

Online Supplementary Materials

A Meta-analysis of Recidivism Rates Among Individuals Who Commit Child Sexual Exploitation Material (CSEM) Offending

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The full thesis is available through ProQuest. Supplemental materials including data and syntax files are available on [OSF](#).

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Table s1*Description Information for Studies Reporting Official Recidivism Rates (k = 26)*

Variables		%	k
Country	Canada	26.9	7
	US	19.2	5
	UK	11.5	3
	Australia	11.5	3
	Switzerland	7.7	2
	New Zealand	7.7	2
	Germany	3.8	1
	Netherlands	3.8	1
	Finland	3.8	1
	Spain	3.8	1
Published	Yes	73.1	19
	No	26.9	7
Peer-reviewed	Yes	84.6	22
	No	15.4	4
Additional information provided by the author(s)	Yes	46.2	12
	No	53.8	14
Group comparisons	Only Any CSEM	23.1	6
	All three ^a	57.7	15
	Any CSEM and CSEM-E	15.4	4
	Any CSEM and Mixed	3.8	1
Any CSEM grouping criteria	Any history of CSEM offenses (index or prior)	42.3	11
	Index is a CSEM offense	50.0	13
	Criminal history comprised exclusively of CSEM offenses (index and prior)	7.7	2
CSEM-E grouping criteria ^b	Any history of CSEM offenses (index or prior)	10.5	2
	Index is a CSEM offense	15.8	3
	Criminal history comprised exclusively of CSEM offenses (index and prior)	73.7	14
Mixed grouping criteria	Any history of CSEM and sexual offending against children	46.7	7
	Any history of CSEM and sexual offending (unsure if it is against adults or children)	13.3	2
	Index cluster is a CSEM and contact sexual offending	20.0	3
	Other	20.0	3
Number of recidivism sources	1	73.1	19
	2	19.2	5
	3	7.70	2

Variables		%	<i>k</i>
Type of recidivism sources	Official national source of recidivism (i.e., whole country)	65.4	17
	Official local (provincial/ state) source of recidivism	46.2	12
	Recidivism information from Newspapers reports	0.0	0
	Recidivism information from self-reports	0.0	0
	Recidivism information from police investigation or case files	23.1	6
Type of recidivism criteria ^b	Breaches or risky behaviors reported by parole	6.9	2
	Arrests	24.1	7
	Charges	13.8	4
	Convictions	55.2	16
Pseudo-recidivism was assessed	Yes	38.5	10
	No	0.0	0
	Unknown	61.5	16
Type of follow-up period	Fixed	38.5	10
	Variable	34.6	9
	Both	26.9	7

Note. See Table s2 for self-report samples ($k = 4$). All values reported as unadjusted raw data, without any weighting applied for descriptive purposes. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), Mixed = individuals with both CSEM and contact sexual offenses, k = number of samples; NR = not reported.

^a In samples where only CSEM-E and Mixed were reported, Any CSEM is computed by combining both groups.

^b Some samples reported more than one grouping/ recidivism criteria.

Table s2*Self-report Study Description Information (k = 4)*

Variables		%	<i>k</i>
Published	Yes	100.0	4
	No	0.0	0
Peer-reviewed	Yes	100.0	4
	No	0.0	0
Additional information provided by the author(s)	Yes	1.0	25.0
	No	3.0	75.0
Group comparisons	Only Any CSEM	50.0	2
	All three ^a	50.0	2
	Any CSEM and CSEM-E	0.0	0
	Any CSEM and Mixed	0.0	0
Any CSEM grouping criteria	Self-reported CSEM-offending individuals	3.0	75.0
	Any history of CSEM offenses (index or prior)	1.0	25.0
	Index is a CSEM offense	0.0	0.0
	Criminal history comprised exclusively of CSEM offenses (index and prior)	0.0	0.0
CSEM-E grouping criteria	Self-reported CSEM-Exclusive individuals	3.0	100.0
	Any history of CSEM offenses (index or prior)	0.0	0
	Index is a CSEM offense	0.0	0
	Criminal history comprised exclusively of CSEM offenses (index and prior)	0.0	0
Mixed grouping criteria	Self-report CSEM and contact offending	100.0	3
	Any history of CSEM and sexual offending against children	0.0	0
	Any history of CSEM and sexual offending (unsure if it is against adults or children)	0.0	0
	Index cluster is a CSEM and contact sexual offending	0.0	0
	Other	0.0	0
Number of recidivism sources	1	75.0	3
	2	25.0	1
Type of recidivism sources	Recidivism information from self-reports	100.0	4
	Official national source of recidivism (i.e., whole country)	25.0	1
	Official local (provincial/ state) source of recidivism	0.0	0
	Recidivism information from Newspapers reports	0.0	0
	Recidivism information from police investigation or case files	0.0	0

Type of recidivism criteria ^b	Self-report	100.0	4
	Arrests	25.0	1
	Breaches or risky behaviors reported by parole	0.0	0
	Charges	0.0	0
	Convictions	0.0	0
Type of follow-up period	Fixed	25.0	1
	Variable	50.0	2
	Both	25.0	1

Note. All values reported as unadjusted raw data, without any weighting applied for descriptive purposes. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), Mixed = individuals with both CSEM and contact sexual offenses, k = number of samples.

^a In samples where only CSEM-E and Mixed were reported, Any CSEM is computed by combining both groups.

^b Some samples reported more than one recidivism criteria.

