Can an American actuarial risk assessment tool help us to identify risks to children in UK child protection cases?

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Risk– layers of risk in child protection

- Risks to the child of pain, distress, harm and injury;
- Risks to the family of intrusion into their privacy, loss of autonomy, criticism of parenting, removal of child/ren, separation from partner, prosecution;
- Risks to professionals of blame, exposure, criticism, loss of job/livelihood;
- Risks to agencies of blame, exposure, loss of reputation.

How have child protection services coped with risk?

- Increased inclusion of different behaviours as abusive → wider scope of child abuse as a phenomenon (leading to more complex assessment tools)
- Understanding of the factors leading to neglect and abuse
- Increasingly detailed procedures and prescriptive documentation
- Inquisitorial case reviews which focus on whether ‘rules’ were followed and ‘managerialist’ solutions
- Blame and mistrust of social workers and agencies

Assessment of risk : difficulties & uncertainties

- Uncertainty about likelihood of adverse events
- Dynamic nature of families & volatile human beings
- Changing needs of the growing child also change their risks
- Information overload – can’t compute
- Agencies are under-resourced for extended monitoring of cases – unjustified optimism about outcomes
- Workers are compassionate & support adults, BUT may lose focus on the outcomes of inconsistent parental care for the child

US versus UK models

- Much fundamental ideology is similar, but…
- Different policies, different systems, different approaches to empirical research
- Costs are differently allocated
- Family preservation versus child rescue?
- Are the interests of the child paramount?

Heuristics versus Empiricism

- Weaknesses of heuristic decision making – motivational, cognitive, interpersonal, lack of time to think, unreflective optimism

- Weaknesses of evidence based approaches – reductive, excludes some types of evidence, poor fit with naturalistic processes & concerns

- Statistics = Maths = Hard to understand!

So what *can* we rely on?

- Vulnerability checklists have often been used as predictors, but reliability and validity may be untested → **not good enough**
- False positives, false negatives – ethical issues
- Learn from other fields – spouse abuse, mental health, criminology
- Statistical tools can improve sensitivity and specificity of risk assessment

Actuarial risk prediction

- It’s about probabilistic prediction, *not* individual assessment
- Casework still needs full assessments
- Risk assessment is a ‘bolt on’ process, not a replacement for assessment
- Some factors are strong predictors, but very rare, e.g. psychopathy is rare, but a good predictor of future violence

Professional risk assessments v Actuarial risk assessments

- Complexity of real life cases versus a probabilistic approach to risk assessment

BUT

- Actuarial probabilistic approaches *don't* reduce data to meaningless numbers like simple checklists
- They work slightly better than unaided expert decision making for risk prediction, substantially better than novice decision making
- They're focused on RISK & cut through the professional data overload

US actuarial tools for risk assessment in child protection

- Use techniques similar to insurance industry risk prediction – focus on valid predictive factors
- Include some special non-actuarial factors which are rare, but strongly predictive;
- Rapidly adopted across US and parts of Australia
- Quick to use, quick to check how things have changed following intervention

