of the RS-V may guide decision-making regarding granting temporary leave or the placement of individuals within the prison system (e.g., lower vs. higher security). Furthermore, by flagging up individuals with serious concerns about future violent behavior, the RS-V may serve as triage to indicate whether an individual is in need of extensive risk assessment. Finally, the RS-V aims to improve the application of personalized interventions, facilitate the communication about risk levels with collaborating agencies (e.g., probation services) or aftercare facilities, and promote the conversation with detained individuals regarding interventions to improve their personal risk and protective factors. By discussing the results of the screening during

a multidisciplinary team meeting, prison workers are also able to discuss individual risk management and follow-up measures.

The results of a pilot study that ran within seven Dutch prisons were promising. Namely, the total score of the RS-V pilot version was rated by regular prison workers with an excellent interrater reliability (Intraclass Correlation Coefficient, ICC = .80), and showed a medium predictive validity for violent (re)offending within 6 months after release (Area Under the Curve, AUC = .68) in a retrospective study, and large predictive validity for violent incidents during a 4-month follow-up within prison (AUC = .82) in a prospective study (De Vries Robbé et al., 2021). After these positive results, it was decided to implement the RS-V nationally across all Dutch prisons. As the tool is now being used widely, ongoing large-scale evaluation of the tool is deemed important. The current study is part of this larger validation project, which aims to examine the validity of the final version of the RS-V for both males and females incarcerated in prison.

The majority of validation research regarding risk assessment instruments focuses on male populations. This is problematic, as the number of women in prison worldwide is increasing (De Vogel & Nicholls, 2016; Walmsley, 2015), and previous research is inconclusive about the question whether risk assessment instruments are sufficiently able to predict (violent) recidivism among women (De Vogel et al., 2019; Geraghty & Woodhams, 2015). These studies highlight the importance of including female populations in research regarding risk assessment instruments, to find out whether existing approaches are equally applicable for women or if gender-specific versions are needed to successfully estimate the risk level of females.

The current study

The current study is the first validation study regarding the official published version of the RS-V, as implemented across all 25 Dutch prisons in 2021. Data were gathered in a retrospective file-based study, which means that the RS-Vs included in this study were rated by researchers based on file information of incarcerated individuals (both male and female) available in the prison records at the time of discharge. The current study will focus on the psychometric properties of the RS-V, in particular the degree of agreement among independent assessors that rate the RS-V (the interrater reliability) and the extent to which RS-V ratings are able to accurately predict future violent behavior, defined as post-release violent (re)offending¹² (the predictive validity).

12 Within this study we included individuals that have been incarcerated for different types of offenses (violent as well as non-violent). Therefore, committing a violent offense after release concerns violent recidivism for some individuals, but for other individuals a violent offense after discharge from prison may be their first violent conviction. We therefore refer to violence after discharge as 'violent (re)offending'.

Regardless of the sometimes limited file information present in prison records, based on the positive results of the pilot study (De Vries Robbé et al., 2021), an excellent interrater reliability is expected. Moreover, as screening instruments are not necessarily less predictive than extensive risk assessment instruments, we expect RS-V scores to show good predictive validity regarding future violent offending. Especially for violent offenses 6 months after release, sound predictive validity is expected because the final conclusions of the RS-V make predictions about the following 6 months. As the pilot study showed promising preliminary results with regard to gender differences, we anticipate that RS-V ratings have sufficient predictive validity for violent (re)offending for males as well as females. Considering this is the first validation study that examines the psychometric properties of the RS-V, an overview of the subscale scores, the RS-V total score (both solely calculated for research purposes), and the final conclusion regarding concerns about future violence (post-release) will be included. Finally, implications of the findings for international prison practice and beyond will be discussed.

METHOD

Participants

The participants included in this study were incarcerated persons from 25 Dutch prisons. Participants were selected by means of a personal identification number, which is used within the Dutch prison system. A systematic sampling approach was used to select the male participants. For comparability reasons, and to include a sufficient number of females, we actively searched for females within the prison database. In contrast to the male sample, the female sample was, therefore, not completely randomly selected.

In total 1,925 detainee files (1,557 males, 368 females) were checked using the following inclusion criteria: The selected individuals needed to (a) be released from a Dutch prison between September 2014 and September 2017, (b) be formally convicted of the crime for which they received the corresponding prison sentence, and (c) have had a prison stay of at least 28 days, to have sufficient file information to complete the RS-V. With regard to the follow-up period and to be able to track whether ex-detainees reoffended or not, the following additional inclusion criteria applied: Participants needed to (d) remain in the Netherlands after being released; (e) not have passed away during the follow-up period; and (f) stay out of prison or a forensic clinic for at least half of the follow-up period (unless rearrested for a violent crime), so-called time-at-risk. Finally, if participants had more than two factors rated as 'unknown' on the RS-V, they were excluded afterward.

The time-at-risk, as defined within this study, is the number of days an individual is at risk of committing a (new) violent crime within the community. Participants were excluded from participation if their time-at-risk was insufficient, that is, if they were reincarcerated for a nonviolent crime during the follow-up period and the corresponding prison sentence(s) lasted for more than half of the actual follow-up time. Separate incarcerations for nonviolent offenses during follow-up were added up to calculate the total time spent in prison during follow-up. This means that participants were excluded if they had a total detention time for committing a nonviolent crime of at least 3 months during the 6 months follow-up period, 6 months during the 12 months follow-up period, and 12 months during the 24 months follow-up period (see section 'Post-release violent (re)offending').

The files of 571 detainees adhered to the inclusion criteria for analyzing violent (re) offending 6 months after release, of which 461 were male and 110 were female. For the follow-up periods of 12 and 24 months, respectively, a total of 559 (male = 451, female = 108) and 547 (male = 442, female = 105) incarcerated individuals adhered to the inclusion criteria. The following characteristics apply for the group of ex-detainees included within the 6 months follow-up period: 76.9% committed a violent offense prior to detention (male = 85.0%, female = 42.7%), and 21.2% was a first-time detainee (male = 16.1%, female = 42.7%). The mean age upon release for the total group was 36 ($SD = 10.85$, range = 19 – 76) years old, for males 35 ($SD = 10.67$, range = 19 – 76) years old, and for females 37 ($SD = 11.43$, range = 19 – 67) years old. Participants had an average detention duration of 246 ($SD = 300.70$, range = 32 – 3,563) days. For males, this was 251 ($SD = 322.40$, range = 32 – 3,563) days, and for females 225 ($SD = 183.41$, range = 40 – 899) days.

The Risk Screener Violence

The RS-V gathers information regarding the most relevant risk factors and protective factors of an individual incarcerated in prison, which subsequently leads to conclusions regarding the concerns about future violent behavior. Using the term 'concerns' for the final conclusions rather than 'risk' was explicitly chosen for semantic reasons. Although risk inherently also refers to uncertainty, concerns indicate even more clearly that the results from the screening assessment form an initial indication regarding the possibility of future violent behavior, based on the observed risk and protective factors at the time of screening. The RS-V uses the following definition of violence: attempting, threatening with, or actual physical violence toward others (including sexual violence). The RS-V has been developed for use within the entire prison population and may be implemented within different custody levels, for males as well as females. Within prison practice, the RS-V is conducted for each individual at the beginning of the detention period. In addition, it is advised to reassess the RS-V every 6 months and to conduct the RS-V when (longer-term) leave during prison stay are proposed.

The RS-V consists of three parts, including 10 factors and three final conclusions (De Vries Robbé & Van den End, 2020). For an overview of all the factors that are included within the RS-V, see table 5.1. The first part contains two historical risk factors, which are scored based on information about the entire past of an individual. The first historical factor is 'previous interpersonal violence outside prison' (H1), which looks at all convictions for violent offenses (including sexual violence) that took place before the current prison sentence (including the index-offense). The second historical risk factor concerns 'previous interpersonal violence inside prison' (H2) and contains information about all violent incidents that occurred within previous or current prison sentences. Both historical risk factors are rated on a 5-point scale: 0 = no violent offense/incident, 1 = 1 violent offense/incident, 2 = 2 or 3 violent offenses/incidents, 3 = 4 or 5 violent offenses/incidents, or 4 = 6 or more violent offenses/incidents. For the analyses in this study, the 5-point scale was collapsed into a 3-point rating scale (see section 'Statistical design').

The second part of the RS-V consists of four dynamic risk factors (R1 to R4) and four dynamic protective factors (P1 to P4). These dynamic factors are scored based on behavioral observations of prison staff within the past 6 months. Within the RS-V, the dynamic factors are viewed as more stable dynamic factors rather than acute dynamic factors (Hanson & Harris, 2001). Both the dynamic risk factors and the dynamic protective factors are rated on a 3-point scale, where a higher score indicates the presence of a problem (risk factor) or the presence of a strength (protective factor). The first two dynamic risk factors are rated based on the frequency of the observations in the past 6 months (0 = 'not observed', 1 = 'observed once', and 2 = 'observed twice or more'). The other dynamic risk factors and protective factors are scored using the following scale: 0 = not or hardly present, 1 = moderately present, or 2 = clearly present. Naturally, the rating of each factor is supported by sound argumentation, described by the assessor on the rating form. Additional violence related historic and dynamic information might be added if this is deemed relevant for the specific case. If there is not enough information available about an individual to score a certain historical or dynamic factor, this factor is indicated as 'unknown'. When more than two factors are rated as unknown, the RS-V is considered not valid and the third part (the final conclusions) cannot be completed (see the exclusion criteria in section 'Participants').

Within the third part of the RS-V, three conclusions are drawn regarding the final concerns about interpersonal violence during the following 6 months. This means that the RS-V is initially valid for a period of 6 months¹³. The final SPJ conclusions are

13 A time frame of 6 months was chosen in order to insure an updated evaluation of the changeable dynamic risk and protective factors.

based on the ratings and underlying arguments of the historical factors (part one) and dynamic factors (part two). The three final conclusions consider the risk of (A) in-prison violence, (B) post-release violence, and (C) violence during leave from prison (only rated in case of proposed leave during prison stay). They are rated as 0 = 'low concerned', 1 = 'moderate concerned', or 2 = 'serious concerned' about interpersonal violence in that specific context. Within the prison setting, consensus regarding the rating of the three final conclusions follows from a multidisciplinary team meeting including different prison workers (e.g., unit supervisors, case managers, prison officers, and administrators). In the current study, the final conclusions were drawn by researchers, individually or in consensus (for double rated cases, see section 'Procedure').

Table 5.1 The historical risk factors, dynamic risk factors, dynamic protective factors, and final conclusions included in the Risk Screener Violence

Part 1. Historical risk factors
H1. Previous interpersonal violence outside prison
H2. Previous interpersonal violence inside prison
Part 2. Dynamic factors (past 6 months in prison)
Risk factors
R1. Recent interpersonal violence
R2. Substance use
R3. Negative/defiant attitude
R4. Impulsive behavior
Protective factors
P1. Following rules and agreements
P2. Coping with problems and frustrations
P3. Positive influences from social network
P4. Motivation for crime free future
Part 3. Final conclusions (coming 6 months)
Concerns regarding future
A. Violence inside prison
B. Violence outside prison after release
C. Violence outside prison during leave

Post-release violent (re)offending

The outcome measure used in this study is violent recidivism, defined as post-release violent (re)offending within 6, 12, and 24 months after release from prison. The RS-V is initially valid for 6 months. However, to be able to also investigate predictive validities for violent (re)offending at longer follow-up times, we decided to also include violent (re)offending within 12 and 24 months after release from prison. Data regarding post-release violent (re)offending were gathered by using official criminal records, obtained from the judicial information service, part of the Dutch Ministry of Justice and Security.

Post-release violent (re)offending is defined as at least one (new) conviction for a violent offense during follow-up (attempting to, threatening with, or actual physical violence toward others; including sexual violence). An offense was classified as 'violent' based on the penal code section assigned to this offense within the detainee's criminal record. Only formal convictions were included; dismissals and acquittals were excluded.

The group of incarcerated females had a very low base rate for violent (re)offending at 6 months follow-up after discharge. As analyzing data with a low base rate may lead to inaccurate and unreliable predictions (Elwood, 1993), we could only include the follow-up periods of 12 and 24 months for the female group. The prevalence rates of violent (re) offending for respectively 6 ($n = 571$), 12 ($n = 559$), and 24 months ($n = 547$) were for (a) the total group: 7%, 15%, and 21%; (b) the male discharged detainees: 7%, 17%, and 24%; and (c) the female discharged detainees: 3%, 6%, and 9%.

Procedure

The ethics committee of the Institute of Pedagogical Science of the University of Leiden gave approval for this study protocol (Reference Number: ECPW-2021/33). Data for this retrospective file-based study were collected between July 2020 and September 2022. The files of the detainees were studied within the central digital archive of the Dutch Ministry of Justice and Security. The researchers ($n = 19$) involved in the data collection of this study were graduate students extensively trained in using the RS-V and analyzing outcome data.

In the current study, the RS-Vs were completed based on file information upon discharge. To prevent bias, analyzing the file information of an individual was conducted in two phases by two different researchers. The first phase of data collection consisted of four steps: (a) check whether a participant adhered to the inclusion criteria, (b) collect the demographic information, (c) map out the criminal history and recidivism (respectively, the offenses a participant committed before and after the prison stay that was examined in this study), and (d) score factor H1 of the RS-V (based on official criminal records). The second phase of data collection was done by a different researcher. This was important in order for the rater to be blind to (re)offending outcomes. The second phase consisted of rating factors H2, R1 to R4, P1 to P4, possibly additional relevant historic and dynamic information (such as psychological trauma or financial debt), and the final conclusions of the RS-V. The dynamic factors were completed based on reports within the prison records regarding the last 6 months of the detention period (or less for detainees with a shorter detention stay). The reports included incidents that had taken place during prison stay, outcomes of substance use tests, and descriptions by prison staff regarding behavioral observations of the participant over the past 6 months. In

prison practice, the three final conclusions follow from a multidisciplinary team meeting. Within the current study, the second researcher rated the final conclusions based on the collected file information (ratings and arguments for each of the RS-V factors, including H1, and possible additional relevant information). In the current study, only final conclusion B (concerns regarding violence after discharge) was included in the data analyses, as the outcome measure is post-release violent (re)offending.

To assess the interrater reliability, a total of 89 (approximately 15% of the total sample) randomly selected RS-Vs were rated twice by a set of two researchers (14 independent researchers in total). Subsequently, a discussion between the two researchers led to a consensus rating for each factor and final conclusion for every case. The individual ratings were used for analyzing the interrater reliability and the consensus ratings were used in analyses regarding descriptive statistics and predictive validity.

Statistical design

The data were analyzed using IBM SPSS Statistics version 27. Missing values were replaced through pro-rating: each missing value received the mean score on the corresponding subscales for the individual case. On average, 1 factor was missing per case. Most factors received less than 8% missing values. Only protective factor P3 (positive influences social network) received a large number of missing values (78.5%), due to the file-based nature of the study, which often did not include sufficient information regarding the detainee's social network.

Within prison practice, predominantly the individual factors and the final conclusions of the screening are used. However, for the purpose of the current empirical study, the subscale scores and total score of the RS-V were also calculated. These include the subscale score of the historical risk factors, the dynamic risk factors, the dynamic protective factors, and the RS-V total score. The historical risk factors were collapsed from a 5-point rating scale into a 3-point rating scale, to make them comparable with the dynamic factors. The ratings 1 to 2 were transformed into a score of 1 and ratings 3 to 4 into a score of 2. Subsequently, the historical and dynamic risk factors were added up while subtracting the dynamic protective factors, to arrive at an overall combined total score in which risk is corrected for protection. Thus, a more negative total score on the RS-V indicates a greater presence of protective factors in comparison with risk factors, while a more positive total score implies the opposite. The adjusted subscale scores and adjusted integrated total score were used in further analyses.

Descriptive statistics for the total group, males, and females were retrieved to gain insight into the distribution of the scores on the individual factors, subscales, total score,

and final conclusion B of the RS-V. Spearman correlations were calculated to determine the strength and direction of the association between these scales. According to Cohen (1988), a correlation of .10 is considered small, .30 is medium, and above .50 is large. Mann-Whitney *U* tests were conducted to test the differences between males and females regarding the subscale ratings, RS-V total score, and final conclusion B. This nonparametric test was chosen because the final conclusion B was an ordinal variable and the data of the subscale scores and the total score were not normally distributed for each separate group (males and females). The descriptive statistics, correlations, and Mann-Whitney *U* statistics were retrieved for the group of individuals that were included for analyzing post-release violent (re)offending 6 months after release.

To determine the interrater reliability of the RS-V, Intraclass Correlation Coefficients (ICCs) were calculated, using a two-way random effect model and absolute agreement, single measure. ICCs were analyzed for the total group and for males and females separately. For the historical factors, we did not calculate ICCs, as H1 was already rated in phase 1 of the study (see section 'Procedure'). The critical values of ICCs are $ICC < .40$ = poor, $.40 \leq ICC \leq .75$ = fair to good, and $ICC > .75$ = excellent (Fleiss, 1986).

The predictive validity of RS-V ratings were analyzed by conducting receiver operating characteristic (ROC) analyses for all groups with the subscale scores, RS-V total score, and final conclusion B as predictors of 6, 12, and 24 months post-release violent (re)offending. Gender differences regarding the predictive validity of RS-V scores for 12 and 24 months were investigated by conducting an additional ROC analysis. ROC analyses result in Area Under the Curve (AUC) values that vary between 0 and 1 and indicate the predictive validity of an instrument. AUC values can be classified as small (between .56 and .64), medium (between .64 and .71), or large (above .71; Rice & Harris, 2005). For example, an AUC value of .70 indicates a probability of 70% that a randomly selected recidivist will have a higher score than a randomly selected non-recidivist. In addition, an AUC value of .50 indicates that an instrument operates at chance level, while an AUC value of 1 would imply perfect prediction. AUC values are relatively insensitive to base rates; however, when base rates become as low as a few percent, even AUC values become unreliable. For this reason the predictive validity for the female sample could not be analyzed for the 6 months follow-up time, (re)offending prevalence = 3%. For the dynamic protective factors, the AUC values were reversed. This means that a higher AUC value indicates a protective effect against the occurrence of violent (re)offending after release.

RESULTS

Descriptive statistics

Table 5.2 displays the descriptive statistics of the participants on the individual historical risk factors, dynamic risk factors, and dynamic protective factors. Overall, the dynamic risk factors are rated quite low and the dynamic protective factors relatively high.

Table 5.2 Descriptive statistics of the unadjusted scores on the individual factors of the RS-V for the total group of incarcerated individuals, males and females (included within the 6 months follow-up period)

Statistics	Historical risk factors		Dynamic risk factors				Dynamic protective factors			
	H1	H2	R1	R2	R3	R4	P1	P2	P3	P4
Total group (<i>n</i> = 571)										
<i>M</i>	2.17	.72	.16	.62	.39	.39	1.40	1.45	1.25	1.16
<i>SD</i>	1.56	1.13	.45	.79	.63	.69	.72	.76	.85	.79
Males (<i>n</i> = 461)										
<i>M</i>	2.47	.84	.18	.68	.44	.42	1.34	1.42	1.26	1.11
<i>SD</i>	1.47	1.20	.48	.81	.65	.70	.72	.77	.84	.79
Females (<i>n</i> = 110)										
<i>M</i>	.93	.23	.09	.35	.21	.29	1.70	1.58	1.23	1.40
<i>SD</i>	1.30	.59	.29	.65	.51	.63	.60	.68	.88	.72

In addition, table 5.3 displays the descriptive statistics and the correlations for the incarcerated persons on the subscale scores, total score, and final conclusion B of the RS-V. The subscale scores, total score, and final conclusion B of the RS-V are all positively correlated (medium to large effects), except for the dynamic protective factors which are negatively correlated (medium effect) with the other variables. Additional results regarding the ratings of final conclusion B of the RS-V for each group are shown in figure 5.1.

Regarding gender differences, detained males received significantly higher ratings on the historical risk factors ($U = 10,990.50, p < .001$), the dynamic risk factors ($U = 19,127.00, p < .001$), and the RS-V total score ($U = 14,626.50, p < .001$) compared with detained females. In addition, females scored significantly higher on the dynamic protective factors ($U = 18,738.00, p < .001$) compared with males. Moreover, males were rated higher on the final conclusion B ($U = 13,612.00, p < .001$) and thus, on average, higher concerns were raised regarding future violent behavior after release for males than females based on the RS-V (see also figure 5.1).

