

## Appendix A – example search strategy

PsycINFO: 24/06/14	
1. Violen*	65864
2. Aggress*	69455
3. "sex* aggress*"	1696
4. Assault	8277
5. Self-harm	3208
6. Suicid*	46451
7. "self-injurious behav*"	3213
8. "unauthorised leave"	1
9. Abscon*	166
10. AWOL	60
11. "absent without leave"	24
12. Victim*	46715
13. Self-neglect	288
14. "substance abuse"	27617
15. "fire setting"	196
16. Arson	599
17. Stalk*	1328
18. Recidiv*	7004
19. Reoffen*	871
20. Recover*	57871
21. "programme completion"	30
22. 1 OR 2 OR 3 OR 4 OR ... 21	279699
23. START AND Webster	20
24. "short term assessment of risk and treatability"	42
25. START:AV AND Nicholls	2
26. "short term assessment of risk and treatability adolescent version"	3
27. SAPROF	9
28. "structured assessment of protective factors for violence"	10
29. SAVRY	52
30. "structured assessment of violence risk in youth"	97
31. DUNDRUM-3	3
32. DUNDRUM-4	3
33. "dangerousness understanding recovery and urgency manual"	0
34. IORNS	3
35. "inventory of offender risk needs and strengths"	5
36. SDRRC	4
37. "san diego regional resiliency check-up"	2
38. MEGA AND Miccio-Fonseca	7
39. "multiplex empirically guided inventory of ecological aggregates for assessing sexually abusive children and adolescents"	6
40. CSSR AND Posner	0
41. "Columbia suicide severity rating scale"	126
42. RFL AND Linehan	7
43. "reasons for living inventory"	229
44. BRFL	3
45. RFL-A	9
46. BRFL-A	2

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47. RFL-YA	5
48. CSRFL OR RFL-CS	1
49. RFL-OA	1
50. 23 OR 24 OR 25 OR 26... OR 49	536
51. 22 AND 50	503

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## Appendix B – Characteristics of included studies