25.2	Soldino et al. (2021)	CSEM-E	255	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N
26	Steel et al. (2021)	Any CSEM	77	N	Y	Y	N	N	N	N	N	N	N	N	N	N
27.1	U.S. Sentencing Commission (2012)	Any CSEM	610	Y	Y	Y	Y	N	N	N	Y	Y	Y	N	Y	N
27.2	U.S. Sentencing Commission (2021)	Any CSEM	1,093	Y	Y	N	Y	N	N	N	Y	Y	Y	N	Y	N
28	Wijk & Esseveldt (2021)	Any CSEM	194	Y	Y	N	Y	N	Y	N	N	N	Y	N	N	N
29	Wild et al. (2020)	Any	6	N	Y	Y	Y	N	N	N	N	N	N	N	N	N
		CSEM	4	N	Y	Y	Y	N	N	N	N	N	N	N	N	N
		CSEM-E	2	N	Y	Y	Y	N	N	N	N	N	N	N	N	N
30	Wollert et al. (2009)	Any	72	N	Y	Y	Y	N	N	N	N	N	Y	N	N	N
		Mixed CSEM														

Note. CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = individuals with CSEM offenses but without any contact sexual offenses, Mixed = individuals with both CSEM and contact sexual offenses. Recid = recidivism. Any violent recidivism includes sexual offences, whereas violent recidivism does not. Empty cells show we either did not include the effect size from that study (based on the decision tree to avoid violating the assumption of independence) or the study did not report rates for that outcome.

^aMajor offenses including any type of offense excluding breaches/failures/conditions/traffic offenses with the exception of DUI/negligence.

Table s4

Descriptive Information for CSEM Offending Individuals of the Official Recidivism Samples (k = 26), a Subset of Which Included CSEM-Exclusive and Mixed Subgroups

Variables		Any CSEM (k = 26)		Any CSEM (k = 26)			
		% or M (SD)	k	CSEM-Exclusive (k = 17)		Mixed (k = 15)	
				% or M (SD)	k	% or M (SD)	k
Age	-	42.8 (8.1)	17	43.9 (10.8)	9	47.5 (9.7)	8
	NR	34.6	9	47.0	8	46.7	7
Gender/ Sex ^a	Exclusively males	84.6	22	84.2	16	81.2	13
	Mainly males (>80%)	3.8	1				
	NR	11.5	3	5.9	1	18.8	3
Race ^a	Black	3.2 (2.3)	5	1.7 (1.4)	5	11.5 (12.0)	2
	White	85.8 (8.1)	11	90.1 (6.3)	6	86.3 (7.7)	5
	Hispanic	3.5 (2.3)	3	2.8 (2.5)	4	5.3	1
	Indigenous	9.3 (11.2)	7	5.6 (7.0)	5	5.4 (4.2)	3
	Other	3.7 (3.3)	8	2.4 (1.0)	5	5.7 (6.6)	3
	NR	57.7	15	64.7	11	66.7	10
Prior offense history ^a	Prior sex offenses	11.1 (7.4)	15	2.1 (2.9)	6	28.7 (31.5)	6
	Prior violent offenses	7.4 (5.5)	11	3.6 (5.3)	6	28.4 (20.8)	7
	Any prior offenses	23.6 (12.1)	16	15.7 (15.5)	8	44.1 (25.8)	8
	NR	38.5	10	52.9	9	46.7	7
Any sex offending treatment	Some (50-75%)	3.8	1	5.3	1		
	Most (75% or more)						
	NR	96.2	25	94.1	16	100.0	15

Note. All values reported as unadjusted raw data, without any weighting applied for descriptive purposes. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), Mixed = individuals with both CSEM and contact

sexual offenses, k = number of samples; NR = not reported. Self-report samples ($k = 4$) were excluded from the table. ^aStudies inconsistently reported sex and gender. ^bpercentage mean.

Table s5*Descriptive Information of the Self-report Recidivism Samples (k = 4)*

Variables		Any CSEM		CSEM-Exclusive		Mixed	
		% or <i>M (SD)</i>	<i>k</i>	% or <i>M (SD)</i>	<i>k</i>	% or <i>M (SD)</i>	<i>k</i>
Age	-	39.6 (4.0)	4	37.6 (4.8)	2	40.1 (1.3)	2
Gender/Sex ^a	Exclusively males	2	50.0	50.0	2	75.0	3
	Mainly males (>80%)	2	50.0	25.0	1	0.0	0
	NR	0.0	0	25.0	1	25.0	1
Race ^b	Black	1.0	1	NR		NR	
	White	69	1	NR		NR	
	Hispanic	9	1	NR		NR	
	Indigenous	2	1	NR		NR	
	Other	1	1	NR		NR	
Prior offense history ^b	Prior sex offenses	47.3 (31.4)	2	16.0	1	19.0	1
	Prior violent offenses	NR		NR		NR	
	Any prior offenses	78.7	1	NR		NR	
Any sex offending treatment	Some (50-75%)	0.0	0	0.0	0	0.0	0
	Most (75% or more)	25.0	1	25.0	1	25.0	1
	NR	75.0	3	75.0	3	75.0	3

Note. All values reported as unadjusted raw data, without any weighting applied for descriptive purposes. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), Mixed = individuals with both CSEM and contact sexual offenses, *k* = number of samples; NR = not reported.

^bStudies inconsistently reported sex and gender. ^apercentage mean.

