

Name of Tool	Classification of Violence Risk (COVR)
Category	Violence Risk (Validated)
Author / Publisher	Monahan and Colleagues
Year	2005

### Description

- The COVR is a self-report interactive software programme that aims to estimate the level of violence risk posed by individuals diagnosed with a mental disorder over a period of several months, post-discharge into the community.
- The tool assesses patients on 44 risk factors in estimating violence risk ([Monahan, 2010](#)).
- A 'classification tree' methodology is used in the COVR, with questions being asked in a sequence until the individual is assigned a risk category ([Monahan, 2010](#)).
- After the assessor has completed an interview with the participant, the software generates a report that consists of statistical estimates of the likelihood of future violence, including the confidence interval for that estimation of violence ([Monahan, 2010](#)).
- In 2007, [McClusker](#) expressed uncertainties about the instrument. Counteracting that, [Meadows \(2014\)](#) reported a study that "confirmed that COVR scores were predictive of re-hospitalization or violent recidivism."

### Age Appropriateness

18-60

### Assessor Qualifications

Assessors must possess the relevant qualifications (i.e. in the administration and interpretation of psychological tests) and training in the use of this tool.

### Strengths

- Assessment is fairly quick to administer
- Software based assessment that can eliminate sources of error and has the practicality of screening large samples ([Snowden, et al. 2009](#)).
- The COVR provides an estimate of risk that the practitioner can consider in relation to any other information they hold about the patient ([Monahan, 2010](#)).

### Empirical Grounding

- The tool was developed from the MacArthur Violence Risk Study ([Monahan et al., 2001](#)). Variables from the study that predicted future violence were then used to classify participants into risk categories using the iterative Classification Tree System. This is an interactive model of violence,

considering combinations of risk factors in order to classify an individual into a risk level ([Monahan, 2010](#)).

- The COVR implements actuarial methods to a long-established modelling approach used in the medical field to inform professional judgements ([Monahan et al., 2001](#)).

Inter-Rater Reliability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a) UK Research	None available at present.								
b) International Research	<ul style="list-style-type: none"> <li>• <a href="#">Monahan (2010)</a> - Using a dataset of 385 interviews, high kappa coefficients were found.</li> </ul>								

Validation History									
General Predictive Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a) UK Research	<ul style="list-style-type: none"> <li>• <a href="#">Meadows (2014)</a> indicated: "The current study assessed success rates in predicting violent recidivism among forensic and civilly committed inpatients released from a state psychiatric hospital utilizing the violence risk categories generated from the COVR. This study confirmed that COVR scores were predictive of re-hospitalization or violent recidivism."</li> <li>• <a href="#">Snowden, Gray and Taylor (2010)</a> found that applying the instrument in a UK sample indicated "COVR was a good predictor of both verbal and physical aggression. Its predictive ability was similar to that of the VRAG, although the VRAG was a better predictor of violence to property."</li> </ul>								
b) International Research	None available at present								

Validation History									
Applicability: Females	<input type="checkbox"/>								
This tool can be applied to female adults who have offended; however, there is limited research validation relating to this population.									

Validation History									
Applicability: Ethnic Minorities	<input type="checkbox"/>								
No Empirical Evidence Available.									

## Validation History

### Applicability: Mental Disorders

a) UK Research	<ul style="list-style-type: none"><li>• <a href="#">Doyle et al. (2010)</a> - no significant findings were found in relation to the tool's predictive accuracy and inpatient violence in a 20-week post-discharge follow-up.</li><li>• <a href="#">Snowden et al. (2009)</a> - in a six-month follow-up the COVR presented the ability to predict physical aggression (AUC = .73); however, it was unable to predict property offences and verbal aggression.</li></ul>
b) International Research	<ul style="list-style-type: none"><li>• <a href="#">Sturup, Kristiansson and Lindqvist (2011)</a> - in a 20-week follow-up period post-discharge, the COVR attained a high AUC value of .77 in predicting violent offences within a sample of 331 forensic mental health patients.</li><li>• <a href="#">McDermott et al. (2011)</a> - COVR has modest predictive accuracy in relation to physical aggression by psychiatric patients (AUC = .73) in the 20-week follow-up period subsequent to administration of the tool.</li><li>• <a href="#">Monahan (2010)</a> - the COVR has the ability to discriminate between low and high-risk groups. The estimated rate of recidivism was 1.2% for low risk and 63.6% for the high-risk group. The observed rates of recidivism in the prospective sample were 9% and 49% for the low and high-risk groups respectively.</li><li>• <a href="#">Monahan et al. (2005)</a> - the COVR obtained an AUC value of .70 (sensitivity = .75 and specificity = .77) in their follow up investigation of patients from the MacArthur study.</li><li>• <a href="#">Persson et al. (2017)</a> assessed 200 individuals (193 of which were followed-up) who were undergoing forensic psychiatric investigation in Stockholm. The predictive validity for the COVR tool was found to be modest with an AUC of .61.</li></ul>

### Contribution to Risk Practice

- The tool is useful in aggregating the individual's self-reports in relation to the formulation of the risk of reoffending.
- Issues regarding the reliability of self-report ([Snowden et al., 2009](#)).
- The tool provides a statistical probability of short-term risk of recidivism (i.e. within a one-year period following discharge from a secure facility). No other supplementary information is included

that would provide a justification for the statistical information generated by the COVR ([Snowden et al., 2009](#)).

- Information taken from patient's files may be inaccurate or incomplete.
- Mixed findings regarding its predictive utility.
- The COVR states the risk category of an individual (e.g. 'low', 'high'); however, it does not clarify why an individual is placed at a certain level of risk ([Snowden et al., 2009](#)).
- Assessors should note that the COVR has been normed on mentally disordered populations; however, its predictive accuracy lessens depending on the type of recidivism being investigated.

### Other Considerations

- Violent incidents are measured by patient self-report, official police records, hospital records, and collateral informants. Total scores are given in a probability format (a percent range for likely violence being committed within the next several months), a frequency format (e.g., for every 100 persons similar to the patient being assessed, between 20 and 32 will commit a violent act over the next several months), and a categorical format (classes of risk, including very low, low, average, high, and very high) ([Kennedy et al., 2007](#)).
- The COVR has been validated for clinical use with acute psychiatric patients who are being considered for release into the community and should be administered by practitioners in mental health disciplines. If the COVR was to be used with other populations, caution should be exercised ([Monahan et al., 2005](#)).
- [Monahan and colleagues \(2005\)](#) recommend that practitioners adopt a risk assessment procedure that is two-fold in nature: administer the COVR instrument; thereafter review the risk estimate generated by the tool. This will allow for additional considerations of risk or protective factors not covered in the COVR assessment. There is also the possibility for conflicting information in the patient's records. If this cannot be verified, it is advised the practitioner marks the answer as 'missing' ([Monahan, 2010](#)).