**Table B1:** Characteristics of studies included in meta-analysis

Study	N	Country	Population Characteristics	Setting	Length of Follow-up	Study Design
Abidin et al (2013)	100	Ireland	Mean age: 40.45; 94% male; 69% schizophrenia, 16% schizoaffective disorder, 7% bi-polar disorder, 5% recurrent depressive disorder with psychotic symptoms, 3% intellectual disability.	Secure psychiatric	6 months	Prospective longitudinal study
Braithwaite et al (2010)	34	Canada	Mean age: 37.91; 79% male; 88% schizophrenia, 12% mood disorder, 27% substance abuse, 21% personality disorder, 8% intellectual disability.	Civil psychiatric	30 days	Prospective longitudinal study
Chu et al (2011)	50	Australia	Mean age: 34.66; 76% male; 86% psychotic disorder, 20% co-morbid personality disorder; 82% Caucasian, 8% Asian, 6% Aboriginal or Torres Straits Islander descent, 4% Middle Eastern descent.	High secure psychiatric	1 month	Retrospective file-review study
Chu et al (2013)	66	Australia	Mean age: 34.42; 53% male; 84.8% psychotic disorder, 19.7% co-morbid personal disorder; 78.8% Caucasian, 7.6% Asian, 6.1% Aboriginal or Torres Straits Islander descent, 6.1% Middle Eastern descent, 1.5% Maori.	High secure psychiatric	6 months	Retrospective file-review study
Davoren et al (2012)	86	Ireland	Mean age: 40.6; 100% male; 74% schizophrenia, 10% bipolar, 8% schizoaffective, 3.5% major depression, 3.5% intellectual disability	Forensic secure psychiatric	1 year	Prospective longitudinal study
Davoren et al (2013)	56	Ireland	Mean age 43.7; 100% male; 73% schizophrenia, 7% schizoaffective, 9% bipolar, 7% recurrent depressive disorder with psychotic symptoms, 4% intellectual disability	Forensic secure psychiatric	Mean 1.75 years	Prospective longitudinal study
de Vries Robbé, et al (2015)	83	Netherlands	Mean age: 30; 100% male; 45% personality disorder, 2% schizophrenia, 14% sexual disorder	Forensic secure psychiatric	1 year	Retrospective file-review study
de Vries Robbé et al (2013)	188	Netherlands	Mean age: 32; 100% male; 66% personality disorder, 15% psychotic disorder	Forensic secure psychiatric	1 year	Retrospective file-review study
de Vries Robbé et al (2014)	185	Netherlands	Mean age: 41; 79% male; 89% personality disorder, 53% major mental illness (primarily psychotic)	Forensic secure psychiatric	1 year	Prospective longitudinal study
Desmarais et al (2010)	120	Canada	Mean age: 37.97; 100% male; 85% schizophrenia spectrum disorders, 52.5% co-morbid substance use disorder; 75.8% Caucasian, 10% First nations, 3.3% Asian, 2.5% Black, 6.7% Others.	Secure psychiatric	1 year	Retrospective file-review study
Gray et al (2011)	44	UK	Mean age: 40.2; 63% male; 66% schizophrenia spectrum disorder, 41% mood disorder, 14% personality disorder, 16% substance use disorders, 11% organic disorders, 11% other ICD mental disorder; 100% Caucasian.	Medium secure forensic and civil psychiatric	6 months	Prospective longitudinal study
Inett et al (2014)	28	UK	Mean age: 39; 100% male; 3.6% mood disorder, 17.9% autistic spectrum disorder, 78.6% intellectual disability, 21.4% borderline intellectual functioning, 7.1% organic disorder, 10.7% personality disorder	Secure psychiatric	1 month	Prospective longitudinal study
Morris (2013)	54	UK	Mean age: 31.8; 100% female; 41% personality disorder, 24% intellectual disability and personality disorder, 4% alcohol-related disorders, 4% autistic spectrum disorders, 2% post-traumatic stress disorder, 2% psycho-affective disorder, 2% depressive disorder, 2% pervasive developmental disorder, 2% attention deficit hyperactivity disorder 2% schizoaffective disorder.	Secure psychiatric	5 months	Retrospective file-review study
Nonstad et al (2010)	47	Norway	Mean age: 36; 83% male; 96% schizophrenia spectrum disorder, 4% intellectual disability, 38% co-morbid substance use disorder, 15% co-morbid personality disorder.	High secure psychiatric	90 days	Prospective longitudinal study
O'Shea & Dickens (2015b)	827	UK	Mean age: 38.5; 72.2% male; 26% organic disorder, 12.2% substance abuse disorder, 40.1% schizophrenia, 6.8% mood disorder, 4.4% neurotic disorder,	Secure psychiatric	3 months	Pseudo-prospective

O'Shea et al (2015)	200	UK	1.5% behavioral disorder, 32.3% personality disorder, 17.7% intellectual disability, 18.3% developmental disorder, 6% disorder with childhood onset Mean age: 34.3; 74.5% male; 22.5% organic disorder, 10% substance abuse disorder, 38% schizophrenia, 5.5% mood disorder, 6.5% neurotic disorder, 0.5% behavioral disorder, 23.5% personality disorder, 17.5% intellectual disability, 24.5% developmental disorder, 9.5% disorder with childhood onset.	Secure psychiatric	3 months	Pseudo-prospective
Wilson et al (2013)	30	Canada	Mean age: 37.1; 100% male; 87% psychotic disorder, 53% co-morbid substance use disorder; 73% European descent.	Secure psychiatric	12 months	Retrospective file-review study

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## Appendix C – Quality of included studies