Table 5.3 Descriptive statistics and correlation coefficients of the adjusted subscale scores, adjusted total score, and final conclusion B of the RS-V for the total group of incarcerated individuals, males and females (included within the 6 months follow-up period)

	<i>M</i>	<i>SD</i>	Min. – Max.	1	2	3	4	5
Total group (<i>n</i> = 571)								
1. Historical risk factors	1.74	1.38	0 – 4.80	-				
2. Dynamic risk factors	1.55	1.90	0 – 8.00	.433	-			
3. Dynamic protective factors	5.33	2.33	0 – 8.00	-.412	-.643	-		
4. RS-V total score	-2.05	4.71	-8.00 – 12.80	.700	.832	-.880	-	
5. Final conclusion B: Concerns regarding violence after release	1.03	.79	0 – 2	.746	.507	-.580	.727	-
Males (<i>n</i> = 461)								
1. Historical risk factors	1.99	1.34	0 – 4.80	-				
2. Dynamic risk factors	1.69	1.95	0 – 8.00	.375	-			
3. Dynamic protective factors	5.14	2.35	0 – 8.00	-.378	-.661	-		
4. RS-V total score	-1.46	4.72	-8.00 – 12.80	.659	.836	-.887	-	
5. Final conclusion B: Concerns regarding violence after release	1.16	.75	0 – 2	.677	.472	-.587	.701	-
Females (<i>n</i> = 110)								
1. Historical risk factors	.69	1.01	0 – 4.20	-				
2. Dynamic risk factors	.93	1.51	0 – 6.00	.492	-			
3. Dynamic protective factors	6.14	2.04	0 – 8.00	-.340	-.497	-		
4. RS-V total score	-4.51	3.80	-8.00 – 9.60	.616	.791	-.862	-	
5. Final conclusion B: Concerns regarding violence after release	.48	.74	0 – 2	.732	.545	-.449	.637	-

Note. All *p* values were <.001

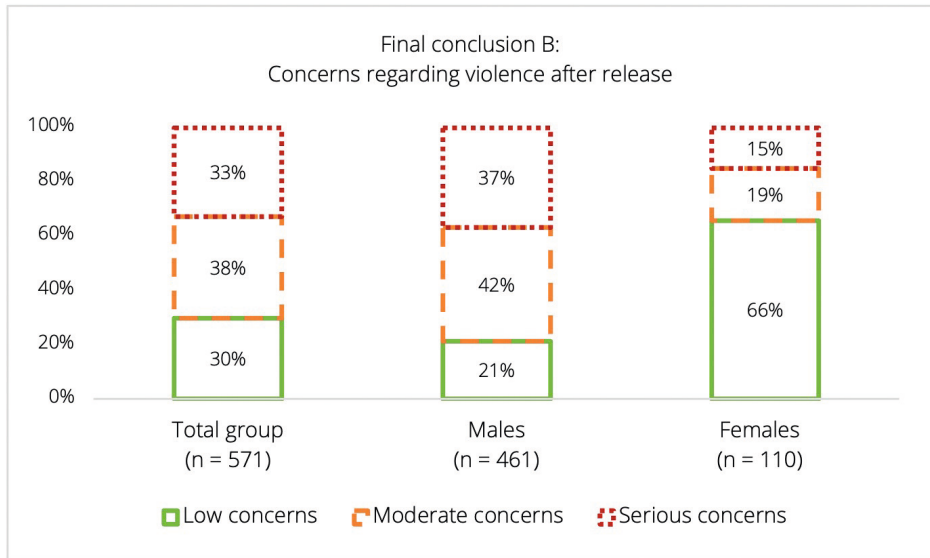


Figure 5.1 Overview of final conclusion B of the RS-V regarding concerns about violence after release. The results are displayed per group: the total group of detained individuals, males and females (included within the 6 months follow-up period)

Table 5.4 The Intraclass Correlation Coefficients (ICC) of the subscale scores, total score and final conclusion B of the RS-V per group of incarcerated individuals, males and females

	ICC		
	Total group (n = 89)	Males (n = 63)	Females (n = 26)
Dynamic risk factors	.920	.917	.930
Dynamic protective factors	.918	.931	.874
RS-V total score	.976	.979	.963
Final conclusion B: Concerns regarding violence after release	.866	.866	.815

Note. All p values were < .001.

Interrater reliability

The results regarding the interrater reliability are shown in table 5.4 for the total group, and for men and women separately. The ICCs were all significant and varied from .815 to .979, which is considered excellent.

Predictive validity of RS-V ratings for post-release violent (re)offending

Table 5.5 displays the results of the ROC analyses. The AUC values of females for 6 months violent (re)offending were excluded due to a low base rate (3%). Within the total group and for the males, the different subscale scores, the RS-V total score, and the final conclusion B rating were all significant predictors of violent (re)offending for 6, 12, and 24 months post-release. The females demonstrated similar results, albeit the ratings on the protective factors were not significantly predictive at 12 months follow-up, possibly due to the low (re)offending base rate (6%) and relatively small sample size. Table 5.5 shows that most AUC values were moderate to large for the total group, males and females. Overall, the ratings on the historical risk factors showed the strongest predictive values for violent (re)offending. For the total group and for the incarcerated males, predictive values appeared slightly stronger for the follow-up period of 6 months, in comparison with 12 or 24 months.

Finally, RS-V scores overall demonstrated a significantly higher predictive validity for the group of females in comparison with the group of males. This is the case for, respectively 12 and 24 months follow-up, the ratings on the historical risk factors ($z = -5.164, p < .001$; $z = -7.967, p < .001$), the dynamic risk factors ($z = -5.324, p < .001$; $z = -7.966, p < .001$), and the RS-V total score ($z = -4.593, p < .001$; $z = -7.112, p < .001$; although comparison is complicated by the difference in (re)offending base rates between men and women). The predictive validity of the final conclusion B rating ($z = -2.960, p = .003$) was only significantly higher for females compared with males for the 24 months follow-up period, but not for the 12 months follow-up period. There was no significant difference in the predictive validity of the scores on the dynamic protective factors for violent (re)offending between males and females, for both follow-up periods.

Table 5.5 The Area Under the Curve (AUC) and Confidence Intervals (CI) of the subscale scores, RS-V total score and final conclusion B of the RS-V for 6 months, 12 months, and 24 months post-release violent (re)offending per group of incarcerated individuals

Violent (re) offending	Prevalence	Historical risk factors			Dynamic risk factors			Dynamic protective factors			RS-V total score			Final conclusion B: Concerns regarding violence after release		
		AUC	95% CI	AUC	95% CI	AUC	95% CI	AUC	95% CI	AUC	95% CI	AUC	95% CI	AUC	95% CI	
Total group																
6 months	37/571 (7 ^a)	.779***	(.70, .85)	.669***	(.57, .77)	.717***	(.62, .82)	.755***	(.67, .84)	.719***	(.64, .80)					
12 months	82/559 (15)	.772***	(.72, .83)	.662***	(.60, .73)	.646***	(.58, .72)	.715***	(.66, .77)	.701***	(.64, .76)					
24 months	114/547 (21)	.769***	(.72, .82)	.682***	(.63, .74)	.661***	(.60, .72)	.736***	(.69, .79)	.694***	(.64, .74)					
Males																
6 months	34/461 (7)	.738***	(.65, .83)	.627*	(.52, .73)	.705***	(.60, .81)	.720***	(.63, .82)	.684**	(.59, .78)					
12 months	76/451 (17)	.729***	(.67, .79)	.626***	(.56, .70)	.628***	(.55, .70)	.675***	(.61, .74)	.666***	(.60, .73)					
24 months	105/442 (24)	.716***	(.66, .77)	.637***	(.58, .70)	.631***	(.57, .70)	.685***	(.63, .74)	.642***	(.59, .70)					
Females																
12 months	6/108 (6)	.956***	(.90, 1.00)	.895***	(.83, .96)	.694	(.47, .92)	.902***	(.83, .97)	.794*	(.61, .98)					
24 months	9/105 (9)	.980***	(.95, 1.00)	.946***	(.90, .99)	.795**	(.62, .97)	.950***	(.91 1.00)	.864***	(.73, 1.00)					

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^aThe numbers between the parentheses represent the prevalence of violent (re)offending in percentages

DISCUSSION

The goal of this retrospective file-based study was to gain insight into the psychometric properties of the RS-V, a newly developed risk screening instrument for violent behavior among adult incarcerated individuals. This study demonstrates that the RS-V is a valid and promising new method for the efficient assessment of concerns regarding post-release violent offending among ex-detainees, for males as well as females. The results show that the RS-V was scored with excellent interrater reliability, which is in line with the results of the pilot study (De Vries Robbé et al., 2021). In addition, detained males showed higher concerns for future violent behavior after release from prison than detained females. Furthermore, the predictive validity of RS-V ratings was medium to large for 6, 12, and 24 months post-release violent offending. Finally, for female offenders, the predictive validity of the RS-V scores was overall higher than for male offenders.

Risk and protective ratings

With regard to the descriptive statistics, the dynamic risk factors are, overall, rated relatively low and dynamic protective factors relatively high. This means most participants behaved reasonably well during prison stay. A possible explanation for this result could be that being detained may result in a diminished presence of potential risk factors (e.g., less availability of alcohol/drugs) and an increase in protective factors (e.g., imprisonment may increase the motivation for a crime free future). Future studies could potentially investigate alterations in the presence of dynamic factors over time during prison stay.

The historical risk factors, dynamic risk factors, RS-V total score, and final conclusion B are mutually positively correlated, while the protective factors are negatively correlated with the other subscales. This is in line with the expectation that protective factors are associated with a decrease of (the risk of) (re)offending, while the opposite is the case for risk factors.

Predictive validity

The results regarding the predictive validity highlight that RS-V ratings have sound predictive values regarding post-release violent (re)offending for the total group of incarcerated individuals. The RS-V, as a screening instrument, is thus able to sufficiently identify persons with an increased likelihood of future violent offending. This is in line with findings regarding other (risk) screening instruments, used within prison practice, that also show promising results for identifying certain problems/needs within the prison population (Desmarais et al., 2016; Gray et al., 2007; Nicholls et al., 2004; Roaldset et al., 2012). In particular, the ratings on the two historical risk factors regarding previous

violent behavior showed strong predictive validity on their own. This is valuable because in prison practice these historical factors are rated on the first day of admission for every detainee. In further prospective studies regarding violence within and outside prison, the specific contribution of the different subscales of the RS-V will be studied in more detail.

With regard to the follow-up period, the total score and the final conclusion B rating of the RS-V overall show the strongest predictive values for shorter follow-up times. This corresponds with the hypothesis that RS-V ratings have good predictive validity for violence in particular for 6 months after release, because the final conclusions of the RS-V make predictions about the following 6 months. Nevertheless, the predictive validity of RS-V ratings for 12 months and 24 months violent (re)offending can still be classified as sufficient to large. Thus, even though the final conclusions of the RS-V make predictions about the following 6 months, aftercare facilities may potentially benefit from the outcome of the RS-V for their case-management planning for a longer time period.

Gender differences

This study additionally looked at the difference in predictive validity of RS-V scores between males and females. For both incarcerated males and females, RS-V scores overall have good predictive validity. When developing and formulating the individual factors of the RS-V, gender differences were not specifically taken into account. Nevertheless, it seems RS-V ratings are able to accurately predict future violent behavior among female and male offenders alike. Surprisingly, RS-V ratings show even higher predictive values for females compared with males. A potential explanation for this gender difference in predictive validity could be found in the base rates: the base rate of previous violence as well as violent (re)offending among females is substantially lower than among males. Thus, violent (re)offending seems more exceptional for women. It could be that RS-V ratings are better able to filter out individuals with a particularly high risk of violent (re)offending in samples where this type of offending is less common, leading to a relatively high predictive accuracy for detained females.

Previous research found a great variability in the predictive validity of risk assessment instruments for (re)offending outcomes among females, especially when it comes to predicting violence (De Vogel et al., 2019; Geraghty & Woodhams, 2015). Thus, including women in violence risk research and monitoring the need for female-specific instruments remains important. The results of this particular study show that it is not (yet) necessary to develop a gender-sensitive version of the RS-V. Although, future research analyzing RS-Vs completed by prison employees in practice is needed to further support this conclusion. In this study, it appears that for females the dynamic

risk factors were stronger predictors than the dynamic protective factors, while for males at short-term follow-up the protective factors performed stronger. Further research on protective factors specifically for females is deemed valuable.

As for gender differences regarding risk and protective ratings, incarcerated males scored higher on the historical risk factors, the dynamic risk factors, the RS-V total score, and final conclusion B, compared with incarcerated females. On the contrary, females had higher ratings on the dynamic protective factors compared with males. These results highlight that, based on the RS-V, detained males show higher concerns for future violent behavior after release from prison than detained females. This result corresponds partially with a previous study where males demonstrated significantly higher mean scores on some (subscales of) risk assessment instruments, but not all (Coid et al., 2009).

Limitations

This study has some limitations. First, the data used in this study concern retrospective file information, which means that the RS-Vs were rated by researchers based on indirect file information instead of direct behavioral observations of prison staff. The researchers who rated the RS-V were dependent on the amount and quality of the reports within the file of each detainee, while employees working in prison practice have more insight into the daily life of an incarcerated person. Probably not all of these insights are reported in detail. Therefore, researchers who rate the RS-V based on files may potentially lack important information that could be relevant for rating the individual factors or for formulating the final conclusions. This may be particularly true for the protective factors, as demonstrated by the ratings of factor P3 (positive influences social network), which was omitted for most of the sample due to a lack of information in this regard. Because of the retrospective nature of this study, older prison files were studied. It seems that these older prison records contained little positive information in comparison with negative information. The recent shift from a risk-focused approach toward a more recovery-focused approach within Dutch prisons will likely lead to an increasingly balanced view of risks and strengths of each incarcerated person and therefore also the documentation of positive behavior or circumstances. Future prospective studies, using data from prison practice, will give more insight into the generalizability of the results found within the current study.

Another limitation is that this study only included offenses for which participants were actually convicted. The so-called 'dark number' of all offending behavior could be approached more realistically in future studies by combining actual convictions with arrests, charges, and/or self-report data. Moreover, the relatively low base rate of

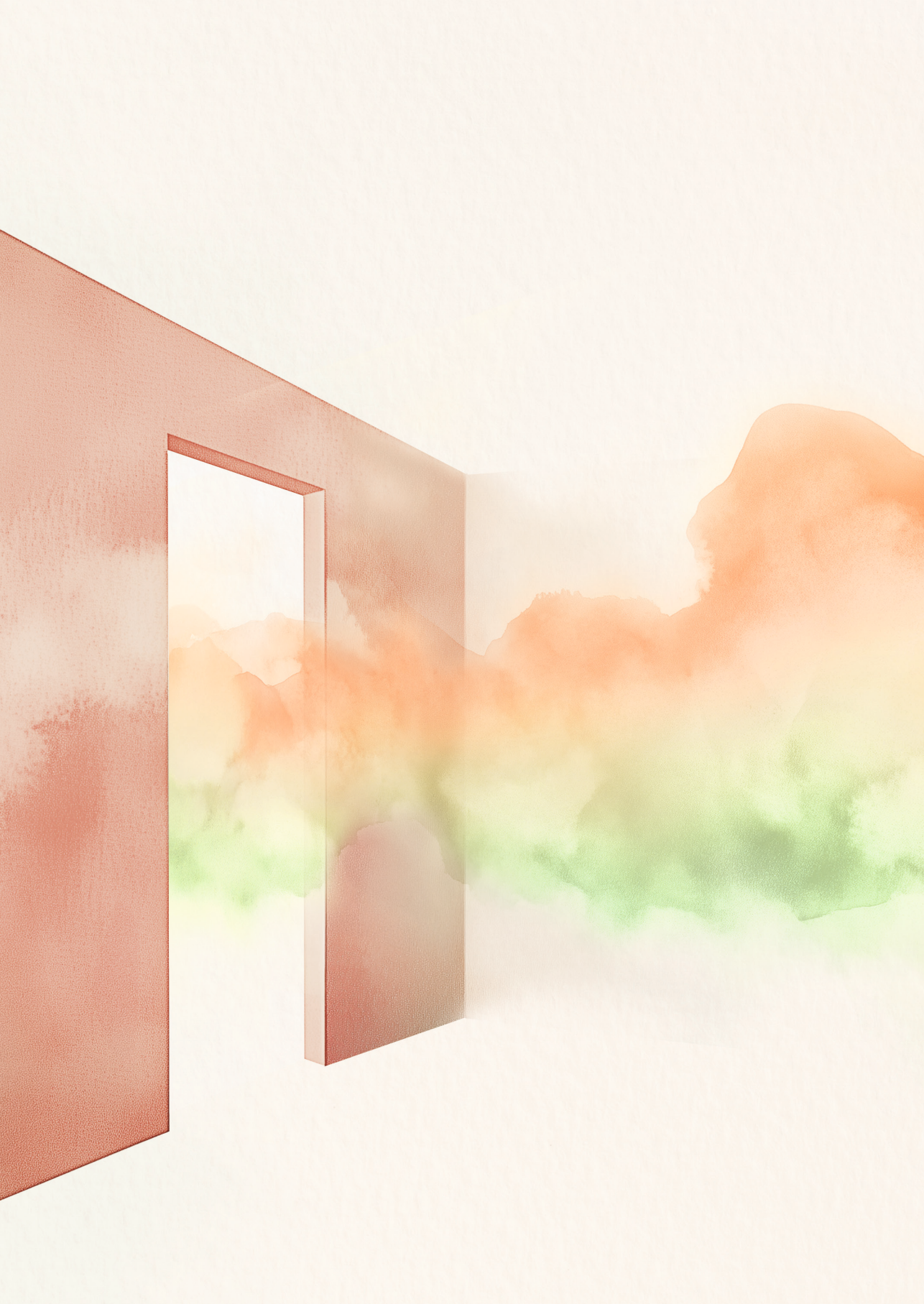
violent (re)offending among females makes it difficult to draw firm conclusions regarding the predictive validity for (re)offending, particularly at 6 months follow-up for women.

A third limitation of this study is that the dynamic factors of the RS-V largely focus on behavior during imprisonment. For some incarcerated persons, it may be the case that behavior during imprisonment differs from behavior outside in the community after discharge. It is, therefore, a positive finding that regardless of this potential behavioral difference, the predictive validity of RS-V ratings are moderate to large for violent behavior after discharge to the community. In further studies, the predictive validity of RS-V scores for in-prison violent behavior will be investigated.

Conclusion

In conclusion, the results of this retrospective file study indicate that the RS-V is a promising new method for the efficient screening of concerns regarding future violent offending among incarcerated individuals upon release from detention. Despite the fact that the RS-V is a brief and compact instrument, RS-V ratings demonstrate to be able to predict actual post-release violent offending of Dutch incarcerated persons. The RS-V, as a risk screening instrument, therefore offers a good first impression of the concerns for future violent offending among all detained individuals. In correspondence with this, and to implement effective prevention strategies, the results of the screening should actively be discussed within the prison setting and shared with aftercare facilities. Moreover, the screening could serve as a triage tool for determining the need for further in-depth assessment with more extensive tools to further inform personalized risk management. More specifically, for individuals who show moderate or serious concerns regarding violent (re)offending based on the screening, it could be useful to conduct comprehensive violence risk assessment (such as the VRS/HCR-20^{V3} in combination with the SAPROF).

Taking into account the often understaffing and relatively limited presence of behavioral experts within the prison system, using a brief and simple risk screening instrument, such as the RS-V, offers an opportunity to increase prison staff knowledge about the importance of specific risk and protective factors for ex-detainee rehabilitation, and to subsequently intervene to improve these factors at an early stage of imprisonment. As such, the RS-V may offer potential for violence risk screening in prison systems worldwide. Furthermore, it could possibly also be used outside of the prison setting, meaning in other contexts where comprehensive risk assessment is simply not feasible and/or efficient for all individuals. Because the RS-V has already been implemented in all 25 Dutch prisons, an important step for future research is to investigate whether RS-Vs completed in prison practice are also able to predict actual future violent behavior of detained individuals, both during imprisonment and after release.



CHAPTER 6

The Prospective Prediction of Community Violence after Release from Prison with the Risk Screener Violence (RS-V)

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ABSTRACT

The prevention of community violence is crucial for the criminal justice system due to its significant impact. Within Dutch prisons, the recently implemented easy-to-use Risk Screener Violence (RS-V) enables the early detection of violence concerns among detained individuals, allowing timely intervention. The current prospective study found sound predictive validity of RS-Vs ($n = 1320$) rated by prison employees for violent (re) offending 6 and 12 months after release from prison. Predictive accuracy was higher for violent recidivism than general recidivism. These results indicate that the RS-V may contribute to overall risk management. However, effective intervention strategies and risk communication are essential.

