Universiteit Leiden
The Netherlands

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

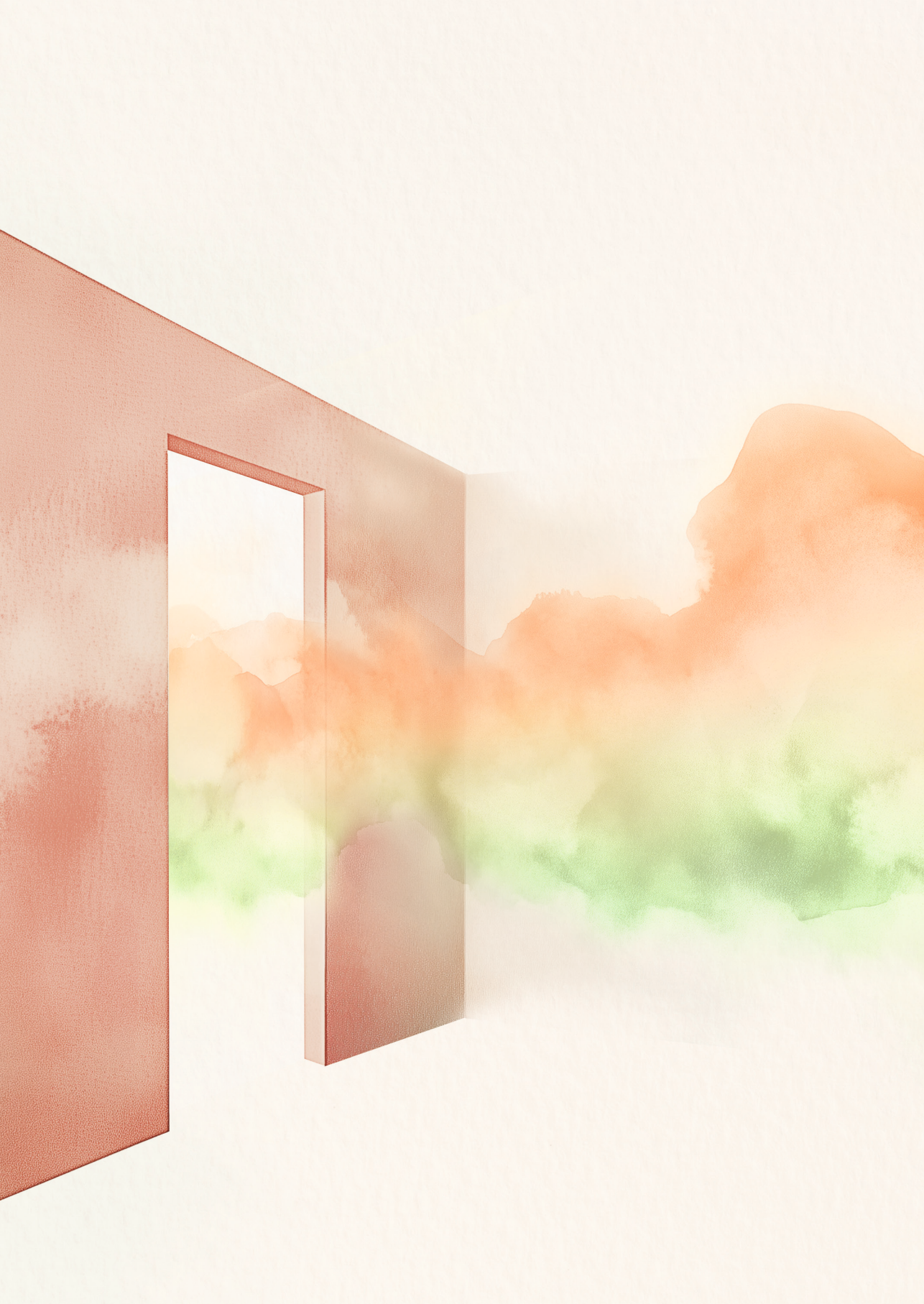
Smeekens, M.V.

**Citation**

Smeekens, M. V. (2025, June 11). *Screening for safety: predicting violence concerns among detained individuals in the Netherlands using the Risk Screener Violence (RS-V)*. Retrieved from https://hdl.handle.net/1887/4239080

| | |
|---|---|
| Version: | Publisher's Version |
| License: | Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden |
| Downloaded from: | https://hdl.handle.net/1887/4239080 |

**Note:** To cite this publication please use the final published version (if applicable).



# CHAPTER 2

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

**Marjam Smeekens**

**Submitted as:**
Smeekens, M. V., De Vries Robbé, M., Popma, A., & Kempes, M. M. (2024). Practical application, subgroup differences, and user evaluation of the Risk Screener Violence (RS-V) within prison practice.

## 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; Monjazeb & 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 cases[2]. 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 – 10,945[3]), 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 six[4] 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 meeting[5] 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 (± 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 25,000[6] 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?[7] | 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).