**Table C1:** Quality assessment of included studies

Author, Year	1. Adequate description of population	2. Non-biased selection	3. Low loss to follow-up/missing data	4a. Standardized method of risk factor assessment and scoring clearly described of referenced	4b. Unbiased risk factor assessment by independent assessors?	5a. Adequate outcome measurement?	5b. Unbiased outcome measurement by independent assessors?	6. Adequate accounting for potential confounders	Overall Assessment of potential for bias (Low/Unclear/High )
Abidin et al (2013)	Yes	Yes – all eligible	Yes – 98/100 had risk assessment and outcome data	Yes for all tools	Yes – blind to outcome data at point of coding	No for both aggression and self-harm	Unclear – recorded by clinical team but collated by same researcher that completed risk assessments	Yes – prospective assessment of single cohort	Unclear
Braithwaite et al (2010)	Yes	Yes – all eligible	Yes – 100% maintained	Yes	Yes – routine clinical practice	Yes for all outcomes	Yes – blind to risk assessment	Yes – prospective assessment of single cohort	Low
Chu et al (2011)	Yes	Yes – all eligible	Yes – 100% maintained	Yes	Yes – blind to outcome data at point of coding	Unclear	No – same researcher that coded risk assessment	Yes – pseudo-prospective assessment of single cohort	Unclear
Chu et al (2013)	Yes	Yes- consecutive admissions	Yes – 100% maintained	Yes	Yes – blind to outcome data at point of coding	Unclear	Unclear – no description of assessor independence or blinding	Yes – pseudo-prospective assessment of single cohort	Unclear
Davoren et al (2012)	Yes	Yes – all eligible	Yes – 86/92 had assessment and outcome data	Yes for both tools	Yes – blind to outcome data at point of coding	Yes	Yes	Yes –prospective assessment of single cohort	Low
Davoren et al (2013)	Yes	Yes – all eligible	Yes – 100% maintained	Yes all tools	Yes – blind to outcome data at point of coding	Yes	Yes	Yes –prospective assessment of single cohort	Low
de Vries Robbé et al (2015)	Yes	Unclear – no description of consecutive or random sampling	Yes – 100% maintained	Yes	Unclear – no description of assessor independence or blinding	Yes	Yes	Yes – pseudo-prospective assessment of single cohort	Unclear
de Vries Robbé et al (2013)	Yes	Unclear – no description of consecutive or random sampling	Yes – 100% maintained	Yes	Yes – blind to outcome data at point of coding	Yes	Yes	Yes – pseudo-prospective assessment of single cohort	Unclear
de Vries Robbé et al (2014)	Yes	Unclear – no description of consecutive or	Yes – 100% maintained	Yes	Yes – routine practice	Yes – clearly defined, objective	Yes	Yes –prospective assessment of single cohort	Unclear

		random sampling	Yes – random sampling	Yes – 100% maintained	Yes	Yes – blind to outcome data	Yes	Yes – blind to risk assessment	Yes – pseudo-prospective assessment of single cohort	Low
Desmarais et al (2010)	Yes	random sampling	Yes – random sampling	Yes – 100% maintained	Yes	Yes – blind to outcome data	Yes	Yes – blind to risk assessment	Yes – pseudo-prospective assessment of single cohort	Low
Gray et al (2011)	Yes	Unclear – no description of consecutive or random sampling	Yes – 44/51 had risk assessment and outcome data	Yes	Yes – blind to outcome data at point of coding	Yes for aggression and self-harm. Unclear for self-neglect and victimization	Unclear – no description of assessor independence or blinding	Yes – prospective assessment of single cohort	Unclear	Unclear
Inett et al (2014)	Yes	Yes – all eligible	Yes – 100% maintained	Yes	Yes – routine practice	Yes for aggression/self-harm – No for remaining outcomes	Unclear – recorded by clinical team who may have had knowledge of assessment	Yes – prospective assessment of single cohort	Unclear	Unclear
Morris (2013)	Yes	Yes – all eligible	Yes – 54/56 had risk assessment and outcome data	Yes	Yes – routine clinical practice	Yes for aggression and self-harm.	Unclear – outcomes recorded by clinical team. Not blind to risk assessment	Yes – pseudo-prospective assessment	Unclear	Unclear
Nonstad et al (2010)	Yes	Unclear – no description of consecutive or random sampling	Yes – 100% maintained	Yes	Yes – routine clinical practice	No	Unclear – outcomes recorded by clinical team. Not blind to risk assessment	Yes – prospective assessment of single cohort	High	High
O'Shea & Dickens (2015b)	Yes	Yes – consecutive	Yes – 827/900 had risk assessment and outcome data	Yes	Yes – routine clinical practice	Yes for UL no for SA	Yes – blind to risk assessment at point of coding	Yes – prospective assessment of single cohort	Unclear	Unclear
O'Shea et al (2015)	Yes	Yes – consecutive admissions	Yes – 200/214 had risk assessment and outcome data	Yes	Yes – routine clinical practice	Yes for aggression and self-harm. Unclear for remaining outcomes	Yes – blind to risk assessment at point of coding	Yes – prospective assessment of single cohort	Low	Low
Wilson et al (2013)	Yes	Yes – random sampling	Yes – 100% maintained	Yes	Yes – independent raters blind to outcome data	Yes	Yes – blind to risk assessment	Yes – matched participants	Low	Low

