



# First results of a french validation of the HCR-20 among swiss offenders

Marc Dupuis<sup>1</sup>, Tiziana Bianchi<sup>1</sup>, Milena Abbiati<sup>1</sup>, Mehdi Gholam-Rezaee<sup>2</sup> & Valérie Moulin<sup>1</sup>  
<sup>1</sup> Institute of Forensic Psychiatry  
<sup>2</sup> Center for Psychiatric Epidemiology and Psychopathology  
 Centre Hospitalier Universitaire Vaudois  
 Marc.Dupuis@chuv.ch



## Theoretical background

The *Historical Clinical Risk assessment guideline* (HCR-20) is a Structured Professional Judgement based tool composed of 20 items, each corresponding to a risk factor for violent recidivism. Once each factor is rated, then the practitioner has to estimate by himself the risk of reoffending.

This paper presents the results of a previous study on the perceived relevance of this instrument (Gravier, Moulin, Ewering, Dupuis & Liaudat, 2012) and focuses on the first results of its validation on swiss French-speaking offenders.

## Perceived relevance

### Aim

The goal of this study was to determine whether evidence-based risk assessment strategies could be implemented in psychiatric units. The purpose of this study, therefore, was to investigate clinicians' perceptions of various risk factors for violent behavior (including HCR-20 risk factors).

### Procedure

6 researchers interviewed the medical staff of 11 psychiatric units regarding their perception of different factors related to violent conducts. A total of 69 practitioners participated in 2 hour long focus groups. Then, each participant had to rate HCR-20 risk factors by relevance.

### Results

This survey showed in particular that previous violence, impulsivity and psychopathy are considered as the most relevant factors, while young age at first violent incident, employment problems and relationship instability seem to have moderate importance. Such results are consistent with Liaudat et al. (2007), which supports the hypothesis that some factors could be regularly undervalued while others could be overrated.

## Retrospective validation study (in progress)

### Aim

The aim of this study is to validate the French version of the HCR-20 guideline among swiss offenders.

### Subjects

This study is based on the criminal cases and psychiatric records of 60 offenders convicted of violent or sexual offenses and appraised between 2000 and 2005.

### Procedure

4 different researchers used multiple instruments to assess risk of recidivism: HCR-20, Hare's Psychopathy Checklist (PCL-R), Violence Risk Appraisal Guide (VRAG), Static-99 revised version.

## Results

Based on the 60 first subjects assessed, good indices of validity were obtained. Cronbach's  $\alpha$  was 0.71, which indicates an acceptable homogeneity of the instrument. Interrater reliability was 0.78. Concerning concurrent validity, significant correlations from 0.46 to 0.77 were measured between HCR-20 and PCL-R, VRAG and Static-99-R (table 1). Such values are consistent with literature, but lower than those obtained by prospective studies.

**Table 1 – Concurrent validity**

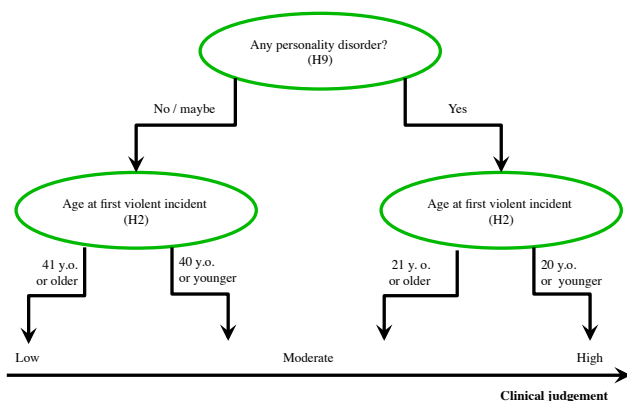
Subscales	Risk assessment scales		
	PCL-R	VRAG	Static-99-R
H 'Historical factors' subscale	0.62**	0.77**	0.54**
C 'Clinical factors' subscale	0.66**	0.26*	ns
R 'Risk factors' subscale	0.41**	ns	ns
HCR-20 Overall score	0.72**	0.58**	0.46**

\*p<.05; \*\*p<.01

## HCR-20 and decision biases

Given the potential impact of perceived relevance of risk factors on the clinical conclusion about risk, CART analyses were performed on our validation data (figure 1). CART analyses suggest that clinical perception about recidivism mainly depends on the presence of personality disorders and the age of the first act of violence. Juvenile delinquency seems to be a relevant criterion when the offender suffers from a personality disorder. When the offender does not suffer from any personality disorder, he's considered more likely to reoffend if he was younger than 40 at first violent incident.

**Figure 1 – CART model of clinical judgement on risk**



## Conclusion

The results of the validation study are consistent with international literature. However, little work has been done to detect possible decision biases in structured professional judgement based assessment.

Further studies are required to identify whether there is a decision bias caused by the fact practitioners systematically perceive some factors as highly relevant.