Keywords: risk screening, violence risk, prison, recidivism, predictive validity

INTRODUCTION

The criminal justice system is highly concerned with the occurrence of recidivism after incarceration. Especially for violent offenses, since the incidence of violence has significant negative effects on victims and society as a whole. Besides physical injuries, victims of these high-impact crimes often experience persistent socio-emotional and psychological problems, such as difficulties with work/school, (romantic) relationships, victim blaming, PTSD, stress, and depression (Andrews et al., 2003; Gracia, 2006; Langton & Truman, 2014; Tan & Haining, 2016). Moreover, the impact of violent assault extends beyond the immediate victim as violence may also influence the victims' family members, friends, neighbors and involved professionals, generating overall public fear and disrupting community functioning (Fowler et al., 2009; Ruback & Thompson, 2001). In this study, we examine whether a newly developed and easy-to-use screening instrument (the Risk Screener Violence) is able to identify which individuals are more prone to display violent recidivism after release from prison.

When examining recidivism rates, the public fear for violent crimes committed by former inmates seems warranted. Within the U.S., approximately one in four (26%) detainees were imprisoned for a violent offense in 2005 (Durose et al., 2015). In addition, the rearrest rate for a violent offense eight years after release from prison in 2010 was higher among violent offenders (39%) compared to non-violent offenders (22%) (Cotter et al., 2022). Similar percentages applied to the Netherlands in 2017. Roughly 20% of Dutch offenders were convicted for a violent crime, and approximately 17% of the Dutch ex-detainees were re-convicted for a violent offense within two years after release from prison (Verweij et al., 2021). These considerable violent offending rates and subsequent negative effects on victims and the community highlight the need for prevention and intervention strategies regarding the occurrence of these offenses, in order to enhance desistance from violent crime.

Prison sentencing serves as an intervention strategy for violent offenders aimed at improving public safety and preventing further offending, at least for the time being. Copp (2020) describes two main hypotheses regarding the actual effect of imposing imprisonment on subsequent recidivism rates. The first hypothesis is that prisons diminish criminality. This view is embedded in the deterrence theory which states that the threat of (further) punishment can prevent individuals from committing future offenses (Andenaes, 1968). On the contrary, the second perspective states that incarceration increases criminal behavior. According to the social experience approach, incarceration may expose individuals to various criminogenic risks (e.g., victimization, stigmatization, overcrowding, and criminogenic beliefs of other detained individuals)

leading to an increase in the likelihood of (re)offending after release (Copp, 2020; Cullen et al., 2011). Moreover, the often harsh environments in prisons may exacerbate mental health problems, thereby increasing criminalization (Parsons and Bergin, 2010). More high-quality research is needed in order to confirm whether incarceration has a preventive or a criminogenic effect, although studies conducted thus far tend to support the latter, which could have significant policy implications (Copp, 2020; Gendreau et al., 1993; Nagin et al., 2009).

To counteract the possible criminogenic effect of prison sentencing and making time in prison as effective as possible, mapping out the individual risk factors and protective factors that potentially influence the likelihood of future violence offers a useful starting point for a personalized approach. Especially since the prison setting provides a unique window of opportunity to gain insight into the offender's strengths and problems. Within the Netherlands, prison employees make use of the Risk Screener Violence (RS-V) to assess the most relevant risk and protective factors of each detained individual upon entry in a Dutch prison (De Vries Robbé & Van den End, 2020). Consequently, concerns regarding future violent behavior of this individual inside and outside prison are discussed following the Structured Professional Judgement (SPJ) methodology. The RS-V may be rated by trained general prison workers without specific behavioral expertise, not requiring psychologists or psychiatrists. By discussing the results of the RS-V in a multidisciplinary team meeting, follow-up measures may be instated aimed at the prevention of future violent behavior. For individuals for whom moderate or serious concerns arise regarding future violent behavior, it can be advised to conduct complementary extensive risk assessment (e.g., by means of the HCR-20^{v3} for risk factors (Douglas et al., 2013), and the SAPROF for protective factors (De Vogel et al., 2012a)) in order to gain a more in-depth insight regarding the risk profile of an individual. This way, the RS-V serves as a triage tool. In addition, the results of the RS-V may provide guidance for prison personnel toward the deployment of personalized follow-up measures, such as single-celling, aggression replacement training, or communicating the individual's risk profile to collaborating institutions and/or aftercare programs.

Implementation of the RS-V within all 25 Dutch prisons commenced in 2021. User evaluations across three years from implementation revealed that prison employees considered the administration of the RS-V to be useful and fairly easy (Smeekens et al., 2024d). Additionally, the RS-V has been scored with excellent inter-rater reliability (Smeekens et al., 2024b). Moreover, both file-based and prison practice studies showed that RS-V ratings have sound predictive value for violent and aggressive incidents occurring within the prison setting (Smeekens et al., 2024a; 2024c). This result was found for both violence toward staff and violence toward other detained individuals

during a 4-month follow-up period within prison. Regarding the prediction of violent behavior within the community after release, a previous study which included RS-Vs rated retrospectively by researchers based on (digital) file information of detained individuals, found sound predictive validity of RS-V ratings for violent recidivism at 6, 12, and 24 months post-release (Smeekens et al., 2024b). For females, the predictive validity of RS-V scores for violent offending after release was even higher than for males.

The current study intends to replicate the findings of Smeekens et al. (2024b) regarding the prediction of violent recidivism. However, instead of retrospective file-based data, this study includes actual prison practice data; RS-Vs prospectively completed by prison staff in daily practice. We expect ratings on these RS-Vs to have sound predictive validity for violent (re)offending during both 6 and 12 months after release from prison. To investigate whether the RS-V is specifically predictive of violence, general (re)offending was included as an additional outcome measure. Since the main goal of the RS-V is to predict and map-out concerns regarding future violent behavior of individuals, it is hypothesized that scores on the RS-V are primarily able to predict violent (re)offending as opposed to general (re)offending.

METHOD

Participants

The Dutch prison system is comprised of 25 prison units with maximum capacities ranging from less than 200 individuals to more than 500 individuals. The incarceration rate in the Netherlands was 54 out of 100,000 Dutch inhabitants in 2022, and the average detention duration is four months (Dutch Custodial Institutions Agency, 2024b; Statista Research Department, 2023). In addition, 10% of the individuals are being incarcerated for more than one year, with 72% staying in prison for less than 12 weeks.

The individuals in this study were (former) detainees from all 25 prisons within the Netherlands for whom several inclusion criteria applied. First, part three of the detainee's RS-V (the final conclusions; see section 'The Risk Screener Violence') needed to be completed within the first six months after implementation of the RS-V within Dutch prison practice, between September 2021 and February 2022. Thus, an eligible participant needed to have been incarcerated during this time period. Except for individuals that resided within one particular prison. Within this prison, implementation of the RS-V commenced from April 2021 onwards, hence the inclusion period for this prison contained an additional five months. Second, in order to have enough time to prospectively map out violent (re)offending rates after release from prison, an individual

could not have remained imprisoned for more than 90 days after the rating of part three. Third, the RS-V of this individual needed to include part one (the historical risk factors), part two (the dynamic risk and protective factors), and part three (the final conclusions) of the RS-V, with overall no more than two factors rated as 'unknown'. Applying these inclusion criteria resulted in an initial sample of 1460 eligible individuals.

Subsequently, other inclusion criteria were checked. Namely, an individual had to have been formally convicted for the offense for which they received the corresponding prison sentence. In addition, after release, the individual had to have remained within the Netherlands and not have passed away during the follow-up period. Finally, this study applied a time-at-risk (TAR) criterion to account for the number of days someone was at risk of committing a (new) violent offense within the community after release. Every day was counted that an individual was not *at risk* within the community during the follow-up time (for example, due to re-incarceration for a non-violent crime or admission to a forensic clinic). If the individual was not at risk during more than half of the follow-up period, they were excluded after all. In case of multiple institutionalizations for non-violent crimes during follow-up, these were added up to calculate the total time not-at risk. Individuals were excluded if the sum of the number of days incarcerated for non-violent crimes during follow-up added up to more than 3 months for the 6-month follow-up sample, and to more than 6 months for the 12-month follow-up sample.

The final sample contained 1,320 ex-detainees, 1,241 males and 79 females. The 6-month follow-up sample consisted of 1,230 detained individuals (1,154 males and 76 females), whereas the 12-month follow-up sample included 1,233 individuals (1,158 males and 75 females). The average age of the total group of included individuals upon release was 37 ($SD = 12.00$, range = 18 – 79), for both males and females alike (respectively: $SD = 11.96$, range = 18 – 79; $SD = 12.58$, range = 19 – 72). The total group had an average detention duration of 260 days ($SD = 356.55$, range = 29 – 4043), males were imprisoned for an average of 258 days ($SD = 354.86$, range = 38 – 4043), and females for 303 days ($SD = 381.96$, range = 29 – 2310). In total, 31.9% of the ex-detainees were incarcerated for the first time (males = 30.2%, females = 56.4%, missing values = 116). All individuals were released from prison between May 2021 and May 2022. The average time between the rating of RS-V part three actual release from prison was 40 days ($SD = 23.80$, range = 0 – 90).

The Risk Screener Violence

The Risk Screener Violence (RS-V) is an easy-to-use risk screening tool, initially developed for the prison setting, to estimate concerns regarding future violent behavior of incarcerated persons (De Vries Robbé & Van den End, 2020). The RS-V is a relatively

short and compact instrument compared to the elaborate and in-depth extensive risk assessment instruments usually conducted within prison settings, such as the HCR-20^{v3} and the SAPROF (Douglas et al., 2013; De Vogel et al., 2012). The definition of violence that is used within the RS-V is as follows: ‘attempting, threatening with, or actual physical violence toward others (including sexual violence)’. The RS-V evaluates the most relevant risk and protective factors of a detained individual and is based on SPJ principles, which is reflected in the multidisciplinary discussion of the final conclusions of the RS-V (see table 6.1). The RS-V may be used within different prison regimes, for both males and females. Within the Dutch prison system, the RS-V is administered at the beginning of the prison sentence and later on during the detention process when a detainee qualifies for leave. In addition, the RS-V may be reassessed at any time when deemed valuable. For example, when new individual risk-related information becomes available or when much time has passed since the previous screening and a re-evaluation is deemed useful to gain an updated picture of the individual’s risk and protective factors. An additional feature of the RS-V is that it does not require the specific behavioral expertise of a trained psychologist or psychiatrist and may be rated by general prison staff. All employees involved in the application of the RS-V were trained in the use of the tool.

The RS-V consists of three parts (see table 6.1). Within the Dutch prison context, these parts are filled out by different prison employees at different time points during incarceration. Part one of the RS-V contains two historical risk factors that map out the frequency of previous violent convictions within the community and previous violent incidents during prison stay. These historical risk factors are rated on a five-point scale (0 – 4) based on official criminal records and disciplinary prison reports. Any relevant historical risk-related information may be added (e.g., relevant non-violent offenses or infractions, trauma, placement in foster homes, or homelessness). Each individual that enters a Dutch prison will receive ratings on the historical risk factors, since these factors are rated within one or two days after admission. This serves as an initial rough evaluation of the violence risk profile, which is informative for the early stage of prison stay.

Part two consists of four dynamic risk factors and four dynamic protective factors, rated on a three-point scale: ‘not or hardly present’, ‘moderately present’, and ‘clearly present’. A higher score on a dynamic risk factor indicates a potential risk for violence, whereas a higher score on a dynamic protective factor indicates a potential protective effect against violence for that particular factor. The ratings of the dynamic factors are supported by sound argumentation. Furthermore, additional relevant dynamic risk-related information may be added (e.g., medication use, symptoms of psychiatric illness, or financial problems).

The third part of the RS-V is comprised of three final conclusions regarding future violent behavior of an individual during different situations. Namely, these conclusions contain concerns regarding future violent behavior A) inside prison, B) outside prison after release, and C) outside prison during leave. Final conclusion C is only rated in the case of proposed leave. The current study focuses on final conclusion B (concerns regarding violence after release). The final conclusions are discussed and rated in consensus by various prison employees (e.g., correctional officer, case manager, psychologist, and unit manager) during multidisciplinary team meetings. The final conclusions regarding future violent behavior may have the following results: 'low concerns', 'moderate concerns', or 'serious concerns'.

Because the final part of the RS-V is discussed in a multidisciplinary way, it becomes possible for prison staff to directly implement follow-up measures. Especially for detained individuals with moderate or serious concerns for future violent behavior, follow-up measures are necessary in order to prevent future violent behavior from occurring. Examples of follow-up measures are: discussing the results of the RS-V with the detained individual during a trajectory meeting, conducting extensive risk assessment instruments (such as the HCR-20^{v3} and the SAPROF) to gain a more comprehensive image of the individual risk profile, offering behavioral interventions (e.g., aggression replacement training or treatment for addiction), and informing collaborating partners or after-care facilities such as probation officers or forensic outpatient services. Previous studies by Smeekens et al. (2024a, 2024b, 2024c) may be consulted for a more comprehensive description of the RS-V.

Table 6.1 An overview of the individual factors and subscales of the RS-V, and the administration process of the RS-V within Dutch prison practice

Part	Content	Qualitative labels and ratings	Moment of evaluation	Assessor
1	Historical risk factors subscale H1. Previous interpersonal violence outside prison H2. Previous interpersonal violence inside prison	0x (0) 1x (1) 2 – 3x (2) 4 – 5x (3) ≥6x (4)	Within one or two days after admission	Back office employee
2	Dynamic risk factors subscale (past 6 months in prison) R1. Recent interpersonal violence R2. Substance use R3. Negative/defiant attitude R4. Impulsive behavior Dynamic protective factors subscale (past 6 months in prison) P1. Following rules and agreements P2. Coping with problems and frustrations P3. Positive influences from social network P4. Motivation for crime free future	Not or hardly present (0) Moderately present (1) Clearly present (2)	1. Within six ¹⁴ weeks 2. Prior to proposed leave 3. When deemed necessary	Case manager
3	Final conclusions (coming 6 months). Concerns regarding future: A. Violence inside prison B. Violence outside prison after release C. Violence outside prison during leave	Low concerns (0) Moderate concerns (1) Serious concerns (2)	1. Within six ¹³ weeks 2. Prior to proposed leave 3. When deemed necessary	Multidisciplinary

14 In some Dutch prisons, a timeframe of nine weeks instead of six weeks is used for the rating of the dynamic factors and final conclusions, due to differences in the planning of their prison program.

Post-release violent (re)offending

The primary outcome measure included in this study was violent recidivism, defined as post-release violent (re)offending within 6 or 12 months after release from prison. To be more specific, this study included formal convictions (excluding dismissals and acquittals) for a violent offense committed after release within the community. A conviction was categorized as violent based on the penal code given to the conviction within the criminal record of the detainee. Examples of violent convictions were actual or attempted manslaughter, (aggravated) assault, sexual violent offenses, stalking, and arson with immediate danger for other persons. Convictions for verbal violent threats were also included. The RS-V initially makes predictions about violent behavior for the coming 6 months. However, this study additionally included a follow-up period of 12 months to investigate whether the RS-V may also predict violent recidivism during a longer follow-up time. In addition, this study included general (re)offending (6 months and 12 months post-release) as a secondary outcome measure, which includes violent (re)offending as well as non-violent (re)offending. Data regarding criminal records were obtained from the judicial information service, part of the Dutch Ministry of Justice and Security.

This study intended to also investigate differences regarding the predictive validity of the RS-V for males versus females. However, due to the low base rate of violent offending among females in the current sample, it was not possible to investigate these subgroup differences (see table 6.2).

Table 6.2 (re)Offending rates among the total group of included ex-detainees, for males and for females

	Violent (re)offending	General (re)offending
6 months after release from prison		
Total group	50/1230 (4.1%)	204/1320 (15.5%)
Males	49/1154 (4.2%)	201/1241 (16.2%)
Females	1/76 (1.3%)	3/79 (3.8%)
12 months after release from prison		
Total group	76/1233 (6.2%)	310/1320 (23.5%)
Males	75/1158 (6.5%)	301/1241 (24.3%)
Females	1/75 (1.3%)	9/79 (11.4%)

Note. The violent (re)offending rates are corrected for TAR (see section 'Participants')

Procedure

This study protocol was approved by the Ethics Committee of the Institute of Pedagogical Science of the University of Leiden (Reference Number: ECPW-2021/33). The design of the current study is comparable to the study design of (Smeekens et al.,

2024b), although the current study includes RS-Vs rated by prison employees rather than RS-Vs rated by researchers. Data for the current research were retrieved between November 2023 and June 2024. The first step of data collection consisted of checking the inclusion criteria, and acquiring the RS-Vs and demographic information of the eligible participants from their digital files. These RS-Vs were rated by prison employees in real-life prison practice between April 2021 and February 2022 and were retrieved from the digital database of the Dutch Custodial Institutions Agency, called MetIS. Within MetIS, information about Dutch detainees from different information systems is centralized and safely stored.

The second step of data collection consisted of mapping out community recidivism and adjusting for TAR (see section 'Participants'). The criminal records of the former detainees within our sample were retrieved from the judicial information service (part of the Dutch Ministry of Justice and Security). Researchers searched within the criminal record of a participant for offenses that occurred within 6 months or 12 months after the release date of this individual from prison. For each offense, researchers noted the date, penal code, the reference number of the public prosecutor's office, the classification of the offense, the corresponding court decision, and, if applicable, when the penalization was executed. Subsequently, post-release violent (re)offending rates were coded as 0 (no/not present) or 1 (yes/present) for the 6-months follow-up period and for the 12-months follow-up period. TAR was corrected for non-violent incarcerations during follow-up (see 'Participants').

In some cases, it may take as long as one year for convictions to be administered within the official digital criminal record of an individual. Therefore, to make sure all possible new offenses were registered and finalized within the criminal record, the criminal records were retrieved two years after release of an individual from prison¹⁵.

Data analyses

IBM SPSS version 28 and R version 4.4.0. were used to analyze the collected data. First, data preparation involved adjusting for missing values within the RS-V dataset. Missing values of the individual RS-V factors were replaced by the mean value of the other factors within the corresponding subscale through the method of pro-rating. Pro-rating occurred the most frequent for dynamic protective factor P3 (positive influences from social network) and dynamic protective factor P4 (motivation for crime free future).

15 For example, if an individual was released from prison on the 10th of February 2022 (the starting date of the follow-up time), the criminal record of this individual was consulted by researchers from the 10th of February 2024 onwards to identify possible offenses within 6 and 12 months post-release.

These factors contained respectively 25.4% and 14.9% missing values, while the other individual RS-V factors had missing values between 0.1% and 5.3%.

Second, the subscale scores (see table 6.1) and the RS-V total score were calculated. The numerical subscale scores and RS-V total score were calculated for research purposes only, in order to gain insight into the predictive validity of the separate parts of the RS-V. Prison employees solely use the qualitative labels of the individual RS-V factors (not or hardly/moderately/clearly present) and the final conclusions (low/moderate/serious concerns), including their argumentation, to arrive at an overall judgement regarding the individual's violence risk. An individual's RS-V total score was calculated by adding up the historical risk factors subscale and the dynamic risk factors subscale, while subtracting the dynamic protective factors subscale. To be able to calculate the RS-V total score, the historical risk factors, which are rated on a five-point scale, were recoded to a three-point scale (i.e., '0x' = 0, '1x' and '2 – 3x' = 1, '4 – 5x' and '≥6x' = 2). Thus, a more negative RS-V total score indicates a greater presence of protective factors compared to risk factors.

Subsequent analyses consisted of retrieving descriptive statistics regarding the RS-Vs that were included in this study. To be more specific, the mean, the standard deviation, minimum and maximum values of the individual RS-V factors and final conclusion B (unadjusted for missing values), and the subscale scores and RS-V total score (adjusted for missing values) were consulted. In addition, cross tabs were performed to gain insight into the true positives, true negatives, false positives, and false negatives regarding the prediction of final conclusion B (concerns regarding violence after release) versus the actual occurrence of violent convictions within 6 and 12 months after release from prison.