Table s6

Meta-analysis of Recidivism Rates of Subgroups and their Moderation Effect on Other Recidivism Outcomes Based on Official Recidivism Sources

Recidivism Outcome		Fixed-effect	Random-effects	Q	I^2	n	(k)	Studies
		% [95 % CI]	% [95 % CI]					
Any violent (including contact sex)	Any CSEM	8.89 [8.10, 9.71]	4.12 [1.03, 9.14]	143.32	95.81	4,795	(7)	1a, 1b, 9, 17, 22, 25.1a, 25.1b
	CSEM-E	8.84 [8.04, 9.67]	2.43 [0.23, 6.85]	142.02	97.18	4,702	(5)	1a, 9, 17, 22, 25.1a
	Mixed $Q_{\Delta} = 0.85,$ $p = .357$	11.77 [6.05, 19.06]	11.77 [6.05, 19.06]	0.45	0	93	(2)	1b, 25.1b
Any violent (including contact sex; outlier re-moved, 9)	Any CSEM	2.08 [1.27, 3.07]	3.01 [0.52, 7.45]	21.87	77.13	968	(6)	1a, 1b, 22, 25.1a, 25.1b
	CSEM-E	1.50 [0.80, 2.41]	1.50 [0.80, 2.41]	4.02	25.32	875	(4)	1a, 17, 22, 25.1a
	Mixed $Q_{\Delta} = 17.40,$ $p < .0001$	11.77 [6.05, 19.06]	11.77 [6.05, 19.06]	0.45	0	93	(2)	1a, 25.1b
Nonsexual Violent	Any CSEM	1.12 [0.94, 1.32]	1.41 [0.50, 2.79]	84.70	89.37	11,471	(10)	4.1a, 9, 10.1, 13.1a, 13.1b 14, 15.1a, 15.1b, 17
	CSEM-E	1.08 [0.89, 1.29]	1.08 [0.44, 2.00]	50.05	90.01	10,377	(6)	4.1a, 9, 10.1, 13.1a, 15.1, 17

	Mixed $Q_{\Delta} = 1.31,$ $p = .252$	1.49 [0.86, 2.30]	2.33 [0.12, 7.17]	33.34	91.00	1,094 (4)	4.1b, 13.1b, 14, 15.1b
Breach/ recall	Any CSEM	11.45 [10.38, 12.56]	9.43 [2.25, 20.82]	191.13	96.86	3,268 (7)	4.1a, 4.1b, 10.1, 14, 17, 25.1a, 25.1b
	CSEM-E	9.17 [8.07, 10.33]	6.69 [1.09, 16.54]	92.75	96.77	2,524 (4)	4.1a, 10.1, 17, 25.1a
	Mixed $Q_{\Delta} = 62.55,$ $p < .0001$	20.72 [17.89, 23.71]	13.34 [0.03, 44.38]	35.83	94.42	744 (3)	4.1b, 14, 25.1b
Any recidivism	Any CSEM	11.72 [11.16, 12.29]	21.19 [15.25, 27.82]	510.35	95.49	12,554 (24)	1a, 1b, 4.1a, 4.1b, 6.1a, 6.1b 7.1a, 7.1b, 9, 13.1a, 13.1b, 14, 15.1a, 15.1b, 16a, 16b, 17, 21a, 21b, 22, 23a, 23b, 25.1a, 25.1b
	CSEM-E	10.66 [10.10, 11.24]	14.18 [10.75, 18.01]	113.86	89.46	11,203 (13)	1a, 4.1a, 6.1a, 7.1a, 9, 13.1a, 15.1a, 16a, 17, 21a, 22, 23a, 25.1a
	Mixed $Q_{\Delta} =$ 117.17, $p < .0001$	22.03 [19.85, 24.28]	30.46 [18.66, 43.73]	279.32	96.42	1,351 (11)	1b, 4.1b, 6.1b, 7.1b, 13.1b, 14, 15.1b, 16b, 21b, 23b, 25.1b
Any crime (i.e.,	Any CSEM	9.16 [8.52, 9.83]	7.93 [5.20, 11.17]	106.90	96.26	7,415 (5)	4.1a, 4.1b, 9, 15.1a, 15.1b

major offenses)	CSEM-E	9.39 [8.70, 10.09]	8.42 [4.26, 13.81]	102.11	98.04	6,779 (3)	4.1a, 9, 15.1a
	Mixed	6.91 [5.07, 9.01]	6.91 [5.07, 9.01]	0.001	0	636 (2)	4.1b, 15.1b
		$Q_{\Delta} = 4.79,$					
		$p = .029$					

Note. Analyses restricted to samples that reported recidivism rates for CSEM-Exclusive (denoted by study numbers that include a) and/or Mixed (denoted by b). Therefore, this does not encompass all samples that reported Any CSEM, but rather a subset of them. Self-report samples ($k = 4$) were excluded from these analyses. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), Mixed = individuals with both CSEM and contact sexual offenses, k = number of samples, Q_{Δ} = Q -change.

Bolded values are significant at $p < .05$; p -values are based on the chi-square distribution with degrees of freedom equal to $k - 1$.

Material s1

Inter-rater Reliability Results

IR analyses were completed for all non-practice studies (total $k = 22$). Below are the kappa and percentage agreement for categorical variables and ICC for continuous variables.

Sample Descriptors

* STUDY – Identification # _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 22

* PUBLISHD – material is published _____ $\kappa = 0.58$, % agreement = 86.4%, number of studies = 22

0 = no
1 = yes

* PEERREVIEW – material is peer reviewed _____ $\kappa = 0.69$, % agreement = 90.9%, number of studies = 22

0 = no
1 = yes

* YEAR – date which study was published/released/completed _____ $\kappa = 0.95$, % agreement = 95.5%, number of studies = 22

* COUNTRY – country where study originated _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 22

0 = Canada	7 = Norway
1 = U.S.	8 = Australia
2 = United Kingdom	9 = Scotland
3 = France	10 = Switzerland
4 = Netherlands (Holland)	11 = New Zealand
5 = Germany	12 = Not listed
6 = Denmark	

- * Whether additional information was provided by the authors for us to compute p (e.g., subgroup analyses) or code moderators _____ $\kappa = 0.83$, % agreement = 95.5%, number of studies = 22

0 = no
1 = yes

- * CJSINVLMT – whether the sample was a criminal justice sample (versus non-offending) _____ $\kappa = 0.46$, % agreement = 90.9%, number of studies = 22

1 = yes
2 = no

- * COMP – number of group comparisons _____ $\kappa = 0.78$, % agreement = 86.4%, number of studies = 22