Reservations and caveats

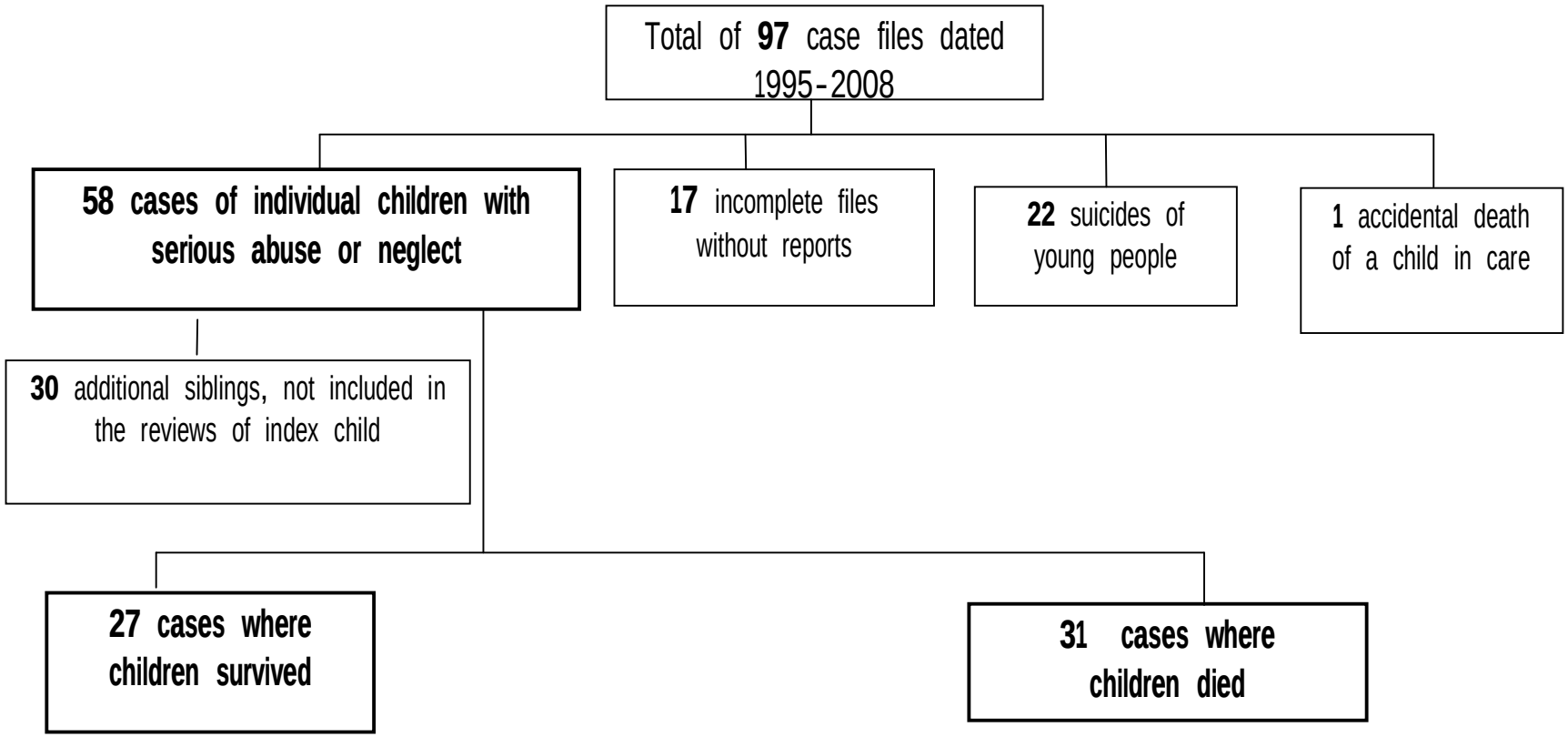
- UK & US systems vary in detail, but both based on liberal approaches, the privacy of the family, limited universal welfare systems
- Mandatory reporting in US means rationing of services to those in greatest need → screening
- Crisis intervention model of ‘child rescue’ in US, not proactive prevention
- Social factors like poverty, racism, poor housing, structural unemployment, etc. are treated differently in US – focus is on finding failing or violent families

The Thirteen Counties Study (TCS)

Method

- **Stage 1:** Systematic & critical literature search to identified the most thoroughly validated risk assessment tool from UK and US literature - Family Risk Assessment of Abuse and Neglect (FRAAN) chosen
- **Stage 2:** Application of FRAAN risk assessment to 58 Serious Case Reviews (SCRs) from 13 British counties over 12 years to score pre-event risks known before trigger abuse/neglect. Frequencies of risk factors compared using Chi Square 2x2 calculations for individual factors and Spearman's Rho to compare overall trends in frequencies
- **Stage 3:** External comparisons with data extracted from published studies of SCRs & UK homicides *(Stroud and Pritchard 2001, Brandon, Bailey et al. 2009; Ofsted 2010)*

The TCS Serious Case Reviews



Data collection & analysis

- Search of SCR files for recorded FRAAN risk factors & 3 further risk factors from Wessex child homicide study
- Interrater reliability tested – 78% agreement accepted
- Case Risk scores and frequencies of individual factors were tabulated using spreadsheets, with brief notes on cases
- Analysis of risks and factor frequencies using Chi square 2x2 tables & Spearman's Rho

FRAAN Neglect risk factors (58 cases)

		Cases	Percentage
N6	**Primary caretaker provides inadequate physical care and/or inadequate supervision for child(ren)**	**54**	**93**
N4	**Primary caretaker's social support is limited or negative**	**51**	**88**
N8	Primary caretaker involved in harmful relationships/domestic violence	44	76
N11	Primary caretaker unable/unwilling to put child's needs ahead of own	43	74
N2	Number of prior assigned neglect allegations and/or findings	36	62
N5	Primary caretaker is unable/unwilling to control impulses	35	60
N7	Primary caretaker currently has a mental health problem	33	57
N1	Current allegation and/or finding includes neglect	32	55
N9	Primary caretaker currently has substance abuse problem	23	40
N10	Family is homeless or children are unsafe due to housing conditions	20	34
N3	**Number of children in the household = 4 or more**	**10**	**17**

Average frequency 35, standard deviation = 13.1 Scores in Bold indicate + or – 1 s.d.

FRAAN Neglect subcategory frequencies

N6b	**Caretaker provides inadequate physical care for child(ren)**	**48**	**83**
N4c	**Relatives & others have a negative impact**	**48**	**83**
N11	**Primary caretaker unable to put child's needs ahead of own**	**44**	**76**
N8b	**Primary caretaker involved in any harmful relationship(s) or one or more domestic violence incident**	**44**	**76**
N4b	No supportive relationships or limited social support	39	67
N5	Primary caretaker is unable/unwilling to control impulses	36	62
N2	Number of prior assigned neglect allegations and/or findings	34	59
N8c	Multiple (2 or more) domestic violence incidents	36	62
N7	Primary caretaker currently has a mental health problem	36	62
N6c	Caretaker provides inadequate supervision for child(ren)	34	59
N1	Current allegation and/or finding includes neglect	33	57
N9	Primary caretaker currently has substance abuse problem	24	41
N10c	Housing is physically unsafe	15	26
N3	Number of children in the household = 4 or more	10	17
N10b	Family is homeless or about to be evicted	4	7
N8a	Primary caretaker not involved in any harmful relationships	0	0
N6a	Caretaker provides adequate physical care and/or supervision for child(ren)	0	0
N4a	Social support is appropriate & available	0	0
N10a	No housing problems	0	0