Furthermore, Receiver Operating Curve (ROC) analyses were conducted to investigate the predictive validity of RS-V ratings for violent and general recidivism post-release. ROC analyses result in Area Under the Curve (AUC) values. These AUC values reflect the discriminant ability or predictive validity of an instrument regarding a certain outcome and may vary between 0 and 1. An AUC value of 1 represents a perfect prediction whereas an AUC value of .50 means that the instrument performs at chance level. Regarding the current ROC analyses, an AUC value of .65 means that there is a 65% chance that a randomly selected recidivist will have a higher score on the RS-V than a randomly selected non-recidivist. A common classification of AUC values is: small (between .56 and .64), medium (between .64 and .71), or large (above .71) (Rice & Harris, 2005).

ROC analyses were conducted to test the predictive value of 1) the historical risk factors subscale, 2) the dynamic risk factors subscale, 3) the dynamic protective factors subscale, 4) the RS-V total score, and 5) final conclusion B for four different outcome measures. The two primary outcome measures were: 1) violent (re)offending within 6 months after release, and 2) violent (re)offending within 12 months after release. Additionally, two secondary outcome measures were included: 3) general (re)offending within 6 months after release, and 4) general (re)offending within 12 months after release. The AUC values of the dynamic protective factors were reversed: a higher AUC value represents a protective effect against the chance of community violence.

By means of the DeLong test (DeLong et al, 1988), statistical differences between AUC values were tested. To be more specific, we tested whether the AUC values of the predictors were statistically different between violent and general (re)offending (6-month violence versus general, and 12-month violence versus general), and between the follow-up periods of the outcome measures (6-month violence versus 12-month violence, and 6-month general versus 12-month general). In addition, the statistical differences between the predictive validities of the RS-V total score and of the final conclusion B rating were analyzed, as well as the statistical differences between the AUC values of the three subscales (historical risk factors, dynamic risk factors, and dynamic protective factors) for all outcome measures.

RESULTS

Descriptive statistics

Table 6.3 displays the mean, standard deviation, minimum value, and maximum value of the individual RS-V factors, the subscale scores, the RS-V total score, and final conclusion B. The mean negative RS-V total score indicates that, on average, the included incarcerated persons had relatively higher scores on the dynamic protective factors compared to the historical and dynamic risk factors. Regarding final conclusion B of the RS-V, 41.7% of the included individuals received low concerns, 27.6% received moderate concerns, and 30.7% of the ex-detainees received serious concerns regarding future violent behavior after release from prison.

Table 6.3 The mean, standard deviation, minimum value, and maximum value of the individual RS-V factors, the subscales, the RS-V total score, and final conclusion B for the total group

	<i>M</i>	<i>SD</i>	Min.	Max.
Historical risk factors subscale	1.29	1.21	0	4.80
H1. Previous interpersonal violence outside prison	1.73	1.46	0	4
H2. Previous interpersonal violence inside prison	.42	.91	0	4
Dynamic risk factors subscale	1.01	1.50	0	8
R1. Recent interpersonal violence	.10	.36	0	2
R2. Substance use	.46	.68	0	2
R3. Negative/defiant attitude	.25	.56	0	2
R4. Impulsive behavior	.21	.54	0	2
Dynamic protective factors subscale	6.38	1.98	0	8
P1. Following rules and agreements	1.67	.61	0	2
P2. Coping with problems and frustrations	1.64	.64	0	2
P3. Positive influences from social network	1.46	.74	0	2
P4. Motivation for crime free future	1.59	.65	0	2
RS-V total score	-4.08	3.70	-8.00	11.80
Final conclusion B: Concerns regarding violence after release	.89	.84	0	2

Note. The descriptive statistics of the individual factors and final conclusion B are unadjusted for missing values, and the descriptive statistics of the subscales and RS-V total score are adjusted for missing values (see section ‘Data analyses’). The historical risk factors subscale contains the recoded values on a three-point scale.

Predictive validity of the RS-V for post-release violent and general (re)offending

Table 6.4 displays the true positives, true negatives, false positives, and false negatives regarding the prediction of violent (re)offending within 6 and 12 months after release compared to final conclusion B (concerns regarding violence after release). Within the group of ex-detainees with low concerns, 0.9% and 2.3% of the individuals committed a violent offense within the community in respectively 6 months and 12 months following release. For the individuals with moderate concerns this was 3.9% and 6.6% respectively, and for ex-detainees with serious concerns this was 8.7% and 11.4% respectively. There are relatively more false positive predictions than false negative predictions regarding violent (re)offending within the community for both 6 and 12 months after release.

The AUC values of the subscale scores, the RS-V total score, and final conclusion B for violent and general (re)offending are displayed in table 6.5. The analyses regarding the difference between AUC values of violent (re)offending and general (re)offending revealed

a significant difference for final conclusion B ($D = 3.88, p < .001$; $D = 2.35, p = .018$) and the historical risk factors subscale ($D = 4.09, p < .001$; $D = 2.52, p = .011$) for both the 6-months follow-up period and the 12-months follow-up period respectively. Regarding violent (re)offending, there was a significant difference between the AUC value of the historical risk factors subscale and the dynamic risk factors subscale ($Z = 2.97, p = .003$, 95% CI [.05, .22]), and between the AUC value of the historical risk factors subscale and the dynamic protective factors subscale ($Z = 3.60, p < .001$, 95% CI [.07, .25]) for the follow-up period of 6 months after release. For the general (re)offending outcome measures, there was a significant difference between the AUC value of the RS-V total score and final conclusion B for the 6-months follow-up ($Z = -3.41, p < .001$, 95% CI [.03, .11]) and the 12-months follow-up ($Z = -4.50, p < .001$, 95% CI [.04, .11]). No other AUC values differed significantly from each other.

Table 6.4 The prediction of future violent (re)offending within the community by means of final conclusion B (concerns regarding violence after release) in contrast to the actual occurrence of violent (re)offending within 6 and 12 months after release from prison

	6 months after release from prison			12 months after release from prison		
	No violent (re)offending (<i>n</i> , % of total)	Violent (re)offending (<i>n</i> , % of total)	Total (<i>n</i> , % of total)	No violent (re)offending (<i>n</i> , % of total)	Violent (re)offending (<i>n</i> , % of total)	Total (<i>n</i> , % of total)
Final conclusion B: Concerns regarding violence after release						
Low concerns	526 (42.8)	5 (0.4)	531 (43.2)	516 (41.8)	12 (1.0)	528 (42.8)
Moderate concerns	320 (26.0)	13 (1.1)	333 (27.1)	313 (25.4)	22 (1.8)	335 (27.2)
Serious concerns	334 (27.2)	32 (2.6)	366 (29.8)	328 (26.6)	42 (3.4)	370 (30.0)
Total	1180 (95.9)	50 (4.1)	1230 (100)	1157 (93.8)	76 (6.2)	1233 (100)

Table 6.5 The Area Under the Curve (AUC) and Confidence Intervals (CI) of the subscale scores, RS-V total score and final conclusion B of the RS-V for 6 months and 12 months for both violent (re)offending and general (re)offending post-release

	Prevalence	Historical risk factors subscale		Dynamic risk factors subscale		Dynamic protective factors subscale		RS-V total score		Final conclusion B: Concerns regarding violence after release	
		AUC	95% CI	AUC	95% CI	AUC	95% CI	AUC	95% CI	AUC	95% CI
Violent (re)offending											
6 months	50/1230 (4.1%)	.753***	[.69, .82]	.620**	[.54, .70]	.593*	[.51, .68]	.695***	[.63, .77]	.723***	[.66, .79]
12 months	76/1233 (6.2%)	.710***	[.65, .77]	.642***	[.57, .71]	.650***	[.58, .72]	.723***	[.67, .78]	.678***	[.62, .74]
General (re)offending											
6 months	204/1320 (15.4%)	.605***	[.56, .65]	.613***	[.57, .65]	.604***	[.56, .65]	.655***	[.62, .69]	.592***	[.55, .63]
12 months	310/1320 (23.4%)	.629***	[.59, .66]	.627***	[.59, .66]	.632***	[.60, .67]	.683***	[.65, .72]	.604***	[.57, .64]

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

DISCUSSION

The current prospective study aimed to analyze the predictive validity of RS-Vs rated by prison employees for violent recidivism 6 months and 12 months after release from prison. The results reveal that the predictive validity of the ratings on final conclusion B (concerns regarding violence after release) are large for the follow-up period of 6 months post-release, and medium for the follow-up period of 12 months post-release. This study thereby replicates the findings of an earlier retrospective study that included RS-Vs rated by researchers based on file information of detained individuals (Smeekens et al., 2024b). However, the results regarding gender differences could not be replicated in the current study due to the considerably low base rate of violent (re)offending that was found within the current study for the group of females (1.3% during both the 6-months and 12-months follow-up, see section 'Limitations'). The predictive values of the RS-V ratings regarding general (re)offending were small to medium. The ratings on the historical risk factors subscale and final conclusion B showed significantly higher predictive values for violent (re)offending compared to general (re)offending after release from prison, highlighting the relative specificity of RS-V scores to predict future violence.

To be more specific regarding the 6-months follow-up period, the ratings on final conclusion B and the (for research purposes calculated) historical risk factors subscale showed large predictive validity for post-release violent behavior, while the ratings on both the dynamic risk factors subscale and the dynamic protective factors subscale showed small predictive validity for future violence. One possible explanation for this difference in predictive values is that predicting behavior occurring outside the prison context based on behavior displayed within the prison context is complex, especially since behavior is (partially) context dependent and the current living environment can greatly influence one's behavior. The dynamic factors are rated based on behavior occurring in the recent past: behavior within the prison context. Nevertheless, final conclusion B (concerns regarding violence after release) demonstrates large predictive validity. Although prison workers often lack sufficient insight into an individual's behavior outside the prison context, they appear capable to draw sound conclusions regarding violence after release based on part one and part two of the RS-V. This finding is somewhat surprising, given the lower predictive validity of the ratings on the dynamic factors and the fact that for some detainees that are soon to be released it is not known what their living situation will be after discharge (for example because they do not have a permanent residence or because prison staff do not have sufficient insight into the home environment), which complicates the final conclusions. It could be that, during the multidisciplinary discussion where part one and part two of the

RS-V are combined to arrive at final conclusion B, prison employees rely more heavily on previous behavior within the community (factor H1) than previous and recent behavior within prison (factor H2, and dynamic factors R1 – R4 and P1 – P4) in order to draw conclusions regarding violent behavior outside the prison context. Post-hoc analyses indeed revealed that the scores on factor H1 (previous interpersonal violence outside prison, AUC = .750) showed a higher predictive validity than the scores on factor H2 (previous interpersonal violence inside prison, AUC = .650). This could clarify the relatively large predictive value of the ratings on final conclusion B for the 6-months follow-up period, although additional research into the multidisciplinary discussion is needed to confirm this explanation.

For the 12-months follow-up period, all predictors showed medium to large predictive validity for violent (re)offending after release, thereby diminishing the relatively large difference in predictive values between the ratings on the historical risk factors subscale and final conclusion B versus the ratings on the dynamic subscales that were observed for the 6-months follow-up. A possible explanation for this observed variation between the 6-months and the 12-months follow-up could relate to the difference in violent (re)offending base rates between the two follow-up periods. The 6-months follow-up period had a base rate of 4.1%, compared to 6.1% for the 12-months follow-up period. Even though the included samples are large (respectively $n = 1230$, and $n = 1233$), a higher base rate generally leads to more accurate and reliable predictions (Elwood, 1993).

Final conclusion B (concerns regarding violence after release) is the primary predictor of the RS-V for community violence and is formulated through a multidisciplinary discussion within prison practice. This study found that final conclusion B showed higher predictive validity regarding violent offending compared to general offending after imprisonment. These findings indicate that professionals in prison practice are indeed able to consider violent recidivism specifically when they draw final conclusions regarding their concerns about offending after discharge. This result is in line with previous research regarding other risk evaluation tools such as the VRAG and the VRS that shows similar results regarding their distinctiveness in predicting violence (Kröner et al., 2007; Wong & Parhar, 2011). Additionally, a meta-analytical study revealed that in general, the predictive validity of risk assessment instruments is greater for violent offending than general offending (Singh et al., 2011). The RS-V has specifically been developed for the prediction of future violence and this study shows that RS-V scores and conclusions indeed have a specific ability to estimate concerns regarding future community violence. However, in general, one would expect the predictive values of RS-V scores to be lower if preventive measures were instated based on the results of the screening, and if these measures were effective in reducing community violence.

There are considerably more false positives than false negatives when it comes to the prediction of final conclusion B (concerns regarding violence after release) versus the actual recidivism convictions for violent behavior. On the one hand, it could be that based on the RS-V, concerns regarding future violence after release are generally overestimated. On the other hand, it is plausible that an individual shows violent behavior within the community, but this is not reflected by the actual convictions within their official criminal record. Actual convictions are assumed to only represent a small portion of actual violent behavior (Minkler et al., 2022). For instance, domestic violence and sexual assaults are not always reported to the police, and charges do not always lead to convictions. In addition, even when someone is accused of a violent crime, they may not always be convicted due to lack of evidence. These so called 'dark numbers' of violent recidivism may therefore go unnoticed when only formal convictions are considered. A similar false positive versus false negatives ratio was found regarding the ratings on final conclusion A (concerns regarding violence inside prison) in comparison to the actual occurrence of violent incidents within prison (Smeekens et al., 2024c). In general, a relative higher number of false positives in contrast to false negatives is preferred when it comes to violence risk assessment within forensic contexts (Kang & Wu, 2022), for the purpose of community safety. Although, from an ethical and community reintegration perspective, one should be aware that overestimating recidivism risk could lead to overly restrictive risk management strategies because being too restrictive may have negative consequences for the reintegration of an individual.

The overall ratings on the RS-V reveal that the included detained individuals had relatively higher scores on the dynamic protective factors compared to the historical and dynamic risk factors. Meaning that they behaved reasonably well during their prison stay. Nevertheless, almost one-third of the sample received serious concerns on final conclusion B regarding future violent behavior after release from prison. This result highlights the likelihood of further offending once a detainee is released, even when behavior during prison stay appears positive, and the importance of instating follow-up measures based on the final conclusions of the screening. Especially for individuals who received moderate or serious concerns regarding violence after release, constructive risk communication and collaboration with other institutions (such as probation services or the municipality the individual will return to) and aftercare facilities (such as treatment programs or supervised housing) is necessary. A recent Dutch study highlights that the re-integration of ex-detainees in the Netherlands is quite often unsuccessful and requires ongoing attention, especially for individuals with short sentences and individuals with complex problems (Doekhie et al., 2024). Therefore, the use of alternative sanctions to prison sentence and/or more effective re-integration programs are advisable, such as day reporting centers, halfway houses, or community

treatment orders (Oselin et al., 2023; Van den Broek et al., 2024). It is possible that within these treatment and supervision contexts, the RS-V may be of added value as well and assist in preselecting individuals that require additional attention and guidance.

Limitations

A first limitation of this study relates to the observed (re)offending rates. The base rates of new convictions for violent (re)offending (6 months: 4%, 12 months: 6%) and general (re)offending (6 months: 16%, 12 months: 24%) found within this study were considerably low compared to previous research. For instance, a retrospective prison study conducted within the Netherlands that used a similar study design reported base rates of 7% and 15% for respectively 6 months and 12 months violent (re)offending within the community, while for general (re)offending base rates of 24% (6 months) and 38% (12 months) were found (Smeekens et al., 2024b). These substantial differences in (re)offending rates can largely be explained by the time-period during which data collection took place. The mentioned retrospective research included violent offenses that were committed during September 2014 and October 2018, whereas the current study included violent offenses that occurred between May 2021 and May 2023. As within many countries, the Dutch government imposed several lockdown measures in 2021 due to the COVID-19 pandemic. For example, evening curfews, stay-at-home orders, travel bans, and the closure of schools and shops. It is known that the COVID-19 pandemic and consequent restrictive measures decreased most types of crime rates globally (Hoeboer et al., 2024). To be more specific, most crimes clearly decreased (e.g., robberies, property crimes, physical violence, and sexual violence), some types of crime yielded mixed results (i.e., homicides, intimate partner violence, and cybercrime), while domestic violence increased. It is plausible that the COVID-19 pandemic also partially influenced the offending rates found within this study. In addition, violent crimes committed by females are in general less frequent than violent crimes committed by males; referred to as the gender gap (Heimer, 2000; Rennison, 2009). The pandemic likely further lowered the violent crime rate among females found within this study (1.3% for both 6 and 12 months), making it not feasible to separately analyze the predictive validity of the RS-V for females within the current study.

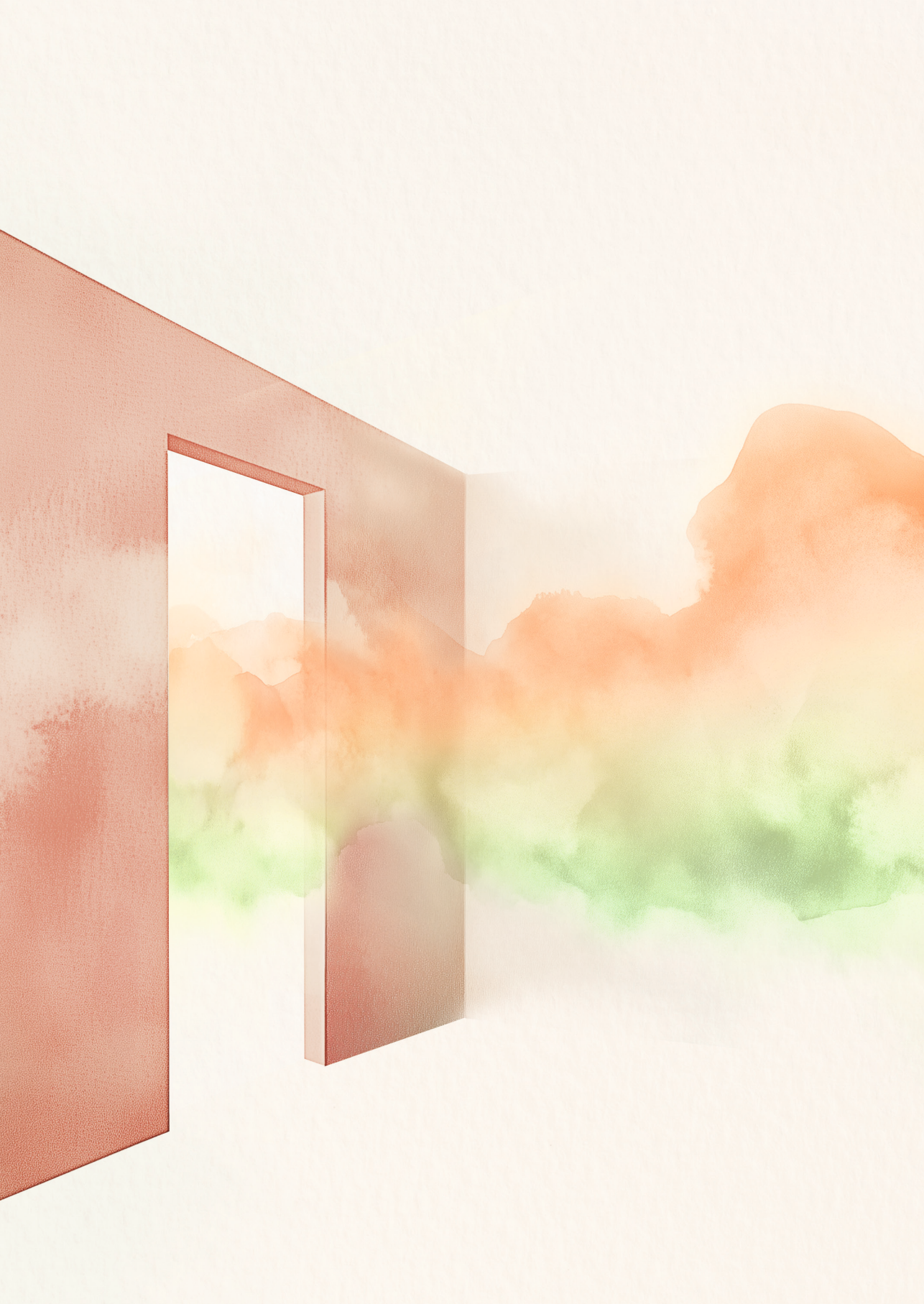
In line with the first limitation, the operationalization of the outcome measure of violent recidivism is a second limitation of this study. Besides mapping-out formal convictions for violent (re)offending as an outcome measure, adding formal charges, re-arrests, and pseudo-anonymous self-reported data of ex-detainees regarding committed crimes would likely have yielded a more rich view regarding violence after release. However, unfortunately these data could not be retrieved.