1 = only Any CSEM
2 = only CSEM-Exclusive
3 = only Mixed
4 = all three (Any CSEM, CSEM-Exclusive, and Mixed)
5 = Any CSEM and CSEM-Exclusive
6 = Any CSEM and Mixed
7 = CSEM-Exclusive and Mixed

- * ANYSIZE – largest sample size with recidivism for Any CSEM group _____ $\kappa = 0.90$, % agreement = 90.9%, number of studies = 22

- * CSEMESIZE – largest sample size with recidivism for CSEM-Exclusive group _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 17

- * MIXEDSIZE – largest sample size with recidivism for Mixed group _____ $\kappa = 1.00$, % agreement = 100.0%, number of studies = 15

- * CSEMEPR – percentage for CSEM-exclusive group in the Any CSEM group _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 15

(____%)

ICC = 1.00, number of studies = 15

0 = 0-20%
1 = 20-40%

2 = 40-60%
 3 = 60-100%
 4 = unknown

- * MIXEDPR – percentage for mixed group in the Any CSEM group _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 14
 (____%)
 ICC = 1.00, number of studies = 14

0 = 0-20%
 1 = 20-40%
 2 = 40-60%
 3 = 60-100%
 4 = unknown

- * ANYCRIT – criteria for Any CSEM group _____ $\kappa = 0.64$, % agreement = 77.3%, number of studies = 22

0 = any history of CSEM offenses (index or prior)
 1 = index is a CSEM offense
 2 = criminal history comprised of exclusively of CSEM offenses (index and prior)
 3 = self-reported CSEM individuals
 4 = other, describe: _____

- * CSEMECRIT – criteria for CSEM-Exclusive group _____ $\kappa = 0.89$, % agreement = 92.8%, number of studies = 14

0 = any history of a CSEM offenses (index or prior)
 1 = index is an CSEM-based offense
 2 = criminal history comprised of exclusively of CSEM offenses (index and prior)
 3 = criminal history of CSEM offenses or non-contact sexual offenses
 4 = self-reported CSEM individuals
 5 = other, describe: _____

- * MIXEDCRIT – criteria for Mixed group _____ $\kappa = 0.78$, % agreement = 84.6%, number of studies = 13

0 = any history of CSEM and sex offending against children
 1 = any history of CSEM and sex offending (unsure if it is against adult/ children)
 2 = index cluster is a CSEM and contact sex offending
 3 = Self-report contact offending but CSEM is based on official
 4 = Self-report CSEM and contact offending

5 = other, describe: _____

- * ANYSAMPLE – sample type for Any CSEM sample _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 22

1 = routine

2 = treatment

3 = high risk/high need

4 = other, describe: _____

- * CSEMESAMPLE – sample type for CSEM-Exclusive sample _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 15

1 = routine

2 = treatment

3 = high risk/high need

4 = other, describe: _____

- * MIXEDSAMPLE – sample type for Mixed sample _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 14

1 = routine

2 = treatment

3 = high risk/high need

4 = other, describe: _____

- * ANYAGE – age for Any CSEM sample _____ $\kappa = 0.85$, % agreement = 94.1%, number of studies = 17

1 = exclusively adults (≥ 18)

2 = exclusively juveniles (< 18)

3 = mainly adults (over 80% but under 98%)

4 = mainly juveniles (over 80% but under 98%)

5 = mixed group (40-60%)

Mean age for Any CSEM sample

[ANYage] _____

ICC = .996, number of studies = 14

anySD _____

ICC = .943, number of studies = 11

anyN _____

ICC = 1.00, number of studies = 17

- * CSEMEAGE – age for CSEM-Exclusive sample _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 11

1 = exclusively adults (≥ 18)
 2 = exclusively juveniles (< 18)
 3 = mainly adults (over 80% but under 98%)
 4 = mainly juveniles (over 80% but under 98%)
 5 = mixed group (40-60%)

Mean age for CSEM-Exclusive sample

[CSEMEXage] _____
 ICC = 1.00, number of studies = 6
 CSEMEXSD _____
 ICC = 1.00, number of studies = 4
 CSEMEXN _____
 ICC = 1.00, number of studies = 8

- * MIXEDAGE – age for Mixed sample _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 10

1 = exclusively adults (≥ 18)
 2 = exclusively juveniles (< 18)
 3 = mainly adults (over 80% but under 98%)
 4 = mainly juveniles (over 80% but under 98%)
 5 = mixed group (40-60%)

Mean age for Mixed sample

[MIXEDage] _____
 ICC = 1.00, number of studies = 6
 mixedSD _____
 ICC = 1.00, number of studies = 5
 mixedN _____
 ICC = 1.00, number of studies = 7

- * OTHERSEX – indicate whether the study reported sex other than male/ female _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 22

1 = yes, describe: _____
 2 = no

- * OTHERGENDER – indicate whether the study reported gender other than men/ women _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 22

1 = yes, describe: _____
 2 = no

- * ANYSEX – sex for Any CSEM sample _____ $\kappa = 0.76$, % agreement = 93.8%, number of studies = 16

1 = exclusively males
 2 = exclusively females
 3 = mainly males (over 80%)
 4 = mainly females (over 80%)
 5 = mixed group (40-60%)

Percent of males for Any CSEM sample [ANYmale] _____
 ICC = 1.00, number of studies = 17

- * CSEMESEX – sex for CSEM-Exclusive sample _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 13

1 = exclusively males
 2 = exclusively females
 3 = mainly males (over 80%)
 4 = mainly females (over 80%)
 5 = mixed group (40-60%)

Percent of males for CSEM-exclusive sample [CSEMEXmale] _____
 ICC = 1.00, number of studies = 13

- * MIXEDSEX – sex for Mixed sample _____ $\kappa = NA$, % agreement = 100%, number of studies = 12

