CRIME-PICS II: Initial validation.

Extract from the first Manual.

Frude, N., Honess, T. M. & Maguire, M. (1994).
Crime-Pics II: A psychometric tool for measuring attitude change in probation clients. Cardiff and London: M&A Research. ISBN 1 899094 008.

RELIABILITY OF THE SCALES

This information is based on the original M&A Research sample of 422 offenders only. The reader is encouraged to consult the more recent publications detailed on the M&A Website.

For a measurement to be useful it must be reliable, and there are a number of ways in which the reliability of a measure can be evaluated. One important psychometric indicator of the reliability of a scale is how well the relevant items "hold together" to form an integrated scale. This is labelled the "internal reliability". Another important indicator of reliability is the extent to which a measure gives the same results when administered twice to the same offender group. This is referred to as the "test-retest reliability".

INTERNAL RELIABILITY

It is important to establish whether the scores from the items that make up a scale are correlated with each other in the predicted direction. It is also possible to compute one overall estimate of such internal consistency for each scale. This is known as the "alpha coefficient", and it is generally advised that an alpha value of .70 or above indicates good internal consistency. However, this coefficient reflects the number of items in a scale as well as the inter-correlations within a scale. This means that higher alpha values are generally more difficult to establish for short scales. The Table below provides the alpha coefficients for each of the **CRIME-PICS II** scales.

SCALE		alpha coefficient
GENERAL ATTITUDE TO OFFENDING (17 items)	G	0.76
ANTICIPATION OF RE-OFFENDING (6 items)	A	0.75
VICTIM HURT DENIAL (3 items)	V	0.73
EVALUATION OF CRIME AS WORTHWHILE (4 items)	E	0.55
PERCEPTION OF CURRENT LIFE PROBLEMS (15 items)	P	0.83

It can be seen that sub-scale E ("Evaluation of crime as worthwhile") fails to meet the alpha "adequacy" criterion, although the four items that make up this scale do significantly correlate with each other. From the internal reliability data alone, however, scores on this scale should be treated with caution.

Thus in terms of internal consistency, at least four of the five sub-scales are reliable.

TEST-RETEST RELIABILITY AND TEST SENSITIVITY

A reliable measuring instrument also provides stable information; it should not yield different scores if administered by different persons, nor should it generally yield different scores on a day to day basis. **CRIME-PICS** II should yield stable information of this kind, yet it should also be sensitive to real change in clients'

attitudes, which would lead us to expect score changes in specified directions.

The following Table is based on a sample of clients who had undergone intervention programmes, with varying test-retest periods. We would therefore expect score changes as a result of interventions, but to meet the test-retest reliability criterion, all scales would be expected to provide significant associations between Time 1 and Time 2: **CRIME-PICS II** clearly meets the test-retest criterion - all coefficients are highly significant. Note that these coefficients are correlations not alpha coefficients.

SCALE		correlations
GENERAL ATTITUDE TO OFFENDING (17 items)	G	0.63
ANTICIPATION OF RE-OFFENDING (6 items)	A	0.58
VICTIM HURT DENIAL (3 items)	V	0.59
EVALUATION OF CRIME AS WORTHWHILE (4 items)	E	0.56
PERCEPTION OF CURRENT LIFE PROBLEMS (15 items)	P	0.55

Each of the scales has also demonstrated movements in the predicted direction, i.e. towards a more desirable attitude to offending.

VALIDITY OF THE SCALES

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CRIME-PICS II has good face validity. It was devised on the basis of extensive discussions and trials with probation officers and covers all of the important general dimensions that appear to be relevant to attitudes to offending.

In the psychometric context, "validity" refers to the issue of whether a test or scale actually measures what it is supposed to be measuring. The "concurrent validity" of a measure can be determined by establishing whether the measure discriminates between groups that should be different on the variable that is supposedly being assessed. In the specific context of CRIME-PICS II, we would expect that certain client groups would differ in terms of their scores on various scales.

In order to assess whether the **CRIME-PICS II** scales were valid, we examined the relationship between the scales and the following variables:

 i) A composite risk-of-reoffending score
 ii) Number of previous convictions
 iii) Number of previous custodial sentences
 iv) Type of (recent) offence

i) The composite risk of re-offending (ROR) score used for this analysis was routinely employed by the Mid-Glamorgan Probation Service and is similar to scores used in many probation services within the United Kingdom. It takes into account the client's age, offence type, previous convictions, and a number of the other factors. We predicted that a higher ROR score should be associated (positively correlated) with the **CRIME-PICS II** scales. This proved to be the case, with three of relationships being particularly strong: those with higher risk of re-offending scores tend to have higher scores on the **CRIME-PICS II** G, A and E scales (General Attitude to Offending, Anticipation of Re-offending, and Evaluation of Crime as Worthwhile).

ii) and iii) Clients were banded into four groups on the basis of the number of their previous convictions, and two groups on the basis of whether they had or had not had a previous custodial sentence. We then analyzed our data to determine whether there were any differences between the **CRIME- PICS II** scores of these different groups.

Each of the **CRIME-PICS II** scores discriminated between the groups in a meaningful fashion. The following relationships were particularly strong:

• the group with the lowest number of previous convictions (two or less) had the lowest scores on the G and A scales. The group with the highest number of convictions (eleven or more) had the highest scores on these two scales.

• a similar pattern was evident for those who had experienced a custodial sentence: they had significantly higher G and A scores than those who had not had a previous custodial sentence. Those who had had a custodial sentence also reported significantly more 'Problems' in their current lifestyle. However, this group also acknowledged greater harm for the victim(s) of their crimes (a lower V score) which is of course likely to reflect the type of offence committed.

iv)   Client offences were originally coded in terms of the Home Office classification system. For the purposes of our analysis, we conflated certain of these categories and formed three broader groups:

a)   offences against the person
b)   property offences
c)   motor vehicle related offences.

Differences in the **CRIME-PICS II** scores of these three groups provided clear support for the validity of the scales. As one would expect, those convicted of offences against the person (who are generally less likely to reoffend than property offenders) had significantly lower scores than each of the other groups for each of the scales. The group convicted of property offences reported the most problems.