Third, this study included individuals that were released from prison within 90 days after the rating of the RS-V final conclusions. The RS-V initially makes predictions about violent behavior for the coming 6 months. However, the average number of days between the rating of final conclusion B and the release date from prison was 40. Thus, even the 6-months follow-up period already exceeded the actual intended timeframe of the RS-V evaluation. The robustness of the predictive values of the RS-V for individuals that had a relatively long prison stay between screening and release could have been affected. Regardless of this limitation, RS-V ratings are still able to sufficiently predict community violence.

Conclusion and future directions

Accurately predicting and successfully preventing violent (re)offending after release from prison remains a challenging task. This study shows that based on RS-V ratings, prison workers without specific behavioral expertise are able to sufficiently classify which individuals are most likely to commit violent offenses after release from prison. The RS-V provides a valuable evaluation measure to gain more insight into concerns regarding future violence for individuals soon to be released from prison. The tool offers guidance regarding which individual risk factors and protective factors require more attention in the rehabilitation process and/or serves as triage to determine the need for the application of more comprehensive violence risk assessment.

Once an individual is (close to being) released, communicating about an individual's risk factors and protective factors is an important step in providing appropriate and tailored care after imprisonment. Effective risk communication toward after-care institutions such as probation officers and local governmental institutions is necessary to optimize successful, smooth, and non-violent re-integration into society. Therefore, it is important for future research to describe current work processes regarding risk communication between forensic institutions, and to discover best practices and formulate recommendations in order to improve the quality of risk communication. Finally, in order to investigate the predictive validity of the RS-V specifically for female offenders, it would be beneficial to conduct a similar study during a pandemic-free period with likely a greater base-rate of reoffending for this subgroup of individuals.





CHAPTER 7

General Discussion

Marjam Smeekens

This thesis investigated the practical application and psychometric quality of a newly developed risk screening instrument for the prison setting called the Risk Screener Violence (RS-V). The main objective was to discover the predictive validity of RS-V scores for violent incidents within the prison setting and for violent recidivism within the community after release. Studies were conducted using both retrospective data, including RS-Vs rated by researchers based on digital file information of detained individuals, and prospective data, including RS-Vs rated by prison employees in real-life prison practice. This final chapter includes a summary of the most important research findings, an interpretation of the results, limitations and strengths, implications for prison practice, recommendations for future research, and final remarks.

Summary of the research findings

The application of the RS-V in Dutch prison practice

After an extensive development and pilot phase in multiple prisons, the initial implementation of the RS-V in all Dutch prisons began in September 2021. Since then, the RS-V has been rated consistently for all individuals detained in one of the 25 prisons in the Netherlands. Therefore, a lot of data containing RS-Vs rated by prison employees in real-life prison practice became available for research. The comparative study described in **Chapter 2** analyzed a large sample of RS-Vs ($n = 8,960$) rated during two cohorts: the first 6 months after the initial implementation (September 2021 – February 2022), and another 6-months time period one year later (September 2022 – February 2023). There were no substantial differences regarding RS-V ratings between the two cohorts, which indicates that the RS-V is rated similarly over time. Specifically, the ratings on the final conclusions showed consistent patterns. Prison employees evidently expressed more concerns regarding violent behavior post-release in contrast to violent behavior within the prison setting or during leave, with violence during leave also raising more concerns than violence during imprisonment. In addition, Chapter 2 identified that males, young adults (age ≤ 25), and recurrent detainees showed more severe concerns based on the screening, compared to respectively females, adults, and first-time detainees. This result may inform prison employees to be more aware of certain risk-related behavioral patterns within subgroups of individuals during an early stage of detention, although the RS-V of each individual requires a personalized approach. Furthermore, this study analyzed RS-V user evaluations completed by prison employees ($n = 821$) across three years since the initial implementation, with surveys being conducted in 2021, 2022, and 2023. In general, these user experiences consistently revealed that prison workers are positive about the RS-V and find the tool to be useful and fairly easy to administer. However, prison staff also indicated that the practical application of the RS-V in prison practice is in need of improvement regarding: 1) the timing and quality of reports written by prison staff that provide input for the RS-V

assessments, 2) the discussion of the final conclusions during the multidisciplinary team meeting (MDO), and 3) the implementation of follow-up measures and risk management based on the results of the screening.

The prediction of prison violence

In **Chapter 3**, the predictive validity of RS-V ratings for violent and aggressive incidents within prison practice was investigated. The RS-Vs included within this study were rated retrospectively by researchers based on behavioral reports within the digital file of a detained individual. In addition, during a follow-up period of 4 months after rating final conclusion A (concerns regarding violence within prison) of the RS-V, violent and aggressive incidents were scored based on disciplinary infractions documented within a detainee's prison record. The primary outcome measure, violent incidents, had a prevalence rate of 10% and included either physical violence or violent threats. In addition, the broader outcome measure, any violent or aggressive incident, had a prevalence rate of 17% and also included aggression toward objects or verbal disruptive behavior, such as insulting or challenging other individuals. The results show that both the ratings on the RS-V total score (which is comprised of the ratings on the historical risk factors and the dynamic risk factors, minus the dynamic protective factors) and final conclusion A showed large predictive validity for violent incidents within prison. Furthermore, RS-V ratings were primarily predictive of violence toward staff compared to violence toward other detained individuals. However, the included sample ($n = 181$) and corresponding base rates of both violence toward a staff member or violence toward another detained individual were relatively low (respectively 6% and 5%), which makes drawing firm conclusions regarding the difference in predictive validity difficult. Finally, this study found a relatively large proportion of false positive predictions (i.e., individuals receiving moderate/serious concerns on final conclusion A while not committing a violent incident during follow-up) compared to false negative predictions.

The study described in **Chapter 4** included a larger sample of RS-Vs ($n = 958$), rated prospectively by prison employees in real-life prison practice. Using a similar study design as described in Chapter 3, this study found comparable base rates of disciplinary infractions regarding violent incidents (11%), violent and aggressive incidents (15%), violence toward staff (6%), and violence toward other detained individuals (6%) during the 4-month follow-up period in prison, making these results more robust. In line with Chapter 3, the ratings on the RS-V total score and final conclusion A revealed large predictive validity for violent incidents. In addition, the predictive value of the ratings on the RS-V total score within Chapter 4 was somewhat higher than within Chapter 3. This results from higher predictive values regarding the ratings by prison employees for both part one (the historical risk factors) and part two (the dynamic factors) of

the RS-V. The predictive validity of final conclusion A is similar across both studies. In addition and in contrast to Chapter 3, the study in Chapter 4 found no difference in the predictive validity of 1) RS-V ratings for violence toward staff versus violence toward other detained individuals, and 2) RS-V ratings for individuals with a longer detention duration versus individuals with a shorter detention duration (until the moment of screening). Although the latter group was more likely to act out aggressively during the follow-up period. Gender differences in predictive validity could not be analyzed due to the low violent incident base rate among females (2%) during follow-up. Based on Chapter 3 and Chapter 4, it can be concluded that the RS-V is a valuable tool in predicting in-prison violence.

The prediction of community violence

Whereas Chapter 3 and Chapter 4 focused on the prediction of violence during incarceration, Chapter 5 and Chapter 6 zoomed in on the prediction of community violence. More specifically, post-release violent (re)offending after discharge from prison based on formal convictions documented within an individual's criminal record. Examples of convictions regarding (actual or attempted) violence that were included: manslaughter, assault, sexual violent offenses, stalking, and verbal violent threats. The study described in **Chapter 5** included RS-Vs ($n = 571$) rated retrospectively by researchers based on digital prison records of detained individuals (like in Chapter 3), and found excellent interrater reliability. The prevalence rates of violent (re)offending discovered within this study were 7% for 6-months follow-up, 15% for 12-months follow-up, and 21% for 24-months follow-up. Concerning predictive validity, the ratings on the RS-V total score and final conclusion B (concerns regarding violence after release) showed the largest predictive validity for the 6-months follow-up period. However, the predictive ability of the included RS-V ratings was also sufficient for 12 months and 24 months follow-up. The RS-V ratings were especially predictive for females compared to males, although females had relatively low base rates for violent (re)offending after imprisonment (6 months after release: 3%, 12 months after release: 6%, and 24 months after release: 9%).

The study design of **Chapter 6** is comparable to the study design of Chapter 5, however this study included a larger sample of RS-Vs ($n = 956$) rated prospectively by prison staff within prison practice (like in Chapter 4). Chapter 6 found lower base rates of violent (re)offending compared to Chapter 5: 4% for the 6-months follow-up period and 6% for the 12-months follow-up period (see section 'Limitations and strengths'). For females, the violent (re)offending rates were even lower (1% during both follow-up periods). As a consequence, reliable analyses regarding gender differences in predictive validity could not be conducted. For the total group, Chapter 6 found large predictive validity of the ratings on final conclusion B for the 6-months follow-up and medium predictive validity

for the 12-months follow-up. For the ratings on the RS-V total score, this was reversed. In addition, this study shows that RS-V ratings are specifically predictive of violent compared to general (re)offending (with a prevalence rate of 15% for the 6-months follow-up, and 23% for 12-months follow-up). Similar to Chapter 3, this study found a large proportion of false positive predictions compared to false negative predictions regarding the occurrence of violent behavior, in this case after release, based on the concerns expressed in final conclusion B. Considering the findings of Chapter 5 and Chapter 6, it can be concluded that the RS-V is capable of sufficiently classifying which individuals are more prone to displaying violent behavior within the community after release.

Interpretation of the results

The findings of this thesis reveal that the implementation and practical application of the RS-V in Dutch prison practice has been successful thus far. In addition, the RS-V is able to sufficiently classify which individuals show more serious concerns regarding future violence, both within the prison environment and in the broader community. However, further reflection on these results is warranted.

The prediction of prison violence versus community violence

It seems that RS-V ratings are slightly better able to predict violent behavior displayed within the prison setting (see Chapter 3 and 4) than violent behavior displayed within the community (see Chapter 5 and 6). There is a plausible explanation for this result. The RS-V is scored based on (reports of) behavior that an individual displays inside prison walls with its corresponding rules and restrictions, while behavior displayed outside the prison context may be fundamentally different. For instance, upon re-entering into the community, individuals regain freedom and autonomy, but they may also face reintegration challenges such as finding employment and housing, and re-connecting with friends and family members (Visser & Travis, 2003). These issues can significantly influence an individual's behavior, which may not align with their behavior observed in the controlled prison setting. Moreover, prison employees often lack insight into the circumstances of an individual after discharge, such as the specific living conditions or employment situation, and potentially corresponding behavior. This may have led to a lesser predictive ability of RS-V ratings for community violence in comparison to prison violence in this thesis. Although the predictive validity is somewhat lower for violence within the community compared to violence within prison, prison employees clearly express more concerns regarding violence within the community (see section 'Implications for Dutch prison practice'). However, the possibilities and responsibilities of professionals working within the prison system are limited after a detainee's release. The prison system is just one organization involved in the overall justice process of guiding offenders toward a safe and successful reintegration, having its own tasks

and functions. This makes constructive communication about violence concerns and the collaboration with other organizations and aftercare facilities operating within the judicial system, such as local municipalities, probation services, and (forensic) mental health organizations, all the more important.

The final conclusions of the RS-V

All detained individuals receive a rating on the historical risk factors, which are rated within one or two days after admission. However, only individuals that are imprisoned for at least six or nine week receive a full RS-V rating, including a rating on the final conclusions (see Chapter 1 'General Introduction'). Chapter 4, 5, and 6 of this thesis reveal that the predictive validity of the historical risk factors and the final conclusions are roughly comparable. This applies to both in-prison violence and community violence. One could speculate whether the final conclusions, based on Structured Professional Judgement (SPJ) principles, would hold additional value if the historical risk factors alone are equally predictive of future violence. The relatively large predictive validity of the historical risk factors provides evidence that these factors are valuable for supporting early in-prison risk management regarding individuals that did not (yet) receive a full rating on the RS-V. For instance, based on the ratings on the historical factors, prison employees could decide to place an individual in a single cell or could consider adjusting their approach toward certain individuals. These are relatively straightforward follow-up measures that can rapidly be instated once an individual is admitted to prison. This way, the historical risk factors provide a baseline evaluation to guide immediate decisions, with a more comprehensive evaluation following for those who remain in detention longer. The ratings on the dynamic factors and final conclusions offer deeper insight into current behavior and potential future behavior, thus providing more guidelines for tailored risk management strategies. Additionally, discussing the final conclusions in a multidisciplinary manner is one of the advantages of the RS-V, as it facilitates a more personalized approach, it encourages collaboration among prison staff, and it offers direct guidance regarding risk management strategies. For instance, during the final conclusions discussion in the MDO, prison employees can directly contemplate on follow-up measures based on the screening results.

The results of this thesis raise questions about the relatively large group of individuals receiving serious concerns on the final conclusions while not committing a violent incident or violent offense during follow-up (i.e., false positive predictions). Not necessarily in line with the predictive validity results, it could be that some individuals with serious concerns received follow-up measures that were successful in preventing the occurrence of violence. Another explanation for the relatively large proportion of false positive predictions could be the underreporting of violent behavior (see

section 'Limitations'). However, it is also likely that several of these individuals were not actually of higher concern for committing violence (assessment tools inevitably contain classification errors). Even though a ratio of relatively more false positives in contrast to false negatives is preferred within forensic settings (Kang & Wu, 2022), there is a possibility of risk management unnecessarily being too restrictive for this group of individuals (see section 'Implications for Dutch prison practice').

Prison practice studies

The prospective prison practice studies in Chapter 4 and Chapter 6 revealed that RS-Vs rated by general prison workers are able to sufficiently predict future violence. Moreover, the RS-V total score rated by prison staff in real-life prison practice (Chapter 4) showed slightly higher predictive ability for prison violence than the RS-V total score rated by researchers based on file information alone (Chapter 3). A possible explanation for this result is that prison employees are more familiar with the prison setting, including its residents, than researchers working remotely. First-hand observations enable prison employees to (more) accurately rate part two of the RS-V, resulting in larger predictive values compared to RS-Vs rated by researchers. Chapter 2 additionally indicates that the majority of prison employees find the RS-V not difficult to rate. Based on these results it can be concluded that trained general prison employees without specific behavioral expertise, such as case managers and back office employees, are able to rate the RS-V successfully. This is likely the case because the RS-V is relatively compact, simple, and relies on straightforward risk and protective factors for which the necessary information is usually accessible within the Dutch prison context. On the other hand, rating extensive risk assessment instruments such as the HCR-20^{V3} and the SAPROF, is generally more complex and requires advanced behavioral expertise by psychologists or psychiatrist (see Chapter 1 'General Introduction'). There was no difference between the file study in Chapter 3 and the prison practice study in Chapter 4 regarding the predictive validity of final conclusion A. In line with the user experiences in Chapter 2, this result indicates that the discussion of the final conclusions within prison practice during MDOs requires some additional monitoring and improvement, in order to increase the predictive validity of final conclusion A and better align it with the RS-V total score. Thus, continually monitoring and improving the application of the RS-V in prison practice is important. For instance, by investigating the arguments provided for the final conclusions and each RS-V factor (see section 'Recommendations for future research').

Finding large predictive values of RS-V ratings based on prospective real-life prison data in Chapter 4 and Chapter 6 is actually somewhat concerning. By administering the RS-V, prison employees identified which individuals showed moderate or serious concerns

regarding future violence. To be more specific, they knew who was more likely to act out violently in the coming months (either during incarceration or within the community). Nonetheless, violent incidents occurred. Which means that interventions based upon the results of the screening were not instated sufficiently or these interventions were not successful in preventing the actual occurrence of violence, resulting in the relatively large predictive validity of the RS-Vs included within Chapter 4 and Chapter 6. Ideally, if individual risk management is tailored well with the results from the screening, the predicted future violence will be prevented, and the predictive validity of the tool will be low. The RS-Vs included within both prospective studies were rated within the first six months after implementation of the RS-V in prison practice, when risk management may not yet have been aligned too well with the RS-V findings for each individual. It is hypothesized that the predictive validity diminishes if future research analyzes RS-Vs administered further from the initial implementation date. This is expected because, over time, prison staff become more experienced with RS-V related work processes, such as directly instating follow-up measures based on the screening results, through which violent incidents are more likely to be prevented. However, this process of subsequent risk management based upon the results of risk evaluation tools remains challenging (see section 'Implications for Dutch prison practice').

The predictive validity of RS-V ratings for different outcome measures and subgroups

The predictive validity of the RS-V ratings included within this thesis shows more or less consistent results regarding the type of victim and the timing of the screening. To be more specific, the RS-V may be used for the prediction of violence toward staff or other detained individuals, and the RS-V may be rated at different time points during incarceration, while still providing equally reliable and predictive results. In contrast, the predictive validity of RS-V ratings do seem to differ when it comes to gender. Namely, the results of Chapter 5 indicate that RS-V ratings seem especially predictive of future community violence among females in comparison to males. A possible explanation for this result relates to the low prevalence rates of violence among females found within this thesis. The RS-V may perform better in populations where violent (re)offending is less common, such as among females. The lower prevalence of violent offending allows the RS-V to distinguish serious-concerned individuals more clearly. As a result, the predictive accuracy of RS-V ratings may be enhanced. Another explanation for the relatively high predictive validity among females in contrast to males could be that prison employees in female-only prisons adopt gender-responsive practices, which they may effectively integrate into the RS-V rating process. Violence displayed by women often occurs within a relational context, such as conflicts with close relatives, in comparison to men where violence is more frequently associated with instrumental motives (De Vogel & De Vries Robbé, 2013). It could be that prison staff in female prisons pay more attention to these

interpersonal dynamics, and gather more information regarding the social network of a female detainee, which could subsequently increase the predictive validity results. This is reflected in the number of missing values found within Chapter 4 regarding factor P3 (positive influences from social network), which was lower among females (16%) compared to males (25%). It was only within the file-based study in Chapter 5 that the base rate of violence among women was sufficiently high to analyze the predictive validity of the RS-V for this group of detained individuals. Therefore, further investigating the RS-V work processes in female prisons and the relatively high predictive validity of the RS-V among females seems worthwhile (see 'Recommendations for future research'). Especially since research regarding the validation of risk assessment for female detainees shows mixed results (Gower et al., 2024).

The studies described in Chapter 5 and Chapter 6 found that the predictive validity of the ratings on final conclusion B (concerns regarding violence after release) seem to differ between follow-up periods. That is to say, the prediction of community violence is somewhat better for shorter follow-up periods (i.e., 6 months) in comparison to longer follow-up periods (i.e., 12 months or 24 months). This corresponds with the aim and depth of analysis of a risk screening instrument such as the RS-V. As stated within Chapter 1 ('General Introduction'), risk assessment instruments offer a more in-depth analysis of risk and protective factors and are in general able to provide a sound prediction of violence on the long term, whereas relatively simple risk screening instruments are more focused on the prediction of violence on the short term. The RS-V has been developed to provide a prediction of violence concerns for a time period of 6 months after rating the final conclusions. Both Chapter 5 and Chapter 6 underscore that final conclusion B, being the primary outcome measure of the RS-V regarding violence after release, indeed has the largest prediction regarding this timeframe. However, longer follow-up periods also provide sufficient predictive validities, at least regarding community violence. Future research could investigate whether RS-V scores are also able to predict in-prison violence during a longer follow-up period.

The RS-V versus risk assessment instruments

The predictive validity results of the RS-V ratings within this thesis are comparable to the predictive validity results of extensive risk assessment instruments¹⁶ such as the HCR-20^{V3} and the SAPROF (Brookstein et al., 2021; De Vries Robbé et al., 2020; Neil et al., 2020; Persson et al., 2017a). In addition, like risk assessment tools, RS-V ratings are also sufficiently predictive of community violence during longer follow-up periods.

¹⁶ For an elaborate explanation about the difference between risk assessment and risk screening see Chapter 1 ('General Introduction').