1 = exclusively males
 2 = exclusively females
 3 = mainly males (over 80%)
 4 = mainly females (over 80%)
 5 = mixed group (40-60%)

Percent of males for Mixed sample [MIXEDmale] _____
 ICC = 1.00, number of studies = 12

- * ANYRACE – race for Any CSEM sample

Percent Black	[anyblack] _____	ICC = 1.00, number of studies = 4
Percent White	[anywhite] _____	ICC = 1.00, number of studies = 8
Percent Hispanic	[anyhispanic] _____	ICC = 1.00, number of studies = 3
Percent indigenous	[anyindg] _____	ICC = 1.00, number of studies = 5
Percent other, describe: _____	[anyother] _____	ICC = 1.00, number of studies = 7
* ANYRACE_DI – White versus non-white ratio for Any CSEM sample _____		
	[% white] _____	ICC = 1.00, number of studies = 8
	[% non-white] _____	ICC = 1.00, number of studies = 8
* CSEMERACE – race for the CSEM-Exclusive sample _____		
Percent Black	[CSEMEblack] _____	ICC = 1.00, number of studies = 4
Percent White	[CSEMEwhite] _____	ICC = 1.00, number of studies = 5
Percent Hispanic	[CSEMEhispanic] _____	ICC = 1.00, number of studies = 3
Percent indigenous	[CSEMindg] _____	ICC = 1.00, number of studies = 4
Percent other, describe	[CSEMEother] _____	ICC = 1.00, number of studies = 4
* CSEMERACE_DI – White versus non-white ratio for CSEM-Exclusive sample _____		
	[% white] _____	ICC = 1.00, number of studies = 5
	[% non-white] _____	ICC = 1.00, number of studies = 5
* MIXEDRACE – race for Mixed sample		
Percent Black	[mixedblack] _____	ICC = NA, number of studies = 1
Percent White	[mixedwhite] _____	

- Percent Hispanic ICC = 1.00, number of studies = 4
[mixedhispc] _____
- Percent indigenous ICC = NA, number of studies = 0
[mixedindg] _____
- Percent other, describe ICC = 1.00, number of studies = 2
[mixedother] _____
- ICC = 1.00, number of studies = 2
- * MIXEDRACE_DI – White versus non-white ratio for Mixed sample _____
- [% white] _____
- ICC = 1.00, number of studies = 4
- [% non-white] _____
- ICC = 1.00, number of studies = 4
- * RECIDDEFNO – the number of sources the study used for recidivism definition _____
- $\kappa = 0.63$, % agreement = 90.9%, number of studies = 22
- RECnat: Official national source of recidivism (i.e., whole country) YES NO
- $\kappa = 0.73$, % agreement = 86.4%, number of studies = 22
- REClloc: Official local (provincial/state) source of recidivism YES NO
- $\kappa = 0.81$, % agreement = 90.9%, number of studies = 22
- RECnews: Recidivism information from Newspapers reports YES NO
- $\kappa = NA$, % agreement = 100%, number of studies = 22
- RECself: Recidivism information from self-report reports YES NO
- $\kappa = 1.00$, % agreement = 100%, number of studies = 22
- RECpo: Recidivism information from police investigation or case files YES NO
- $\kappa = 1.00$, % agreement = 100%, number of studies = 22
- RECothers: Other, describe: _____ YES NO
- $\kappa = NA$, % agreement = 100%, number of studies = 22
- * PSEUDOREC – whether researchers addressed pseudo-recidivism _____ $\kappa = 1.00$, % agreement = 100.0%, number of studies = 22
- 1 = yes
- 2 = no
- 3 = unknown
- * ANYPRIOANYCSEM – any prior offenses for Any CSEM group
- Any CSEM group [ANYpriorperc] _____%
- ICC = 1.00, number of studies = 2
- [ANYpriormean] _____

$$\text{ICC} = \text{NA}, \text{ number of studies} = 1$$

$$(SD = \text{_____}, n = \text{_____})$$

$$\text{ICC} = \text{NA}, \text{ \# of studies} = 1, \quad \text{ICC} = 1.00, \text{ \# of studies} = 11$$

- * CRITANYPRIO – criteria for the any prior offenses for Any CSEM group _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 11

1 = arrest
2 = charges
3 = convictions
4 = self-reports
5 = police files

- * ANYPRIOCSEMEX – any prior offenses for CSEM-Exclusive group

CSEM-Exclusive group

$$[\text{EXCpriorperc}] \text{ _____\%}$$

$$\text{ICC} = 1.00, \text{ number of studies} = 5$$

$$[\text{EXCpriormean}] \text{ ______}$$

$$\text{ICC} = \text{NA}, \text{ number of studies} = 0$$

$$(SD = \text{_____}, n = \text{_____})$$

$$\text{ICC} = \text{NA}, \text{ \# of studies} = 0, \quad \text{ICC} = 1.00, \text{ \# of studies} = 4$$

- * CRITANYCSEMEPRIO – criteria for the any prior offenses for CSEM-Exclusive group _____ $\kappa = 1.00$, % agreement = 100%, number of studies = 4

1 = arrest
2 = charges
3 = convictions
4 = self-reports
5 = police files

- * ANYPRIOMIX – any prior offenses for Mixed group

Mixed group

$$[\text{MIXpriorperc}] \text{ _____\%}$$

$$\text{ICC} = 1.00, \text{ number of studies} = 3$$

$$[\text{MIXpriormean}] \text{ ______}$$

$$\text{ICC} = \text{NA}, \text{ number of studies} = 1$$

$$(SD = \text{_____}, n = \text{_____})$$

$$\text{ICC} = \text{NA}, \text{ \# of studies} = 1, \quad \text{ICC} = 1.00, \text{ \# of studies} = 4$$

- * CRITMIXANYPRIO – criteria for the any prior offenses for Mixed group _____ $\kappa =$
1.00, % agreement = 100%, number of studies = 4

