

# A comparison between the Historical Clinical Risk Management 20 (HCR-20) and the Psychopathy Checklist Revisited (PCL-R) violence prediction tools for risk assessment in forensic psychiatry

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## INTRODUCTION

Reliable assessment of violence risk is central to forensic psychiatry, shaping decisions on security level, conditional release, leave, and treatment priorities. Over the past three decades, structured instruments have replaced unstructured clinical judgement as the gold standard, with the Psychopathy Checklist-Revised (PCL-R) and the Historical Clinical Risk Management-20 (HCR-20) occupying a central position in international practice.

The HCR-20 operationalises a structured professional judgement (SPJ) model integrating historical, clinical and risk-management factors, emphasising dynamic change and formulation-driven management plans.

The PCL-R, by contrast, was developed to quantify psychopathic traits, but has been widely adopted as a proxy risk tool due to its robust association with general and violent recidivism.

Empirical studies in correctional and forensic settings, including Portuguese probationers and parolees and North American forensic inpatients, show that both instruments predict violent and non-violent reoffending, yet differ in accuracy, time frame and clinical utility.

In Greece, where structured tools are routinely used in forensic practice, clarifying these differences is particularly important for aligning risk assessment with human-rights standards, with proportionality, and rehabilitative aims.

## AIM

To compare the predictive performance and clinical applicability of the HCR-20 and PCL-R for violence risk assessment in forensic psychiatry, and to derive pragmatic recommendations for their combined use in forensic settings.

## METHODS

A targeted narrative review was conducted focusing on three key sources: a prospective study of 158 non-mentally disordered Portuguese offenders assessing predictive, convergent and incremental validity of HCR-20 and PCL-R for general, violent and non-violent recidivism; a scoping review of violence risk tools used in North American forensic and acute psychiatric services highlighting real-world uptake and performance metrics for HCR-20 and PCL-R; and a comparative paper analysing the advantages and limitations of HCR-20, PCL-R and related actuarial instruments.

Findings from these sources were synthesised using a forensic-psychiatric risk-management framework, focusing on time horizon (short- versus long-term risk), type of outcome (institutional aggression, community violence, general recidivism) and implications for structured formulation and intervention planning, with specific attention to their feasibility within resource-limited public systems.

## RESULTS

Across studies, both instruments showed good overall predictive validity for future violence and broader criminal recidivism, but the HCR-20 generally achieved slightly higher effect sizes and areas under the curve, particularly for institutional aggression and non-violent reoffending. In the Portuguese community sample, total HCR-20 scores predicted general, violent and non-violent recidivism at least as well as, and often better than, PCL-R scores, and remained significantly associated with outcomes after controlling for psychopathy, demonstrating clear incremental validity. Risk-management items, capturing supervision needs, environmental instability and likely coping with stressors, were especially informative for community outcomes. SPJ summary risk ratings derived from the HCR-20 performed as well as or better than actuarial total scores, especially for violent incidents, underscoring the value of structured formulation rather than mechanical cut-offs.

The PCL-R, while somewhat weaker than the HCR-20 for imminent or short-term institutional violence, contributed importantly to prediction of long-term recidivism. Its strongest associations with reoffending arose from the lifestyle and antisocial facets (Factor 2), reflecting chronic rule-breaking, impulsivity and unstable life patterns, whereas the

interpersonal-affective traits (Factor 1) showed more modest links with subsequent violence. Conceptual reviews emphasise that the PCL-R primarily indexes a stable personality liability (psychopathy) which functions as a background risk amplifier across settings and life stages rather than a direct target for short-term risk management.

Convergent validity analyses reveal substantial overlap: higher PCL-R scores correlate strongly with HCR-20 historical items and, to a lesser extent, with clinical and risk-management domains. Nevertheless, multivariate models indicate that adding HCR-20 to PCL-R meaningfully improves prediction, whereas adding PCL-R to an existing HCR-20-based assessment yields more modest gains. Scoping data from North American forensic units show that HCR-20 and PCL-R are among the most commonly used tools, often in combination, with clinicians favouring HCR-20 for day-to-day risk reviews and PCL-R for comprehensive, long-term forensic evaluations (e.g. dangerousness opinions, high-security placement). From a practical perspective, both instruments require specific training, but the intensive interview and file-review demands of the PCL-R make it less suitable for frequent re-assessment, whereas the modular structure of the HCR-20 lends itself to iterative updating and multidisciplinary case conferences.

## CONCLUSION

Available evidence suggests that the HCR-20 and PCL-R should be viewed as complementary rather than competing tools. For routine violence risk assessment and ongoing case management in forensic hospitals and prisons, the HCR-20 offers superior flexibility by integrating static, dynamic and contextual factors into an SPJ framework, supplying concrete levers for intervention and review.

The PCL-R remains indispensable for characterising psychopathy as a stable, long-term risk factor and can refine risk stratification in high-stakes cases, but is less suited as a stand-alone instrument for short-term violence prediction. Prioritising HCR-20 as the primary violence risk framework, with selective PCL-R use for detailed personality assessment and long-term planning, may enhance transparency, proportionality and rehabilitative focus in risk-based decision-making.

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