There is a plausible explanation as for why a relatively simple and compact risk screening instrument such as the RS-V performs as well as more in-depth risk evaluation tools. It is possible that the diverse risk profiles present in the prison setting make it easier to predict who will be violent in the future based on a screening tool. While in settings where more severe risk profiles are common, such as in forensic psychiatric care, tools that are more comprehensive may be needed. An additional explanation relates to the possibility that a relatively small number of key risk or protective factors explains the largest amount of variation in predicting future violence. By focusing on these core factors, risk screening may provide a fairly accurate evaluation without the need for complex evaluations. If this is the case, adding more factors may not necessarily improve the predictive accuracy of an instrument. However, incorporating additional factors likely enhances the overall understanding of an individual's risk and protective factors, thereby improving the opportunity to effectively target personalized interventions and overall risk management. The use of risk assessment instruments is therefore particularly relevant in specialized forensic psychiatric settings, such as 'terbeschikkingstelling' (TBS), given the generally longer treatment duration and the variety of individualized treatment options. Comprehensive risk assessment instruments are more detailed and nuanced, and likely more supportive in managing violence risk among relatively complex patient groups. Future research could compare the predictive validity of RS-V scores with extensive risk evaluation tools, such as the HCR-20^{v3} and the SAPROF, within various forensic contexts and populations. Another possibility is to study the effectiveness of interventions that are implemented based on the results of these tools to provide further evidence of their utility in real-world settings.

Limitations and strengths

Limitations

Although the studies described in this thesis have been conducted carefully, a critical review of the methodology and the collected data is of importance. A first limitation relates to the included outcome measures within Chapter 3 and Chapter 4: violent and aggressive incidents within prison practice. The prevalence rates of in-prison violence found within these studies were relatively low compared to prevalence research within other Western countries, although there is a lot of heterogeneity between studies (Caravaca-Sánchez et al., 2023). In this thesis, the prevalence of violent and aggressive incidents within the Dutch prison setting was scored based on reports of disciplinary infractions documented within the digital prison record of a detained individual. Therefore, the accuracy of these outcome measures depended on whether prison staff consistently reported on the incidents that occurred during the incarceration of a specific individual. More importantly, this also depended on whether prison workers had sufficient insight into all incidents that actually took place. Behavioral insight might

be especially limited for incidents that happened between incarcerated persons. These conflicts among prisoners may occur in less supervised or secure areas/moments within the prison setting, such as during nighttime hours or inside cells. This could explain why Chapter 3 and Chapter 4 found comparable prevalence rates of violence among detained individuals in comparison to violence toward staff members, while other studies found higher rates for the former (Celinska & Sung, 2014; Lahm, 2008, 2009). In addition, another study has found that inmate-on-inmate victimization rates were substantially lower if data collection was based on official records in contrast to self-report measures, highlighting a substantial dark number (Braga et al., 2019). Other researchers stated that the actual rates of violent incidents within prisons are likely even higher than found within scientific research (Byrne & Hummer, 2007).

The second limitation relates to the outcome measure used within Chapter 5 and Chapter 6: violent recidivism within the community. The prevalence rates of violent recidivism found within both studies were relatively low compared to other studies conducted in Western countries (Yukhnenko et al., 2020). The COVID-19 pandemic likely contributed to the lower prevalence of violent (re)offending observed in Chapter 6 in contrast to Chapter 5. Violent (re)offending was defined as formal convictions for a violent offense based on the penal code within the official criminal record of an individual. Formal convictions likely only constitute a fraction of actual offending, highlighting the probable underestimation of the occurrence of community violence (Elliott et al., 1986; Minkler et al., 2022). Including supplementary data regarding new charges, rearrests, and reincarcerations could provide additional insight into the occurrence of post-release violence. Still, there is a margin of error in the likelihood of crime detection by the police. Besides lack of evidence and prioritization, another explanation for this margin of error is that some crimes are not reported to the police (e.g., domestic violence or sexual harassment) or cannot be linked to a specific individual.

The limited scope of the included violence outcome measures could explain why this thesis found relatively low base rates of violent behavior, both inside and outside prison, compared to other studies. On the contrary, the prison climate within the Netherlands is perceived as being relatively safe, which could also partly explain the relatively low prevalence of in-prison violence found within this thesis (Van Ginneken, 2024). The potential dark figure of violence within this thesis could have possibly been reduced by including more data sources besides official prison records and criminal records, such as self-report measures of prison and community violence, additional staff observations, police reports, and community surveys. Self-report data has been identified as a reliable method for measuring crime prevalence rates as it captures instances of criminal behavior not visible in formal reports (Thornberry & Krohn, 2000).

In addition, including self-report measures enhances the involvement of the detained individuals themselves in the research process.

This lack of involvement of detained individuals is another limitation of this thesis. The views of incarcerated individuals themselves were not included into the studies that were carried out, while their opinion regarding their own risk and protective factors could have been of added value to further understand the presence and details of the RS-V factors and the overall intervention and reintegration process. It would also have been informative to find out whether the results of the screening were properly shared with an individual during a trajectory meeting, or whether the viewpoint of the individual regarding the ratings on the factors was incorporated into the Detention & Reintegration (D&R) plan. It is important to not only study the behavior of detained individuals, but to also engage and involve them during an early stage of research to effectively capture their perspective and motivation for change (see section 'Recommendations for future research'). In addition, as mentioned earlier, involving detained individuals regarding self-report measures of violent behavior would have enhanced the quality and depth of the outcome data.

An additional limitation concerns the relatively long detention period of the included detained individuals within this thesis. As mentioned in Chapter 1 ('General introduction'), 24% of all individuals in Dutch prisons are released within two weeks after incarceration, and 72% within three months (Dutch Custodial Institutions Agency, 2024b). This thesis only included fully completed RS-Vs. Meaning that the RS-Vs contained ratings within part one (the historical risk factors), part two (the dynamic factors), and part three (the final conclusions), with a maximum of two factors recorded as missing. Part three of the RS-V is rated after six or nine weeks of detention. This means that the (partly completed) RS-Vs of individuals with a detention period of less than six weeks were automatically excluded. In addition, the studies investigating the predictive validity for violence within prison required an additional follow-up time of at least 4 months of incarceration to collect the outcome data, thereby excluding an additional number of short-stay participants. As a result, the population of detained individuals that was investigated in this thesis is not necessarily an accurate reflection of the prison population within the Netherlands. For instance, individuals with a longer average detention period likely committed more severe (violent) crimes. Therefore, on average, the studied population probably had more serious concerns regarding future violence than the general prison population. However, including fully rated RS-Vs within this thesis was necessary to properly investigate the practical application and psychometric quality of the RS-V. It would be of interest to find out more about differences between individuals who only received ratings on part one of the RS-V

(relatively short-stay individuals) compared to individuals for whom all parts of the RS-V were rated (relatively long-stay individuals).

As mentioned above, the RS-Vs included within this thesis had no more than two factors recorded as missing. When examined in more detail, the average number of missing values of the RS-V was higher within the retrospective studies than within the prospective studies. For example, the retrospective study described in Chapter 2 reported an average of 1.4 missing factors per RS-V, whereas the prospective study of Chapter 4 reported an average of 0.6 missing factors. This indicates once more that prison employees working with detained individuals on a daily basis have more insight into their risk and protective factors than researchers working remotely with digital file information do. Across all studies within this thesis, the majority of missing values was recorded within factors P3 (positive influences from social network) and P4 (motivation for crime free future). For instance, Chapter 4 found that these factors contained 24% and 22% missing values respectively, while the other factors of the RS-V had minimal missing data. Missing data poses challenges to the reliability of the predictive validity results, as it may lead to an underrepresentation of certain factors. However, including a relatively large sample of RS-Vs (which is one of the strengths of this thesis, as discussed below), and using the method of prorating to account for missing values helps mitigate this issue (Perley-Robertson et al., 2024). The relatively high rate of missing values within factor P3 and P4 is likely caused by the difficulty prison employees experience in gathering sufficient information about the social network and motivation for a crime free future of a detained individual. Collecting such information often requires time, whereas employees may have limited opportunities to gather these insights with the relatively large number of short-stay individuals in Dutch prison. Strategies to address or account for the missing data on the two protective factors are important for making more accurate decisions based upon the results of the screening. There has been a recent initiative called 'samen starten', where probation services collaborate more intensively with prison facilities from the beginning of an individual's prison sentence (Drost et al., 2023). This stronger collaboration with probation services could provide more insight into an individual's behavior and life domains prior to admission and, for instance, may help to map out the social network and its possible positive influence.

Strengths

Besides the mentioned limitations, the studies included within this thesis are the first to examine the practical application and predictive validity of the RS-V since its implementation within the Dutch prison system. Several strengths are therefore worth mentioning. First, including relatively large samples of detained individuals that received an RS-V rating strengthens the reliability of the results and allows for conclusions that are

more generalizable across similar populations. Within the included samples, comparisons were made between specific groups of detained individuals (e.g., males versus females, shorter versus longer detention periods, young adults versus adults). By examining group differences, this thesis aimed to uncover patterns that might otherwise remain hidden in the combined data, providing a more detailed analysis that may inform targeted interventions and policy decisions regarding specific subgroups in the prison population.

The reliability of the findings is further strengthened by including both retrospective and prospective data, and outcome measures related to both violence inside prison as well as violence within the community. This approach allows for a more comprehensive view regarding the psychometric quality of the RS-V, providing a thorough evaluation of its predictive accuracy across different timeframes and contexts. The analyses of prospective data from prison employees in Chapter 4 and Chapter 6 not only improves the validity of the findings within this thesis but also allows for more accurate conclusions about the RS-Vs predictive abilities in real-life prison practice. Furthermore, because the data used within this thesis originates from the Dutch prison system, it provides insights that are directly applicable to current practices in Dutch prisons. This practical focus is essential for informing policymakers and prison management regarding safety enhancement.

Another strength relates to the involvement of prison employees. By analyzing user experiences of prison staff regarding the practical usability of the RS-V in Chapter 2, valuable feedback is provided regarding possible improvements in the tool's application. Moreover, because the studies included within this thesis analyzed RS-Vs rated by both researchers and prison employees, the importance of firsthand observations in enhancing the accuracy of risk evaluation is highlighted. Finally, this thesis provides evidence for the advantage of conducting risk screening instruments within prison practice. These findings may be informative for other custodial settings where an early detection of risk and protective factors is equally essential for promoting safety and effective risk management.

Implications for Dutch prison practice

The benefit of risk screening

Prior to the implementation of the RS-V within the Dutch prison setting, risk evaluation was only conducted for a small group of individuals (see Chapter 1 'General Introduction'). The administration of the RS-V for all detained individuals in the Netherlands has several potential benefits. First, the RS-V creates insight into the most important risk and protective factors of an individual. (For a more in-depth insight into all possible risk and protective factors, along with more tailored risk management

strategies, an evaluation with extensive risk assessment tools is advised, see section 'The RS-V versus risk assessment instruments'). Improving the understanding of (the behavior of) detained individuals is a first step in being able to assist these individuals toward a safe and comfortable detention period and a successful reintegration into society. Thereby, the RS-V offers an improved utilization of the 'window of intervention opportunity' that occurs when individuals spend time in prison. More importantly, structurally documenting observed behavior by means of (repeated) RS-V ratings in a detainee's digital file, makes it easier to report on subsequent reintegration goals within the D&R plan. Particularly prior to leave, since the RS-V offers essential input for decision making regarding the approval of such leave.

A second potential benefit of the RS-V is the actual reduction of violence. To be more specific, by knowing which individuals are more prone to displaying violent behavior in an early stage of detention, violent incidents are more likely to be prevented (assuming that effective preventive measures are implemented, see below). As a result, the overall safety of the prison environment may be improved, benefiting not only the detained individuals themselves and their fellow inmates, but also the prison employees who interact with them on a daily basis. For instance, a safer work environment may foster positive work relationships between staff and detained individuals, reducing tension and conflict, which benefits the overall reintegration process of an individual. Employees may experience higher job satisfaction and less stress because they can focus on supportive services for detainees instead of managing crisis situations. This may also result in lower rates of sick leave. In turn, the Dutch prison system may become a more attractive employer for potential new employees who are interested in working within the prison setting. Additionally, administering the RS-V can lead to greater efficiency and differentiation in the management of incarcerated persons. It allows for more focused support for serious-concerned individuals, while offering policies that are more flexible for those who require less intensive supervision.

Third, structurally gathering information about multiple relevant risk and protective factors and violence concerns for a large group of individuals during an early stage of detention (in contrast to risk assessment instruments, which are usually conducted for a small group of individuals during a later stage of detention), may provide relevant prison management information. For instance, the early administration of the RS-V within all 25 Dutch prisons allows for the comparison of risk profiles between prisons and specific groups of detainees, and may inform the placement of detained individuals on a regional and national scale. Individuals with serious concerns or specific needs can be assigned to prison facilities that are better equipped to manage them and staff ratios may be more aligned with risk profiles in different settings. This subsequently ensures

safer detention outcomes for both the detained individual as well as staff members. Moreover, RS-V data could be utilized in digital applications, such as a dashboard, which could support local and national prison management in the allocation of detained individuals and prison staff.

A fourth potential benefit of risk screening in prison is structured violence risk communication. The RS-V results in a relatively straightforward and easy-to-understand classification: low concerns, moderate concerns, or serious concerns regarding future violent behavior. Therefore, the results of the RS-V can be communicated efficiently and clearly across different prison wards, regimes, and facilities. For example, in the case of a transfer between two prisons, the receiving facility has immediate insight into the violence concerns without the need of an additional risk evaluation. Moreover, communicating violence concerns by means of the RS-V toward collaborating organizations or after-care facilities in the case of release is valuable to support the continuity of guidance and care.

Follow-up measures

The majority of the mentioned potential benefits of the RS-V will only be realized if follow-up measures are properly implemented based upon the results of the screening. In an ideal situation, all individuals that receive moderate or serious concerns should obtain some form of personalized follow-up intervention. This subsequent risk management may vary from placing an individual within a single cell, to the administration of comprehensive risk assessment by means of the HCR-20^{V3} and the SAPROF, to offering aggression management training, and/or to communicating the violence concerns to collaborating probation services. However, it is commonly recognized that constructive risk management based upon the results of risk evaluation is challenging. This problem is not unique for the prison system, but occurs within the broader custodial and forensic context. For instance, previous research within forensic clinical practice indicates that clinicians often experience difficulties in translating risk assessment outcomes into a risk management plan (Bouman et al., 2020; Singh et al., 2014). Bouman et al. (2020) conclude that the forensic psychiatric field is in need of a guideline to properly structure and facilitate the Risk Assessment and Management Pathway (RAMP) process. In addition, a systematic review by Viljoen et al. (2018) discovered that risk evaluation tools seem to be more valuable for subsequent risk management if the tools are carefully implemented and if staff is provided with appropriate training and guidelines. Although this thesis did not specifically investigate the translation of the results of the RS-V into subsequent risk management, it is clear that similar challenges are present within the Dutch prison context. Namely, the findings in Chapter 2 revealed that prison employees indicate that the implementation of follow-up measures and risk management based

on the results of the screening requires improvement. Therefore, future research could explore what is needed to effectively guide the RAMP processes within the Dutch prison context, and how this can be aligned with the current work processes (e.g., the RS-V, the D&R process, and the periodical MDO meetings). It can be concluded that risk evaluation, and specifically risk screening, serves as a valuable supportive tool and an important starting point in overall risk management. However, it cannot independently address the issue of the occurrence of violence.

False positive predictions and ethical challenges

This thesis found a relatively high ratio of false positive predictions in comparison to false negative predictions for both in-prison violence as well as community violence. As stated above, this may lead to unnecessary restrictive risk management for some individuals. Excessive restrictive follow-up measures may have negative effects on an individual's rehabilitation process (Kang & Wu, 2022). For instance, it may increase the resistance of an individual to cooperate and it may have negative social and psychological impact, such as feelings of mistrust, loneliness, stress and hopelessness (Tomlin et al., 2018). An example of unnecessary restrictive risk management in Dutch prison practice is fully denying (reintegration) leave for individuals for whom risk screening reveals moderate or serious concerns. Instead, it is important to make careful considerations regarding the terms and conditions (e.g., supervision, location, and duration) that allow these individuals to go on leave while accounting for the possible concerns of violence. Specifically, since practicing with going outside of the prison environment is believed to offer therapeutic benefit and support reintegration (Barlow & Dickens, 2018; Dickens & Barlow, 2018). Rehabilitation should not only focus on punishment or control, but instead should help individuals grow, learn and develop positive behaviors and attitudes. Thus, a balance is required between necessary risk management and supportive rehabilitation. The focus on both risks and strengths in the RS-V supports this holistic view of recovery.

Besides ethical challenges regarding overly restrictive risk management that prioritize safety over the well-being of detained persons, another ethical challenge relates to the detailed documentation of a detainee's behavior. Mapping out the behavior of individuals in prison may provide valuable insights into their risk profile, but it also raises concerns about the implications of such surveillance. For instance, comprehensive documentation about a detainee's behavior inherently increases the responsibility of staff to act upon that information, which may not always be straightforward (as stated above). This can create ethical dilemmas about implicit bias, and stigmatization (Douglas et al., 2017), and the potential misuse of the acquired data and undermining the autonomy of incarcerated individuals. It is therefore important to critically evaluate

the ethical implications of risk screening and risk assessment, and to involve detained individuals in this process.

Alternative ways of sentencing

This thesis discovered that prison workers are consistently more concerned regarding future violent behavior after discharge compared to violent behavior during incarceration. The steady relatively high level of concerns regarding community violence might indicate that prison staff is not able to completely manage the community risk level of individuals during incarceration. If the prison environment fails to effectively reduce concerns about future violence after release, it raises the question about the possible adverse effect that prison sentencing may have on violent recidivism. This effect, referred to as detention damage, suggests that imprisonment can lead to additional (psychological) problems, subsequently challenging a successful re-integration within society (Van Oploo & Dalhuisen, 2024). In addition, individuals may be victimized during prison stay or influenced in a negative way by fellow inmates (Daquin et al., 2016). Moreover, prison stay may lead to hopelessness and stigmatization. As a result, this may increase the likelihood of reoffending. Detention damage may apply to both short and long detention periods, but is especially concerning for short sentences (almost three-quarters of the Dutch individuals are released within three months) during which the opportunities for behavioral change and effective re-integration strategies are limited. Alternative or additional ways of punishment and retaliation may be conceivable for short-sentenced individuals if both the well-being of the individual and the safety of the community as a whole is diminished by imposing prison sentences (Van Oploo & Dalhuisen, 2024). Examples of alternative ways of sentencing are community services, conditional sentences, fines, halfway houses, and home detention, possibly accompanied by Electronic Monitoring (EM).

Within the Netherlands, individuals who serve a prison sentence of more than one year and who are in the final stage of their detention may qualify for a conditional release to serve the remaining part of their sentence at home (Dutch Custodial Institutions Agency, 2024a). Some of these individuals receive EM by means of an ankle bracelet, supervised by probation services. Recent capacity shortages within the overall Dutch prison system have led to the exploration and implementation of alternative sanctioning methods to address these challenges. One example is the temporary introduction of 'capacity leave' in 2024 (Dutch Custodial Institutions Agency, 2024a). This measure allows individuals to serve a part of their sentence at home, including EM. Eligible individuals should have a prison sentence of at least four weeks but not longer than one year. Another condition to go on capacity leave is that an individual should not have received serious concerns on final conclusion C of the RS-V (concerns regarding violence during leave). Given the

results of this thesis and the possibility of detention damage as mentioned earlier, it appears advisable to implement this method of capacity leave more permanently and on a larger scale in the future. In that case, low concerned individuals can remain close to their community, which increases the likelihood of maintaining their jobs, housing and stable relationships with family and friends. These are important protective factors that contribute to successful reintegration into society and enhance desistance from crime (Maruna, 2001). Individuals with low concerns for future violence and the prospect of a short prison sentence might benefit more from less intensive interventions, such as a community order or EM, rather than an overly restrictive prison sentence. More research is needed regarding the effectivity of EM compared to prison sentences to reduce recidivism. So far, research that has been conducted in this regard seems promising (Belur et al., 2020; Williams & Weatherburn, 2022).

Recommendations for future research

Since the implementation of the RS-V within the Dutch prison system in 2021, a steady flow of data has been emerging regarding RS-Vs rated within prison practice. This offers significant opportunities for further research; several recommendations will be presented.

First, given that the RS-V is administered at both the beginning of detention and when an individual qualifies for leave, future research could assess the predictive validity of final conclusion C (concerns regarding violence during leave). The current thesis only focused on the predictive validity of final conclusions A and B (concerns regarding violence within prison and violence after release). Investigating the predictive validity of final conclusion C would provide further information regarding the psychometric quality of the RS-V, specifically when it comes to predicting violent incidents during leave. It is expected that the predictive validity of final conclusion C will be lower than the predictive validity of final conclusions A and B. To clarify, the leave committee uses the information from final conclusion C, in combination with other relevant information, in deciding whether to grant leave. This leave committee decides whether an individual about whom moderate or serious concerns have been expressed is allowed to go on leave, and if so, under which terms and conditions. In this regard, risk management directly depends on the results of the screening. In contrast, the decision-making process for follow-up measures related the results of final conclusions A and B is less direct. For instance, even if prison employees have serious concerns that a given individual may act out violently after discharge, the employees cannot decide that this individual should remain imprisoned; this individual will simply be released once they have served their prison sentence. Given that the current procedures support proper risk management in relation to leave (i.e., each application is assessed by a

leave committee and the RS-V is administered before leave is granted), it is expected that the predictive validity of final conclusion C will be diminished. In short, incidents during leave is more likely to be prevented due to tailored risk management based on the results of the screening. Future studies could test this hypothesis.