1 = arrest
2 = charges
3 = convictions
4 = self-reports
5 = police files

- * ANYPRIOSEX – prior sex offenses for Any CSEM group

Any CSEM group [ANYpriorsexperc] _____ %
ICC = 1.00, number of studies = 14
[ANYpriorsexmean] _____
ICC = 1.00, number of studies = 4
(SD = _____, $n =$ _____)
ICC = 1.00, # of studies = 2, ICC = 1.00, # of studies = 15

- * CRITSEXPRIOANY – criteria for the prior sex offenses for Any CSEM group _____ $\kappa =$
1.00, % agreement = 100%, number of studies = 12

1 = arrest
2 = charges
3 = convictions
4 = self-reports
5 = police files

- * CSEMEPRIOSEX – any prior sex offenses for CSEM-Exclusive group

CSEM-Exclusive group [EXCpriorsexperc] _____ %
ICC = 1.00, number of studies = 3
[EXCpriorsexmean] _____
ICC = NA, number of studies = 1
(SD = _____, $n =$ _____)
ICC = NA, # of studies = 0, ICC = 1.00, # of studies = 13

- * CRITCSEMESEXPRIO – criteria for the prior sex offenses for CSEM-Exclusive group _____ $\kappa =$ 1.00, % agreement = 100%, number of studies = 4

1 = arrest
2 = charges
3 = convictions

4 = self-reports
5 = police files

- * PRIOSEXMIX – prior sex offenses for Mixed group

Mixed group

[MIXpriorsexperc] ____ %
ICC = 1.00, number of studies = 4
[MIXpriorsexmean] ____
ICC = NA, number of studies = 1
(SD = _____, n = _____)
ICC = NA, # of studies = 1, ICC = 1.00, # of studies = 5

- * CRITCMIXSEXPRIO – criteria for the prior sex offenses for Mixed group ____ $\kappa = 1$,
% agreement = 100%, number of studies = 5

1 = arrest
2 = charges
3 = convictions
4 = self-reports
5 = police files

- * ANYPRIORVIO – prior violent offenses for Any CSEM group

Any CSEM group

[ANYpriorvioperc] ____ %
ICC = 1.00, number of studies = 6
[ANYpriorviomean] ____
ICC = NA, number of studies = 1
(SD = _____, n = _____)
ICC = NA, # of studies = 0, ICC = 1.00, # of studies = 6

- * CRITANYVIOPRIO – criteria for the prior violent offenses for Any CSEM group ____
 $\kappa = 1.00$, % agreement = 100%, number of studies = 6

1 = arrest
2 = charges
3 = convictions
4 = self-reports
5 = police files

- * CSEMEPRIORVIO – prior violent offenses for CSEM-Exclusive group

CSEM-Exclusive group [EXCpriorvioperc] ____%

ICC = 1.00, number of studies = 4

[EXCpriorviomean] ____

ICC = NA, number of studies = 0

(SD = _____, n = _____)

ICC = NA, # of studies = 0, ICC = 1.00, # of studies = 4

- * CRITCSEMEVIOPRIO – criteria for the prior violent offenses for CSEM-Exclusive group ____ $\kappa = 1.00$, % agreement = 100%, number of studies = 4

1 = arrest
2 = charges
3 = convictions
4 = self-reports
5 = police files

- * MIXPRIORVIO – prior violent offenses for Mixed group

Mixed group [MIXpriorvioperc] ____%

ICC = 1.00, number of studies = 3

[MIXpriorviomean] ____

ICC = NA, number of studies = 0

(SD = _____, n = _____)

ICC = NA, # of studies = 0, ICC = 1.00, # of studies = 3

- * CRITMIXVIOPRIO – criteria for the prior violent offenses for Mixed group ____ $\kappa = 1.00$, % agreement = 100%, number of studies = 3

1 = arrest
2 = charges
3 = convictions
4 = self-reports
5 = police files

- * ANYTX_CSEM – treatment completion for Any CSEM group ____ $\kappa = 0.62$, % agreement = 90.5%, number of studies = 22

0 = no
1 = some (at least 50-75%)
2 = most (75% or more)

3 = unknown

- * ANYTX_CSEME – treatment completion for CSEM-Exclusive group _____ $\kappa = 1.00$,
% agreement = 100%, number of studies = 15

0 = no

1 = some (at least 50-75%)

2 = most (75% or more)

3 = unknown

- * ANYTX_MIXED – treatment completion for Mixed group _____ $\kappa = 1.00$, %
agreement = 100%, number of studies = 14

0 = no

1 = some (at least 50-75%)

2 = most (75% or more)

3 = unknown

Variable Coding

OFFGROUP: _____ $\kappa = 0.98$, % agreement = 98.4%, $n = 256$

- 1 = Any CSEM
- 2 = CSEM-Exclusive
- 3 = Mixed

RecidTYPE: _____ $\kappa = 0.99$, % agreement = 99.6%, $n = 256$

- 1 = any sex
- 2 = contact sex
- 3 = CSEM
- 4 = any non-contact sex (inc. CSEM)
- 5 = non-contact sex (exc. CSEM)
- 6 = any violent (inc. contact)
- 7 = violent (exc. contact)
- 8 = breach/ recall
- 9 = failure to register
- 10 = any recidivism
- 11 = any crime (i.e., major offenses)
- 12 = non-sexual recidivism
- 13 = non-sexual non-violent

SOURCE: $\kappa = 1.00$, % agreement = 100%, $n = 256$ **F/U:** $\kappa = 0.98$, % agreement = 99.2%, $n = 256$

