A review and meta-analysis of the psychopathy checklist and psychopathy checklist-revised: predictive validity of dangerousness

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Authors' objectives
To evaluate the ability of the Psychopathy Checklist (PCL) and Psychopathy Checklist-Revised (PCL-R) to predict violent and non-violent recidivism.

Searching
PsycLIT was searched from 1974 to 1995. Previous reviews of the literature on psychopathy and the reference sections of individual studies were examined. Specialised journals (list provided) that might address the issue of dangerousness were also searched for any studies or reviews that were too recent to be included in computer databases. Any available studies that were in press or under review were incorporated.

Study selection
Study designs of evaluations included in the review
No restrictions were placed on study design.

Specific interventions included in the review
The interventions were the PCL and PCL-R.

Reference standard test against which the new test was compared
All studies using the index tests to predict the occurrence of violent or non-violent recidivism were eligible for inclusion. The occurrence of recidivism was, therefore, the reference standard.

Participants included in the review
No inclusion criteria relating to the participant characteristics were specified. The participants in the included studies were males recruited from federal medium-security prisons, maximum-security youth detention centres, therapeutic community programmes (medical out-patients), forensic treatment centres for sexual offenders, or they were forensic psychiatric patients. The participants were classified as either violent offenders, non-violent offenders, recidivators, non-recidivators, sadistic rapists, non-sadistic rapists, or mixed. Where reported, the mean age of the participants ranged from 16.3 to 39.1 years.

Outcomes assessed in the review
No inclusion criteria relating to the outcome measures were specified. The sensitivities, specificities, positive predictive powers, and negative predictive powers of the psychopathy checklists were reported for the individual studies. Where reported, the cut-off score for dangerousness and recidivism ranged from greater than 18 to greater than 33. The outcome measures in the review were the effect sizes for the ability of the psychopathy checklists to predict violence, recidivism, and deviant sexual arousal and sexual sadism.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality
The authors do not state that they assessed validity.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.
Methods of synthesis
How were the studies combined?
The effect sizes were calculated for each study using the formula from Rosenthal (see Other Publications of Related Interest). The average effect size across all studies was then calculated, by category of behaviour.

How were differences between studies investigated?
The heterogeneity of the effect sizes was examined using the chi-squared test. The studies were evaluated separately for the ability of the psychopathy checklists to predict violent behaviour, recidivism, and sexual sadism or deviant sexual arousal.

Results of the review
A total of 18 PCL or PCL-R studies yielding 29 effect sizes were included in the review. Thirteen studies (2,390 participants) investigated the ability of the psychopathy checklists to predict violent behaviour, ten their ability to predict recidivism (1,991 participants), and three their ability to predict sexual sadism or deviant sexual arousal (305 participants).

The test characteristics were reported for 10 of the 18 included studies. The sensitivity for the most commonly reported cut-off score of greater than 25 (from 5 included studies) ranged from 17 to 62%, and the specificity from 80 to 93%. The positive and negative predictive values ranged from 29 to 88%, and from 55 to 81%, respectively.

The test for heterogeneity of the effect sizes was non significant.

When violence was used as the primary outcome, the effect sizes ranged from 0.42 to 1.92, with a mean effect size of 0.79. When general recidivism was used as the outcome, the effect sizes ranged from 0.24 to 0.93, with a mean effect size of 0.55. In studies addressing deviant sexual arousal and sexual sadism, the effect sizes ranged from 0.47 to 0.77, with a mean effect size of 0.61.

Authors' conclusions
The research reviewed in this meta-analysis suggests that psychopathy is associated with an increased risk for criminal and violent behaviour in male offenders. In addition, it appears that psychopathic traits predict violence, even in those suffering from serious mental disorder, as well as sexual sadism and sexual recidivism in inmates.

CRD commentary
The review focused on a broad research question, which was poorly defined in terms of the inclusion criteria. The primary studies were presented in sufficient detail and were combined appropriately. The search terms were not stated. The search could have been extended to include other databases, such as the Social Sciences Citation Index, MEDLINE and EMBASE. No attempt was made to identify unpublished literature, thus publication bias cannot be ruled out.

The review methodology was poorly reported, and the validity of the included studies was not assessed. The potential impact of bias, introduced by the review process or by the quality of the included studies, cannot, therefore, be assessed.

The conclusions follow broadly from the results presented.

Implications of the review for practice and research
Practice: The authors state that, there is some merit for psychologists utilising the PCL-R when making probability statements regarding placement decisions in correctional institutions (e.g. level of security and treatment needs). In addition, psychologists may want to consider the PCL in parole and conditional release decisions, and in hearings on community placement of forensic patients. In these cases (especially with Anglo-American males), the PCL is an
unequalled measure in determining their specific risk assessments.

Research: The authors state that future research is needed to determine whether one of the psychopathy checklist factors (applicable to all versions) might predict violent and criminal behaviour better than the other. Research should determine what degree the measures add to predictions of violence beyond that afforded by aggregate measures of a history of violence. Research should also investigate whether the PCL will be valuable with adolescent and female populations, as well as forensic and civil psychiatric patients. In addition, nonclinical populations with both minorities and non-minorities need further investigation.

Bibliographic details

Other publications of related interest

Indexing Status
Subject indexing assigned by CRD

MeSH
Antisocial Personality Disorder; Dangerous Behavior; Mental Disorders; Psychiatric Status Rating Scales; Risk Assessment

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.