Another possible avenue for future research would be to further explore the predictive validity of RS-V ratings in relation to female detainees. As stated above, the present thesis was not able to extensively investigate gender differences regarding the predictive validity due to the relatively low base rate of physical violence and violent threats displayed by females. In line with previous research, this thesis found the occurrence of violence displayed among females to be less prevalent than among males (Heimer, 2000; Rennison, 2009). Nonetheless, it would be valuable to conduct additional research specifically regarding female detainees, especially since Chapter 5 did show promising results regarding the relatively high predictive validity of RS-V ratings for females compared to males regarding violent offending after release. Future research could investigate longer follow-up periods and at the same time include an even larger sample of RS-Vs rated for female detainees. In addition, investigating gender-responsive practices in female prisons could improve the practical application of the RS-V and subsequent risk management for females. Moreover, studying females in prison may require a broader definition of what constitutes violence and/or aggression. For instance, manipulation, ostracism, rumors, and other forms of (direct or indirect) aggression are more common among females (Trammell, 2009). Future studies could investigate whether RS-V scores are also able to predict these alternative types of aggression.

A third recommendation for future research relates to the involvement of detained individuals. As mentioned in the 'Limitations and strengths' section, this thesis did not include the perspective of the detained individuals who received an RS-V rating. However, involving detainees in the risk screening process could provide additional insight into specific domains evaluated in the RS-V and offer input for change trajectories. Future research could focus on developing of a self-report version of the RS-V to actively involve individuals in the evaluation of their own risks and strengths. A self-assessment version could be beneficial for an individual's reintegration because it could provide them with additional insight into their own risk and protective factors. Such insights could provide a valuable starting point for discussing future goals, and might consequently increase motivation for change. A self-assessment version of a similar risk screening instrument has been shown to have added value in juvenile forensic evaluation. This instrument is called the Risk Screener Youth (RS-Y) (De Vries Robbé & Kleeven, 2023). Simultaneously with the evaluation of the RS-V for the adult prison setting, the applicability of the RS-Y was investigated in the context of juvenile

justice. The RS-Y includes an additional simplified self-appraisal scoring form, which can be rated by the juveniles themselves. Moreover, a social network version of this scoring form is also available, which can be rated by parents/caregivers or other close relations. Within several juvenile treatment and supervision settings, the RS-Y self-report version is used in an interview format, allowing the juvenile to tell their own story regarding each risk and protective factor. This facilitates the active involvement of the youngster in the risk evaluation process and inspires collaborative goalsetting. It is expected that a similar self-report version of the RS-V will be of added value within the adult prison setting as well. However, further exploration by means of a pilot study in a small number of Dutch prisons is necessary.

An additional direction for future research might involve exploring ways to enhance the quality of the application of the RS-V in prison practice. A relevant result that follows from this thesis is that continually monitoring and improving the application of the RS-V in prison practice is important. Within Chapter 2, prison employees mention several changes that they consider are necessary in order to improve the usefulness of the RS-V in daily practice. These recommendations are mainly related to improving the discussion of the final conclusions during the MDO, and the implementation of better follow-up measures based upon the results of the screening. Future research could use a qualitative approach in order to investigate the way the final conclusions and subsequent follow-up measures are discussed and executed by prison employees. One possibility is conducting observational research, by attending several MDOs and closely monitoring and evaluating the discussion of the final conclusions. This may provide insight into the bottlenecks or issues that arise when discussing the risk and protective factors of a detained individual and subsequent tailored interventions. By additionally conducting semi-structured interviews with prison staff that frequently attend these MDOs, suggestions can be gathered on how to improve these discussions and procedures. Future qualitative research could also focus on the argumentation provided by RS-V raters for each factor and for each final conclusion. Moreover, other historical and dynamic information added by the assessor could be analyzed. A more detailed understanding of the strengths and issues when it comes to rating the RS-V, can lead to instating follow-up measures more effectively. This will likely benefit the overall risk management process within Dutch prison practice.

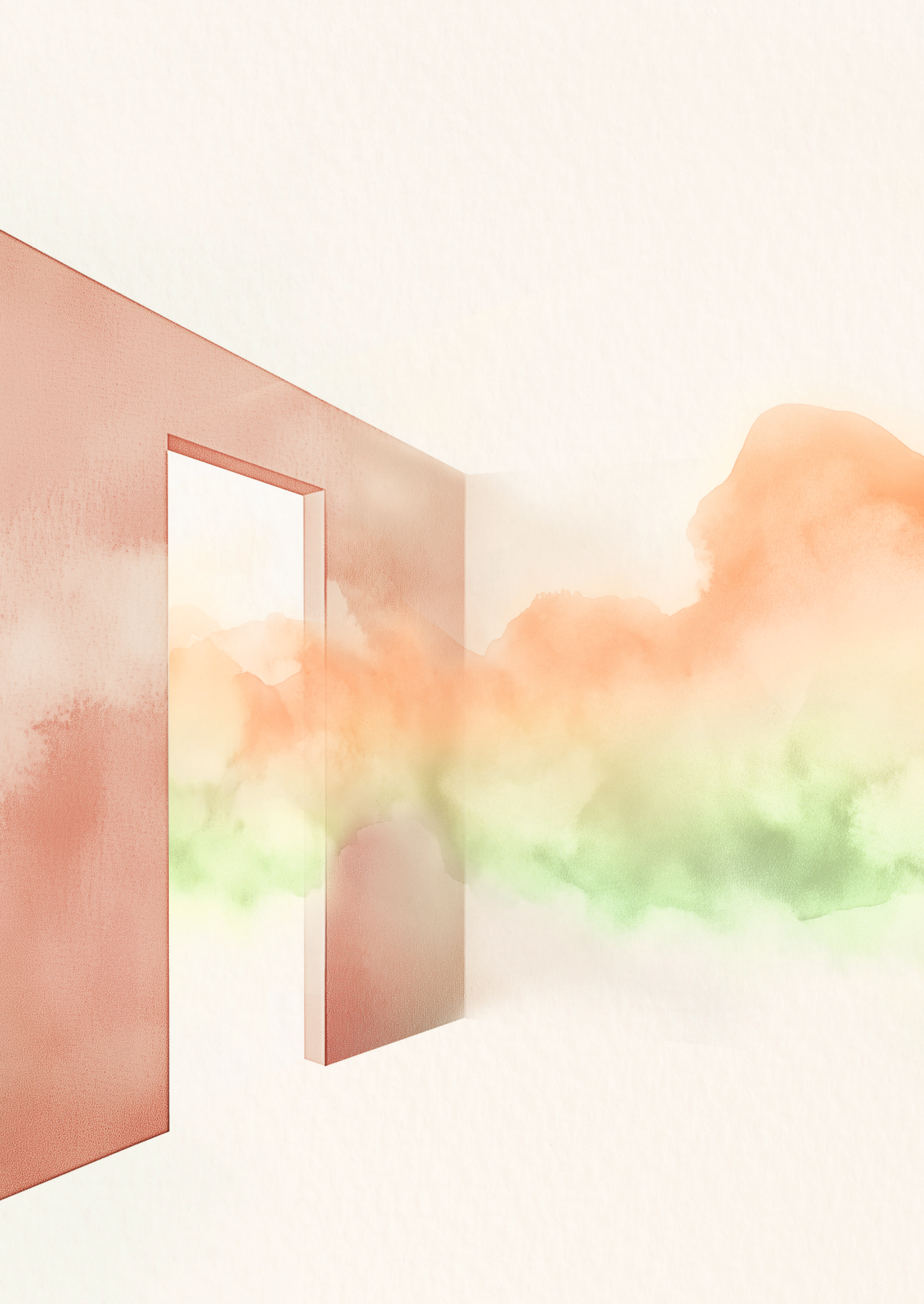
Besides focusing on the Dutch prison system, future research could also adopt a more broad approach. For instance, it is imaginable that prison systems within other countries face similar issues when it comes to the feasibility of conducting comprehensive risk assessment for all detained individuals, while at the same time it is recognized that gaining better insight into detainees' risk and protective factors is crucial. It is not

without reason that several international initiatives emerged regarding the development of risk screening instruments that can be used in prison settings, with each instrument offering distinct features (Andrews & Bonta, 2001; Ogloff et al., 2018; Ogloff & Daffern, 2006; Wong & Gordon, 2007). Future research could focus on investigating the potential interest of prisons in other countries in implementing the RS-V. The RS-V, with its specific focus on the prediction of violence, its integration of protective factors, its application across disciplines, and its foundation in SPJ principles, may serve as a valuable addition to existing risk assessment practices in prisons worldwide. If other countries indeed express interest in the application of the RS-V, a translation of the RS-V into English or other languages would be a logical next step.

Apart from exploring international interest, it would be worthwhile to examine if the RS-V could be of added value outside of custodial and forensic settings. The prevalence of violence and aggression is not limited to these contexts, but also occurs within general mental health services, social services, or shelter and community care services (De Nederlandse ggz, 2021; Kerman et al., 2024; Shier et al., 2021). For instance, research shows that 67% of Dutch healthcare professionals employed in clinical psychiatry experienced at least one physically violent incident in the past five years (Van Leeuwen & Harte, 2017). However, the use of risk assessment or risk screening instruments to evaluate the risk of violent behavior of patients or clients is not yet part of everyday practice in the majority of these care settings in the Netherlands. It is conceivable that risk evaluation tools might be able to assist mental health professionals in the prevention of violence, especially in mental health care settings where the incidence of violence may be elevated. For instance, employees working in inpatient psychiatric units or emergency psychiatric services often deal with patients who are not always fully compliant with treatment and who often have complex, co-occurring mental health issues. Future studies could begin by analyzing the needs of Dutch professionals in general mental health care or social services regarding the use of a risk screening tool such as the RS-V to rapidly identify which individuals may show more concerns regarding violence, with the aim to improve the safety of both staff and patients/clients alike. Exploring international initiatives regarding the use of violence risk screening in such settings is advised (Daniel et al., 2015; Davies & Dedel, 2006; Langan, 2010; Rosenfeld et al., 2017). Additionally, since individuals often transition between different (forensic) care settings, future research could investigate whether the RS-V might be a useful tool to track changes in risk profiles across settings. This also offers an opportunity to examine how individuals could be more actively involved in the screening process. For instance, a mobile app could allow individuals to easily share and update their own risks and strengths with care providers, promoting self-advocacy and ensuring continuity of care.

Conclusions

This thesis demonstrates that the RS-V offers a novel and evidence-based approach, making quick and easy evaluations of violence concerns feasible for all detained individuals. More specifically, the results show that the RS-V is a valuable tool in distinguishing which individuals are more likely to display violent behavior, either inside or outside prison. By identifying violence concerns early in detention, the RS-V serves as possible triage for more extensive risk assessment and subsequent follow-up measures that aim to improve tailored risk management. As a result, this may enhance internal and external safety. Screening detained individuals for violence concerns has the potential to be of significant value within the prison environment, benefiting both detained individuals and staff, as well as society at large.





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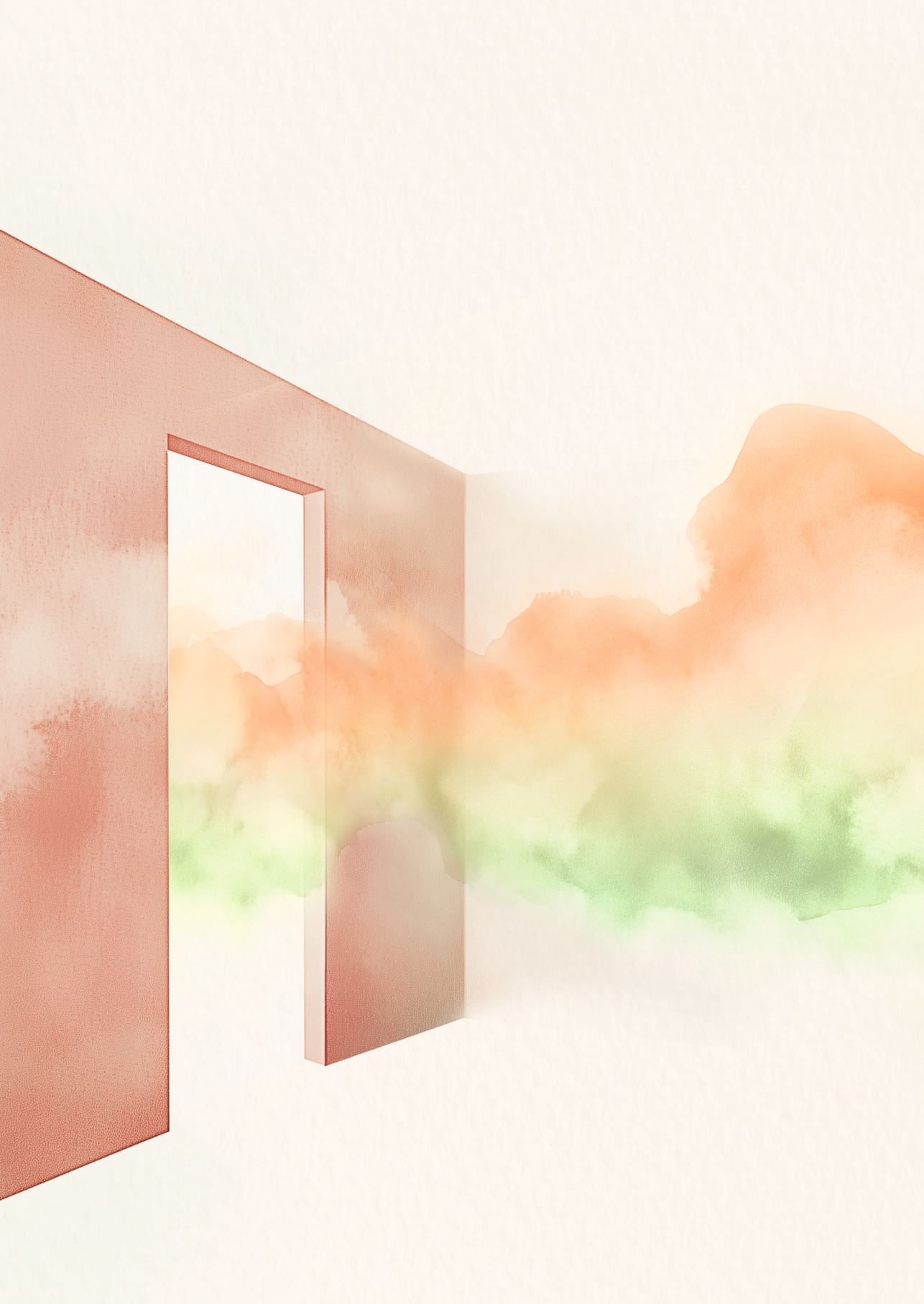
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APPENDIX

**Nederlandse samenvatting
Dankwoord
Curriculum Vitae**

NEDERLANDSE SAMENVATTING

Screenen voor Veiligheid

Het Voorspellen van Zorgen over Gewelddadig Gedrag bij Gedetineerde Personen in Nederland met behulp van de Risicoscreener Geweld (RS-G)

Achtergrond en doel proefschrift

Gewelddadig gedrag heeft een grote impact en kan verstreckende gevolgen hebben voor onze samenleving. Geweld en agressie kunnen bijvoorbeeld aanzienlijke psychologische en emotionele gevolgen hebben voor slachtoffers, familieleden, en andere betrokkenen zoals zorgmedewerkers. Daarnaast kan gewelddadig gedrag maatschappelijke gevoelens van onveiligheid en stigmatisering aanwakkeren. Het is daarom belangrijk om onderzoek te doen naar de preventie van geweld. Een eerste stap in het voorkomen van geweld is het identificeren van individuen die een verhoogde kans hebben op het plegen van geweld. Deze personen zullen het meest profiteren van preventiemaatregelen. In het bijzonder geldt dit voor personen die in detentie verblijven. Het in beeld brengen van factoren die het risico op gewelddadig gedrag verhogen of juist verlagen kan vervolgens middels interventie bijdragen aan een succesvolle re-integratie en positief functioneren in de samenleving.

In dit proefschrift is onderzoek gedaan naar een screeningsinstrument genaamd de Risicoscreener Geweld (RS-G). Dit instrument is in 2019 ontwikkeld voor het Nederlandse gevangeniswezen en sindsdien is er veel zorg, tijd, en aandacht besteed aan de implementatie en uitvoering ervan. Mede door het doen van een pilotstudie, het aanstellen van RS-G coördinatoren in de gevangenispraktijk, een train-de-trainer model, en de continue samenwerking tussen wetenschappelijk onderzoekers en medewerkers in de praktijk, was het mogelijk om de RS-G in alle 25 gevangenissen in Nederland te implementeren. Sinds 2021 wordt de RS-G dan ook structureel afgenomen voor alle personen die in binnenstromen in detentie. De kernvraag in dit proefschrift is of RS-G scores in staat zijn om zorgen over gewelddadig gedrag van deze personen te voorspellen, zowel binnen als buiten de gevangenis.

De Risicoscreener Geweld in het kort

De Risicoscreener Geweld (RS-G) is een screeningsinstrument ontwikkeld voor het gevangeniswezen in Nederland. Op basis van relevante risico- en beschermende factoren brengt het instrument zorgen in kaart over toekomstig gewelddadig gedrag van een gedetineerd persoon, zowel binnen de gevangenis als daarbuiten. De definitie van geweld volgens de RS-G is als volgt: *'lichamelijk geweld naar anderen (waaronder ook seksueel geweld), poging daartoe of dreiging daarmee'*. De RS-G kan afgenomen worden

binnen verschillende gevangenisregimes, zowel voor mannen als voor vrouwen. Naast dat de RS-G verplicht wordt afgenomen aan het begin van detentie, wordt het instrument ook ingevuld voorafgaand aan het verlenen van vrijheden. Daarnaast kan de afname op indicatie herhaald worden gedurende het detentie traject.

De RS-G bestaat uit drie delen die afzonderlijk van elkaar gescoord worden door verschillende gevangenismedewerkers. Deel één van de RS-G wordt ingevuld door een backoffice medewerker zo snel mogelijk na binnenkomst van een gedetineerd persoon. Een backoffice medewerker in de gevangenis is verantwoordelijk voor de administratie rondom de opname, eventuele overplaatsing, re-integratie, en vrijlating van een individu. Dit eerste deel van de RS-G bevat twee historische risicofactoren die gaan over de frequentie van eventueel eerder gewelddadig gedrag: geweldsdelicten in de maatschappij en geweldsincidenten tijdens eerdere detenties. De historische factoren worden gescoord op basis van het justitieel uittreksel (strafblad) en het detentiedossier. Indien er sprake is van eerder gewelddadig gedrag wordt het hoofd van de afdeling waar de persoon verblijft op de hoogte gesteld. De historische risicofactoren worden voor iedere gedetineerde persoon gescoord.

Deel twee van de RS-G wordt gescoord door een casemanager voorafgaande aan het tweede multidisciplinair overleg (MDO) na zes of negen weken, afhankelijk van de planning van de werkprocessen binnen een gevangenis. Een casemanager is verantwoordelijk voor het detentie en re-integratie proces van een kleine groep personen die gedetineerd zijn. Het tweede deel van de RS-G bevat vier dynamische risicofactoren en vier dynamische beschermende factoren. De aanwezigheid van dynamische risicofactoren, zoals middelengebruik, kunnen de kans op gewelddadig gedrag verhogen, terwijl beschermende factoren, zoals positieve invloeden vanuit het netwerk, deze kans juist kunnen verkleinen. De dynamische factoren gaan over recent gedrag dat een persoon laat zien binnen detentie. Deze factoren worden dan ook gescoord op basis van eigen gedragsobservaties van de casemanager en gedragsobservaties van andere gevangenismedewerkers die rapporteren in het detentiedossier. De factoren worden gescoord op basis van aanwezigheid: 'niet of nauwelijks', 'redelijk', of 'duidelijk'. Een termijn van zes tot negen weken is nodig om het gedrag van een persoon goed genoeg te kunnen observeren om de dynamische factoren te scoren.