- 1 = Official
- 2 = Self-report
- 1 = fixed
- 2 = variable

FOLLOW-UP (in months): $\kappa = 0.99$, % agreement = 99.2%, $n = 256$

MIN FOLLOW UP (in months): $\kappa = 0.99$, % agreement = 99.4%, $n = 182$

MAX FOLLOW UP (in months): $\kappa = 0.99$, % agreement = 98.9%, $n = 182$

If self-report, source definition: _____ $\kappa = 0.79$, % agreement = 90.9%, $n = 22$

- 1 = overall rates (up to survey date)
- 2 = distinct time period (e.g., last 12 months)

If official, source definition: _____ $\kappa = 0.98$, % agreement = 98.7%, $n = 234$

- 0 = breaches or risky behaviors reported by parole
- 1 = arrest
- 2 = charges
- 3 = convictions
- 4 = police investigation

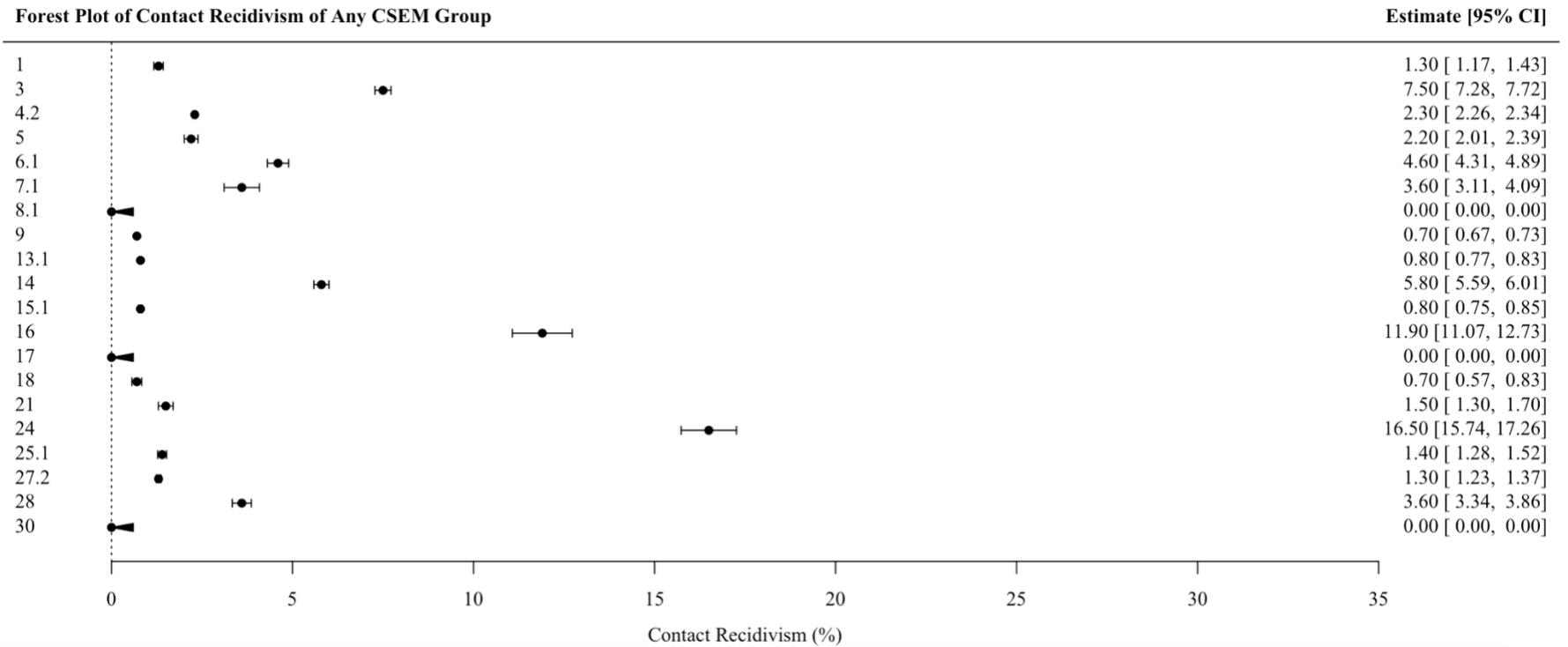
PREVALENCE

	ICC = .989, $n = 256$ <i>N_{total}</i>	ICC = .997, $n = 256$ <i>n_{rec}</i>
RECID		