FRAAN abuse risk factors (58 cases)

A10	**Caretakers need to improve parenting skills but will not participate**	57	98
A2	**Number of prior assigned abuse complaints and/or findings**	52	90
A3	**Age of youngest child is < 6 years**	50	86
A8	Either caretaker has current or a history of domestic violence	45	78
A1	Current complain and/or finding includes mental injury	33	57
A9	A child in the household has one or more of the following characteristics Developmental disability, History of delinquency, Mental health issues, Behavioural issues	22	38
A5	Either caretaker was abused and/or neglected as a child	22	38
A11	Primary caretaker views incident less seriously than department	21	36
A7	Either caretaker is domineering and/or employees excessive and/or inappropriate discipline	19	33
A4	Number of children in the household is 3 or more	12	21
A6	Secondary caretaker has low self esteem	8	14

FRAAN abuse subcategories (58 cases)

		Cases	Percentage
A3	**Age of youngest child is <7 years**	**50**	**86**
A8	**Either caretaker has current or history of domestic violence**	**45**	**78**
A7a	Neither caretaker is domineering and/or employees excessive and/or inappropriate discipline	43	74
A6b	Secondary caretaker has no self esteem problems	41	71
A1	Current allegation and/or finding includes psychological harm	34	59
A9a	No child has any of the characteristics below - Developmental disability, History of delinquency, Mental health issues, Behavioural issues	30	52
A2c	Three or more prior abuse complaints or findings	30	52
A5	Either caretaker was abused and/or neglected as a child	22	38
A2b	One or two prior abuse complaints or findings	22	38
A9b	A child in the household has a developmental disability	19	33
A4	Number of children in the household is >3	13	22
A7c	A caretaker uses inappropriate discipline	13	22
A7b	A caretaker is domineering	11	19
A6a	No secondary caretaker in family	8	14
A6c	Secondary caretaker has self esteem problems	7	12
A2a	No previous abuse complaints or findings	5	9
A9c	A child in the household has a history of delinquency	3	5

Were risks different in fatal abuse cases?

- Thirty one children died within the 58 study cases (53%) – the Deceased cases
- Twelve of these died following severe physical assault (39% of the Deceased cases)
- Twenty seven children survived the Survived cases
- Of these, six were ‘near miss deaths’ (22% of the Survived cases)
- FRAAN scores showed NO statistically significant differences between fatal and non-fatal cases – all were at similar risk

Comparison with Wessex child homicide study data (Pritchard 2004)

- Wessex study looked at adult perpetrators of homicides –28 intrafamilial homicide cases were compared
- Perpetrator demography was closely correlated with the TCS fatal cases
- Child demography – Wessex closely correlated with the TCS fatal cases
- Wessex ‘high risk’ factors - parental mental illness & chaotic families with previous child protection involvement were closely correlated with the TCS fatal cases
- TCS cases recorded fewer violence convictions & more substance misuse

External validation by comparison with other SCR studies

- English SCR reports - Brandon et al (2009) and Ofsted (2010)
- Brandon sample was small (40 cases) & Ofsted (183 cases) had sparse data. Neither study had enough detail to validate TCS findings

Result:

- Both studies showed moderate positive correlations overall with this TCS study (Spearman's Rho = 0.66) but data on families was too limited for effective external validation apart from demography (Spearman's Rho=0.83)
- Ofsted data records fewer cases with domestic violence or parental mental illness

Key findings

- FRAAN risk assessments correctly identified **88%** of the SCR cases as High or Intensive Risk
- False negative cases contained limited data on men in families;
- No differences in FRAAN scores between fatal/non fatal abuse cases – other factors may be more important
- External validation attempts hampered by sparse family data BUT
- Risk factors could support better learning from tragic SCR cases in future

Limitations to this study

- Only high risk cases available, so no specificity or other validity tests, no prognostic separation, no predictive accuracy testing, etc.
- Data quality is limited by the completeness of review report
- Limited external validation data from earlier published studies, but TCS cases showed similar demography & outcomes

So, what next?

- FRAAN needs testing with mixed cases, to measure specificity, check sensitivity, extend measure of utility
- Requires access to large numbers of closed cases with known outcomes
- It’s still difficult to access child protection case files… BUT research is essential to inform practice & policy
- Risk factor analysis is a promising method for reviewing SCRs in future.

Conclusions

- Effective risk assessments would support UK child safeguarding decisions
- Risk assessments focus on families & their needs, not agency problems
- If supported by further UK validation, FRAAN could be added to current tools available to practitioners
- Risk analysis is useful for case reviews & yields rich information for practitioners and planners

Questions?

Further discussions:

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