Deel drie van de RS-G bevat drie eindconclusies aangaande zorgen over toekomstig gewelddadig gedrag en wordt ingevuld op basis van de scores in het eerste en tweede deel van de RS-G. De drie eindconclusies hebben betrekking op zorgen over toekomstig geweld: A) binnen de gevangenis, B) buiten de gevangenis in geval van einde detentie

op dit moment, C) buiten de gevangenis in geval van vrijheden tijdens detentie. Eindconclusie C wordt alleen ingevuld indien er sprake is van verlof mogelijkheden. De drie eindconclusies worden gescoord als 'weinig tot geen zorgen', 'matige zorgen', of 'ernstige zorgen'. Dit gebeurt tijdens het tweede MDO dat na zes of negen weken plaatsvindt en wordt gezamenlijk gedaan door verschillende medewerkers in de gevangenis (bijvoorbeeld een afdelingshoofd, een casemanager, een arbeidsbegeleider, en een backoffice medewerker). Deel twee en drie van de RS-G worden alleen ingevuld voor individuen die minimaal een gevangenisstraf van zes of negen weken hebben, terwijl bijna driekwart van de gedetineerden binnen drie maanden al is teruggekeerd naar de maatschappij. Een detentieduur van zes of negen weken is echter nodig om een persoon zo goed mogelijk te kunnen observeren om de RS-G betrouwbaar in te vullen.

Het multidisciplinair bespreken van de eindconclusies biedt de mogelijkheid om direct opvolg/preventie maatregelen te bespreken om het voorspelde gewelddadige gedrag te voorkomen. Bijvoorbeeld het wel/niet plaatsen van een individu in een bepaald regime of op een meerpersoonscel, het aanbieden van interventies zoals een agressiehanteringstraining of een verslavingsmodule, of het delen van de resultaten van de screening met de reclassering. Daarnaast kan de RS-G als triage dienen voor het afnemen van uitgebreide risicotaxatie-instrumenten. Ten opzichte van risicoscreeningsinstrumenten, bevatten risicotaxatie instrumenten doorgaans meer factoren, een diepgaandere analyse van deze factoren, en vereisen daarom de expertise van een gedragsdeskundige. Deze uitgebreidere instrumenten zijn in staat om een nog beter beeld te geven van de risico- en beschermende factoren van een persoon. De structurele afname ervan is echter niet haalbaar binnen Nederlandse gevangenissen gezien de benodigde tijdsinvestering en gedragsdeskundige expertise. Voorbeelden van risicotaxatie instrumenten die gebruikt worden in de Nederlandse detentiecontext zijn de HKT-R voor risicofactoren en de SAPROF voor beschermende factoren.

De belangrijkste bevindingen

De toepassing van de RS-G in Nederlandse gevangenissen

Zoals hierboven aangegeven is de RS-G in 2021 in alle 25 Nederlandse gevangenissen geïmplementeerd. Sindsdien wordt de RS-G consistent afgenomen voor alle personen die binnenstromen in detentie en is er dus veel data uit de gevangenispraktijk beschikbaar voor onderzoek. De studie beschreven in **Hoofdstuk 2** analyseerde een grote sample RS-G's ($n = 8.960$) ingevuld door gevangenispersoneel gedurende twee cohorten: de eerste zes maanden na implementatie (september 2021 – februari 2022), en een tweede periode van zes maanden een jaar later (september 2022 – februari 2023). De scores op de RS-G's uit deze twee tijdsperiodes waren nagenoeg

gelijk, wat indiceert dat de praktische uitvoering consistent verloopt. De scores op de eindconclusies laten zien dat gevangenismedewerkers vaker ernstige zorgen toekennen als het gaat om toekomstig geweld buiten de gevangenis (eindconclusie B) in tegenstelling tot toekomstig geweld binnen de gevangenis (eindconclusie A). Verder ontvingen mannen, jongvolwassenen, en herhaaldelijk gedetineerden vaker ernstige zorgen op basis van de screening ten opzichte van respectievelijk vrouwen, volwassenen, en personen die voor het eerst vastzitten. Hoewel de RS-G en de daaropvolgende interventies voor elk individu een gepersonaliseerde aanpak vereist, kan dit resultaat bijdragen aan een groter bewustzijn onder gevangenispersoneel over het bestaan van risico-gerelateerde gedragspatronen binnen specifieke subgroepen van gedetineerde personen. In Hoofdstuk 2 is ook gekeken naar gebruikerservaringen gedurende een periode van drie jaar vanaf implementatie. Het personeel in het gevangeniswezen is over het algemeen positief over de RS-G. De meerderheid geeft aan dat de RS-G een zinvol en makkelijk in te vullen instrument is. Echter, gevangenispersoneel geeft ook aan dat er verbeteringen nodig zijn om de praktische uitvoering van de RS-G te optimaliseren: 1) betere en tijdige rapportages vanuit verschillende disciplines, 2) betere opvolging op de uitkomsten van de RS-G, en 3) meer tijd in het MDO voor het bespreken en invullen van de eindconclusies in deel drie van de RS-G.

De voorspelling van geweld in de gevangenis

In **Hoofdstuk 3** is retrospectief onderzoek gedaan naar de voorspellende waarde van RS-G scores voor geweld in de gevangenis. In deze studie zijn RS-G's geïncludeerd ($n = 181$) die zijn ingevuld door onderzoekers op basis van dossierinformatie van gedetineerde personen. Gedurende een follow-up periode van vier maanden na het invullen van eindconclusie A (zorgen over geweld binnen de gevangenis) zijn vervolgens geweldsincidenten bijgehouden. Dit betrof zowel fysiek geweld als bedreiging. Geweldsincidenten werden geïncventariseerd op basis van disciplinaire straffen in het detentiedossier van een persoon. Gedurende de tijdsperiode van vier maanden pleegde 10% van de geïnccludeerde personen een geweldsincident in de gevangenis. Zowel de totaalscore van de RS-G (bestaande uit de scores op het eerste en tweede deel van de RS-G) als de score op eindconclusie A lieten een grote voorspellende waarde zien voor geweldsincidenten tijdens detentie. Op basis van RS-G scores kon dus goed voorspeld worden wie een verhoogde kans had op het plegen van een geweldsincident en wie niet. Tot slot vond deze studie een relatief groot aantal foutpositieve voorspellingen (dat wil zeggen: individuen die matige of ernstige zorgen ontvingen op eindconclusie A, maar geen geweldsincident pleegden gedurende de follow-up periode), in vergelijking tot foutnegatieve voorspellingen.

De prospectieve studie in **Hoofdstuk 4** heeft dit aspect verder onderzocht, maar bevatte een grotere sample RS-G's ($n = 958$) ingevuld door medewerkers in de gevangenis. Er werd een vergelijkbare prevalentie van geweld gevonden van 11% gedurende een verblijf van vier maanden in detentie. Ook lieten zowel de RS-G totaalscore als eindconclusie A wederom een grote voorspellende waarde zien voor geweld in detentie, waarbij de voorspellende waarde van de RS-G totaalscore in Hoofdstuk 4 nog iets groter was dan in Hoofdstuk 3. Een mogelijke verklaring voor dit verschil is dat gevangenispersoneel, dankzij hun ervaring en directe observaties in de praktijk, beter in staat is om deel één en deel twee van de RS-G nauwkeurig in te vullen. Dit resulteert in een grotere voorspellende waarde in vergelijking met RS-G's die op afstand door onderzoekers zijn ingevuld. RS-G scores waren zowel in staat om geweldsincidenten naar personeel als geweldsincidenten naar medege-detineerden goed te voorspellen.

De voorspelling van geweld in de maatschappij

Waar Hoofdstuk 3 en Hoofdstuk 4 de voorspellende waarde van RS-G scores voor geweld binnen detentie hebben onderzocht, hebben Hoofdstuk 5 en Hoofdstuk 6 onderzocht wat de voorspellende waarde van RS-G scores is voor geweld na vrijlating. Het ging hierbij specifiek om officiële nieuwe veroordelingen (zichtbaar op het justitieel uittreksel) voor geweldsdelicten na uitstroom uit de gevangenis. Net als Hoofdstuk 3, bevatte **Hoofdstuk 5** RS-G's ($n = 571$) gescoord door onderzoekers op basis van dossierinformatie van gedetineerde personen. Deze studie vond een uitstekende interbeoordelaarsbetrouwbaarheid. Het aantal ex-gedetineerden dat (opnieuw) een geweldsdelict pleegde was 7% voor 6 maanden, 15% voor 12 maanden, en 21% voor 24 maanden na uitstroom uit detentie. De voorspellende waarde van de RS-G totaalscore en de score op eindconclusie B (zorgen over geweld buiten de gevangenis in geval van einde detentie op dit moment) was het grootst voor de follow-up periode van 6 maanden, maar ook gemiddeld tot groot voor 12 maanden en 24 maanden follow-up. Bovendien waren de RS-G scores specifiek goed voorspellend voor vrouwelijke ex-gedetineerden ten opzichte van mannelijke ex-gedetineerden, al was de prevalentie van geweld een stuk lager bij de vrouwen (6 maanden follow-up: 3%, 12 maanden follow-up: 6%, en 24 maanden follow-up: 9%) dan bij de mannen (6 maanden follow-up: 7%, 12 maanden follow-up: 17%, en 24 maanden follow-up: 24%).

De studie in **Hoofdstuk 6** is vergelijkbaar met de studie in Hoofdstuk 5, maar bevatte RS-G's gescoord door gevangenismedewerkers ($n = 956$), net zoals in Hoofdstuk 4. In Hoofdstuk 6 zijn lagere prevalentie cijfers voor geweld gevonden dan in Hoofdstuk 5, namelijk 4% voor de 6 maanden follow-up en 6% voor de 12 maanden follow-up. Dit wordt waarschijnlijk veroorzaakt doordat de geïncludeerde geweldsdelicten in

Hoofdstuk 6 gepleegd waren tijdens de COVID-19 pandemie. Deze studie vond een gemiddeld tot grote voorspellende waarde van de RS-G totaalscore en de score op eindconclusie B voor geweldsdelicten na vrijlating. Tevens laat deze studie zien dat RS-G scores specifiek voorspellend zijn voor geweldsrecidive in tegenstelling tot algemene recidive. Tot slot vond deze studie net als in Hoofdstuk 3 een relatief groot aantal foutpositieve voorspellingen in tegenstelling tot foutnegatieve voorspellingen.

Interpretatie van de bevindingen en implicaties voor het Nederlandse gevangeniswezen

De voorspelling van geweld in de gevangenis versus geweld in de maatschappij

De voorspellende waarde van RS-G scores lijkt iets groter te zijn voor geweld in de gevangenis dan geweld in de maatschappij. Een plausibele verklaring is dat de RS-G gescoord wordt op basis van gedragingen binnen de gevangensmuren, met bijbehorende regels en beperkingen. Het gedrag dat een persoon laat zien in de maatschappij kan fundamenteel anders zijn, gezien de herwonnen vrijheid en autonomie. Gevangenismedewerkers hebben daarnaast vaak onvoldoende inzicht in de specifieke omstandigheden van een persoon na ontslag, zoals arbeids- en leefomstandigheden. Hoewel de voorspellende waarde van RS-G scores lager zijn voor geweld in de maatschappij in vergelijking tot geweld in de gevangenis, maakt gevangenispersoneel zich duidelijk meer zorgen over toekomstig gewelddadig gedrag in de maatschappij. Het gevangeniswezen is echter slechts één organisatie die betrokken is bij het begeleiden van individuen naar een veilige en succesvolle re-integratie. Effectieve risicocommunicatie en een nauwe samenwerking met ketenpartners binnen het gehele justitiële systeem, zoals gemeentes, reclassering, en forensisch psychiatrische zorginstellingen, zijn daarom essentieel voor een zo veilig mogelijke resocialisatie.

Opvolging

In dit proefschrift zijn grote voorspellende waardes gevonden van RS-G scores voor gewelddadig gedrag binnen detentie, wat eigenlijk zorgwekkend is. Gevangenismedewerkers wisten op basis van de RS-G scores doorgaans over welke individuen er matige of ernstige zorgen waren aangaande het mogelijk plegen van geweldsincidenten. Desondanks veroorzaakten deze personen in veel gevallen toch geweldincidenten in de maanden na de screening. Dit betekent dat de eventuele opvolgmaatregelen die ingezet zijn op basis van de screening niet succesvol waren in het voorkomen van geweld. Hoewel het een utopie is om te veronderstellen dat alle geweldsincidenten voorkomen kunnen worden, zou idealiter, als risicomanagement goed afgestemd wordt op de screeningsresultaten, gewelddadig gedrag zoveel mogelijk voorkomen kunnen worden. In dat geval zal de voorspellende waarde van een instrument laag zijn. Het is belangrijk om extra aandacht te besteden aan het bediscussiëren van de eindconclusies en opvolgingsmogelijkheden

gedurende het MDO. Tijdens deze MDO's wordt namelijk de basis gelegd voor verder risicomanagement. Het potentieel van de RS-G kan alleen benut worden wanneer er geïndividualiseerde opvolging plaatsvindt op basis van de resultaten. De verwachting is dat de voorspellende waarde van RS-G scores in toekomstige studies lager zal zijn omdat personeel in het gevangeniswezen meer ervaring opdoet met het effectief inzetten van opvolgmaatregelen op basis van de screening. Om dit te bereiken is er voortdurend aandacht nodig voor de uitvoering en toepassing van de RS-G in detentie, inclusief het vertalen van de screeningsresultaten naar effectieve preventiemaatregelen.

Foutpositieve voorspellingen

De resultaten van dit proefschrift roepen vragen op over het relatief grote aantal individuen dat ernstige zorgen ontvangt bij de eindconclusies van de RS-G, maar vervolgens geen geweldsincident of geweldsdelict pleegt gedurende de follow-up periode (foutpositieve voorspellingen). Er zijn verschillende verklaringen voor dit resultaat. Ten eerste, ondanks dat het niet in lijn is met de voorspellende waarde resultaten, kan het zijn dat er voor sommige personen met ernstige zorgen succesvolle opvolgmaatregelen zijn ingezet om geweld te voorkomen. Ten tweede kan er sprake zijn van een onderrapportage van gewelddadig gedrag in dit proefschrift, doordat niet al het gewelddadige gedrag zichtbaar is in officiële documenten. Ten derde is het mogelijk dat een aantal van deze personen geen daadwerkelijk verhoogde zorgen hadden aangaande het plegen van geweld en dat er dus sprake is van een classificatie fout. Anders gezegd kan het zijn dat beoordelaars de zorgen over geweld soms onterecht te hoog inschatten. Hoewel een verhouding van relatief meer foutpositieven in vergelijking tot meer foutnegatieven vanuit een veiligheidsoogpunt de voorkeur heeft binnen forensische settingen, vormt dit wel een gevaar voor een onnodig streng risicomanagement voor bepaalde gedetineerde personen. Restrictieve opvolgmaatregelen kunnen negatieve effecten hebben op het rehabilitatie proces van een individu door het ontstaan van gevoelens van wantrouwen, eenzaamheid, en stress, wat juist weer risico verhogend kan werken. Er is daarom een continue balans nodig tussen noodzakelijk risicomanagement en ondersteunende resocialisatie.

De RS-G versus risicotaxatie instrumenten

De voorspellende waarde van RS-G scores is vergelijkbaar met de voorspellende waarde van scores op uitgebreide risicotaxatie instrumenten, zoals de HKT-R en de SAPROF. Daarnaast lijken RS-G scores ook voldoende voorspellende waarde te hebben voor langere follow-up periodes. Een mogelijke verklaring waarom een eenvoudig screeninginstrument relatief goed presteert, is dat een klein aantal belangrijke risicofactoren en beschermende factoren mogelijk een groot deel van de variatie verklaart bij het voorspellen van toekomstig geweld. Het is de vraag of het toevoegen

van meer factoren de voorspellende waarde van een instrument zal verbeteren. Echter, het includeren van extra factoren zal hoogstwaarschijnlijk wel het inzicht in het gedrag van een gedetineerd persoon vergroten, waardoor risicomanagement en interventie beter vormgegeven kan worden. Een andere plausibele verklaring voor de relatief grote voorspellende waarde van RS-G scores in dit proefschrift is dat er binnen het gevangeniswezen een grote verscheidenheid aan risicoprofielen te vinden is, wat het mogelijk makkelijker maakt om te voorspellen wie gewelddadig gedrag laat zien. In settingen met relatief ernstigere risicoprofielen, zoals in de klinische forensische psychiatrie, zijn uitgebreide risicotaxatie instrumenten wellicht meer van toegevoegde waarde. Zoals hierboven aangegeven, kunnen uitgebreide risicotaxatie instrumenten een nog beter beeld scheppen van de risicofactoren en beschermende factoren van een individu. Dit verhoogd waarschijnlijk de kans op het nog effectiever inzetten en personaliseren van opvolgmaatregelen ter preventie van geweld. Toekomstig onderzoek naar de voorspellende waarde van de screeningsinstrumenten versus risicotaxatie instrumenten in verschillende forensische settingen kan hier meer duidelijkheid over scheppen.

Conclusie

De wetenschappelijke studies in dit proefschrift tonen aan dat de RS-G een nieuwe efficiënte screeningsmethode is om relatief makkelijk en snel zorgen over gewelddadig gedrag van gedetineerde personen in kaart te brengen. De resultaten laten zien dat RS-G scores in staat zijn om te onderscheiden welke individuen een verhoogde kans op geweld vertonen, zowel binnen als buiten de gevangenis, en welke individuen niet. Door vroegtijdig een eerste beeld van de belangrijkste risicofactoren en beschermende factoren te verkrijgen, kunnen op basis van de resultaten van de RS-G opvolgmaatregelen worden ingezet, met als doel gewelddadig gedrag te voorkomen en resocialisatie van gedetineerde personen te bevorderen. Daarnaast kan de RS-G dienen als triage voor uitgebreide risicotaxatie. Het effectief inzetten van opvolgmaatregelen behoeft echter nog verdere aandacht in het Nederlandse gevangeniswezen. Er kan geconcludeerd worden dat de RS-G een waardevol ondersteunend instrument en een belangrijk startpunt is voor algeheel risicomanagement en geweldspreventie. Risicoscreening in detentie kan van grote toegevoegde waarde zijn voor de veiligheid binnen de gevangenis muren, zowel voor gedetineerde personen als personeel, maar ook voor de bredere samenleving.

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CURRICULUM VITAE

Marjam Smeekens werd geboren op 21 oktober 1992 in Nijmegen. In deze stad volgde zij voorbereidend wetenschappelijk onderwijs aan het Montessori College. Haar passie voor wetenschappelijk onderzoek ontstond tijdens haar studie Psychologie aan de Radboud Universiteit. Gedurende deze periode was zij werkzaam als onderzoeksassistent bij verschillende onderzoeksprojecten. In 2017 behaalde Marjam cum laude haar diploma voor de onderzoeksmaster *Behavioural Science*.

Na haar afstuderen kwam Marjam in dienst bij FPC de Pompekliniek in Nijmegen als junior wetenschappelijk onderzoeker. In deze forensische setting werkte zij aan diverse onderzoeksprojecten, waaronder studies naar de ForFACT patiëntenpopulatie, de delictanalyse, en de kwaliteit van leven van forensisch psychiatrische patiënten.

In de zomer van 2022 begon Marjam met haar promotieonderzoek bij de afdeling Wetenschap & Opleidingen van het Nederlands Instituut voor Forensische Psychiatrie en Psychologie. Tegelijkertijd werd zij aangesteld als buitenpromovenda bij de Universiteit Leiden. Aan deze universiteit volgde zij de cursussen Wetenschappelijke Integriteit, Data Management Training en Academisch Engels. Het promotieonderzoek van Marjam maakte deel uit van een langer lopend project naar de Risicoscreener Geweld. De resultaten van haar proefschrift heeft zij gepresenteerd op diverse nationale en internationale congressen, waaronder de Dag van de Forensische Zorg, het Voorjaarscongres van de Nederlandse Vereniging voor Psychiatrie, en het *International Corrections and Prisons Association* congres. Onder begeleiding van Maaïke Kempes, Arne Popma en Michiel de Vries Robbé voltooide zij haar proefschrift eind 2024.

Sinds begin 2025 werkt Marjam als onderzoeker bij het lectoraat Wonen en Welzijn van de Hogeschool Utrecht. Ze doet hier onderzoek naar het beter in kaart brengen van de populatie van dak- en thuisloze mensen.