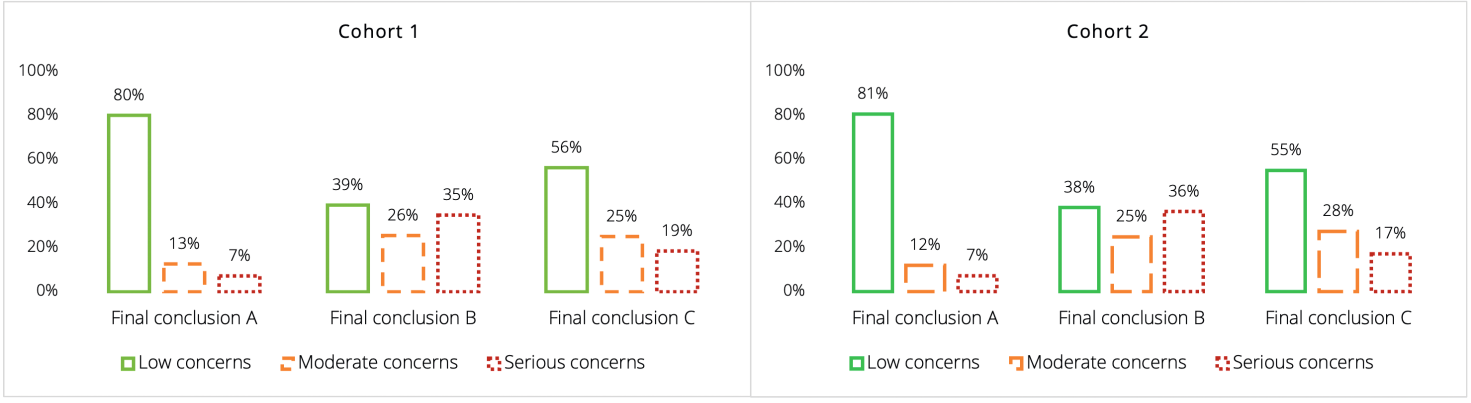



**Figure 2.1** The ratings of final conclusion A (concerns about interpersonal violence inside prison), B (concerns about interpersonal violence after release), and C (concerns about interpersonal violence during leave) of the RS-V in cohort 1 (*n* = 4,446) and cohort 2 (*n* = 4,514)

**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** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H1 | H2 | R1 | R2 | R3 | R4 | P1 | P2 | P3 | P4 | Historical risk factors | Dynamic risk factors | Dynamic protective factors | RS-V total score | A (inside prison) | B (after release) | C (during leave) |
| 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 | 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:** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H1 | H2 | R1 | R2 | R3 | R4 | P1 | P2 | P3 | P4 | Historical risk factors | Dynamic risk factors | Dynamic protective factors | RS-V total score | A (inside prison) | B (after release) | C (during leave) |
| 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'.

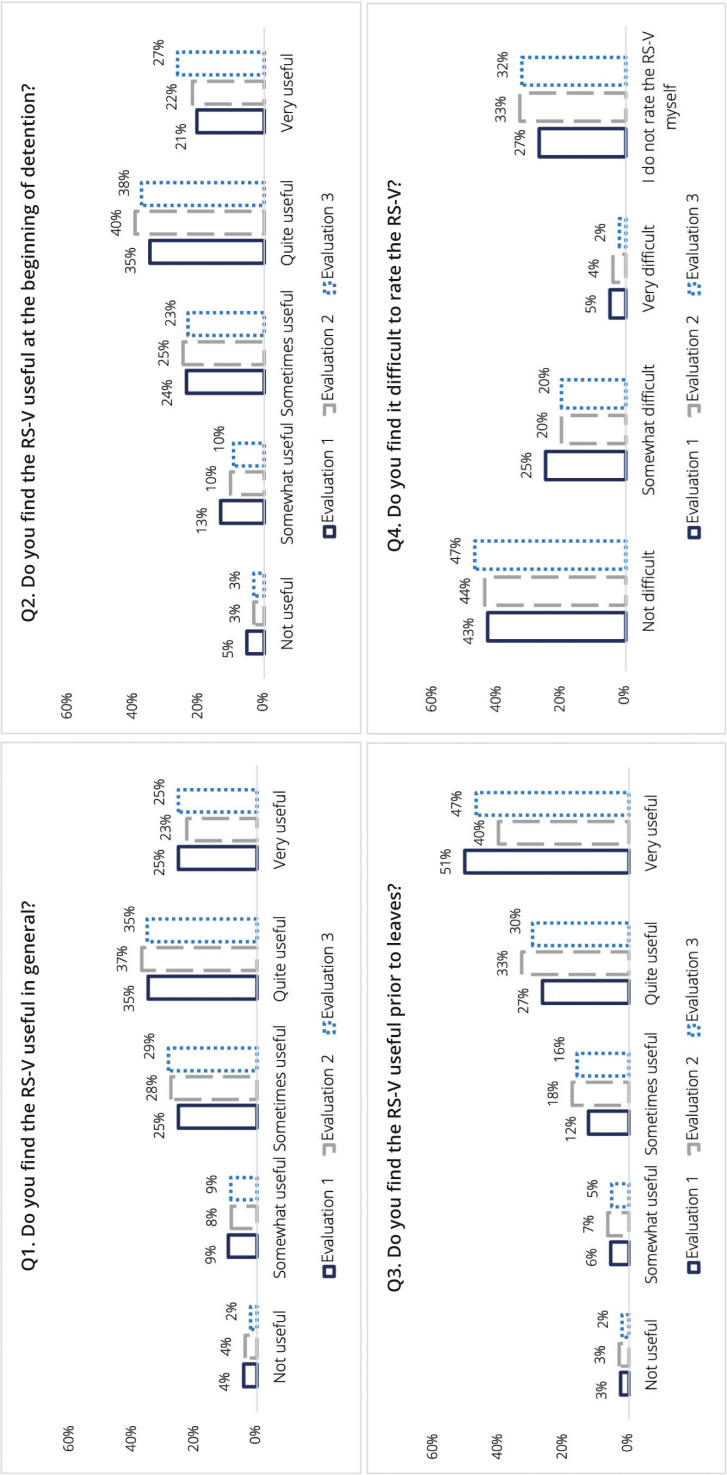



**Figure 2.2** Results regarding the single select multiple-choice questions Q1, Q2, Q3, and Q4 of the RS-V user evaluation. Results are displayed per evaluation moment. Evaluation 1: $n = 323$, evaluation 2: $n = 309$, evaluation 3: $n = 189$

# 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 achieve 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 sentences[8].



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.