Effect size p _____ ICC = .999, $n = 256$

Figure s1

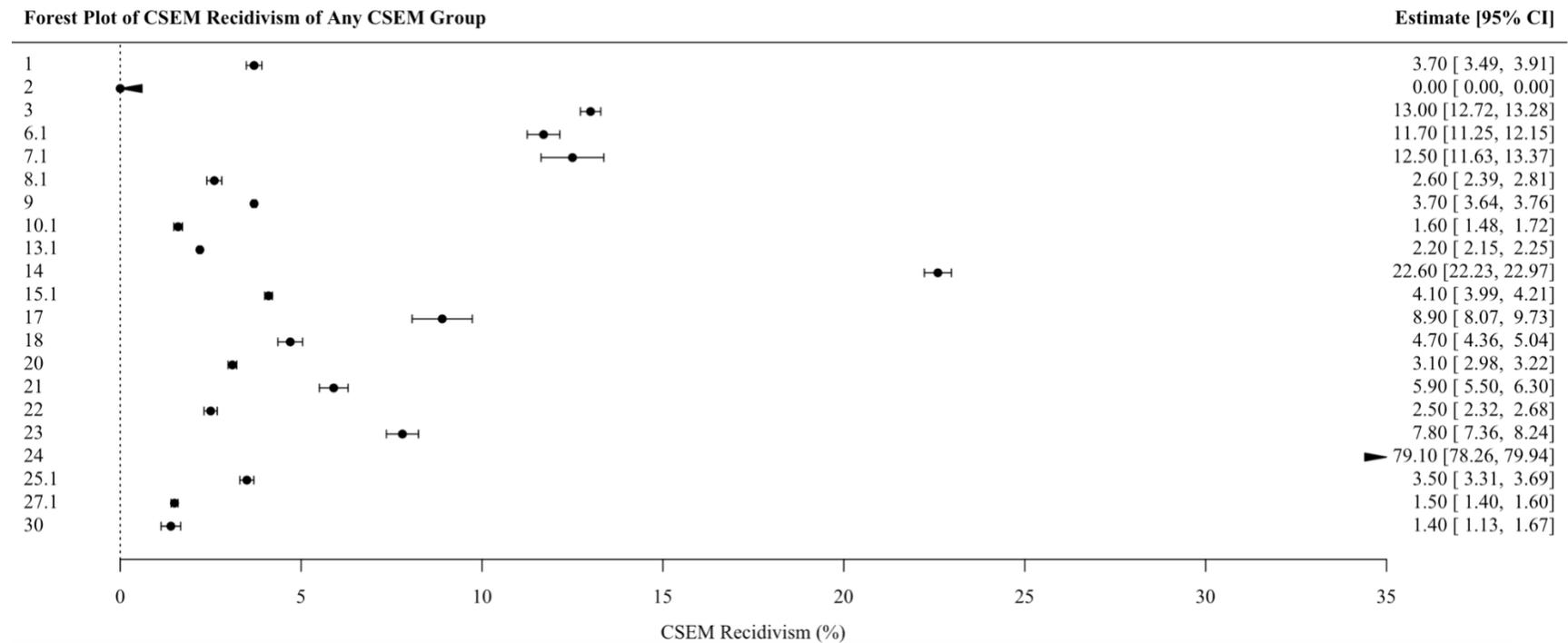
Forest Plot Showing Contact Sex Recidivism Rates among Any CSEM Group



Note. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses. Self-report samples ($k = 4$) were excluded from the figure.

Figure s2

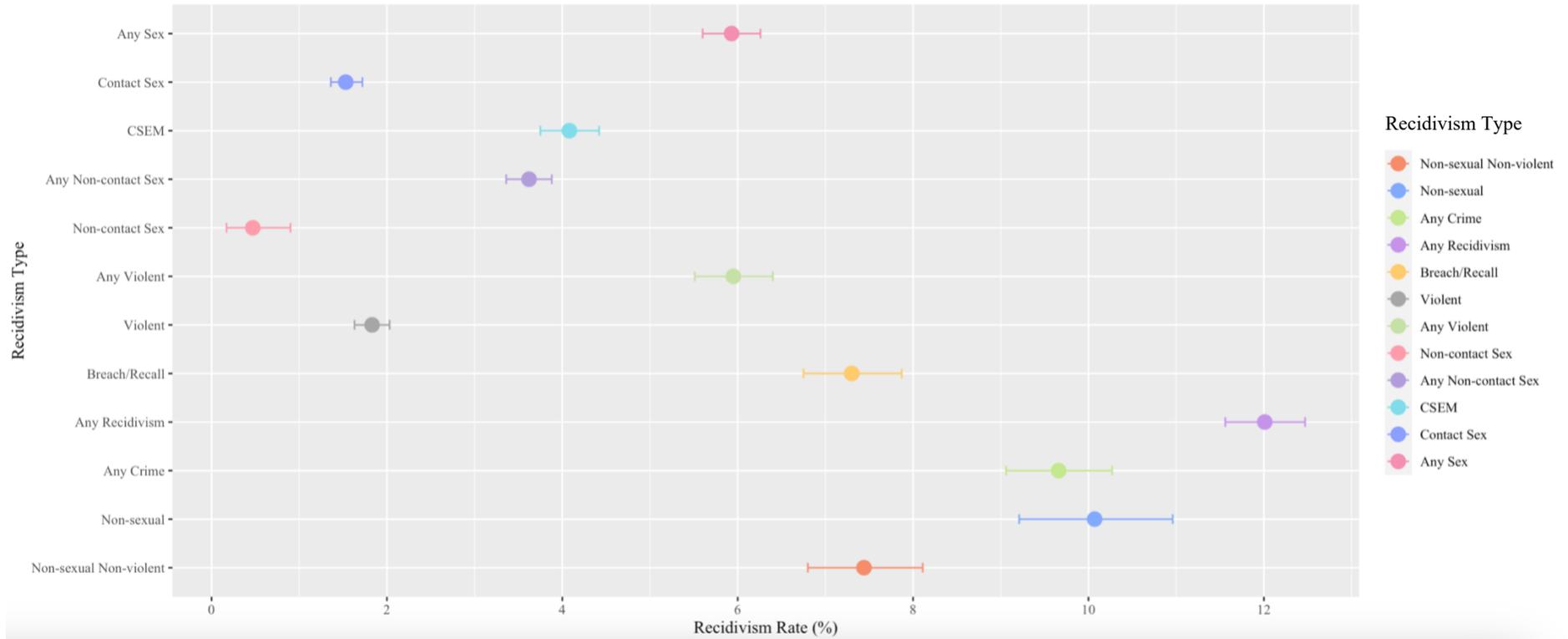
Forest Plot Showing CSEM Recidivism Rates among Any CSEM Group



Note. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses. Self-report samples ($k = 4$) were excluded from the figure.

Figure s3

Fixed-effect Meta-analysis of Recidivism Rates among Any CSEM Group



Note. CSEM = Child Sexual Exploitation Material. Non-contact sex excludes CSEM offenses, and Any violent recidivism includes contact sex offenses. Non-sexual violent recidivism is defined as crime of violence (e.g., robbery, physical assault, and murder) whereas non-sexual non-violent recidivism is defined as offenses that are not sexual and violent in nature (e.g., theft, financial crimes, and drug offenses). Self-report samples ($k = 4$) were excluded from these analysis.

Figure s4

Heatmap Showing Fixed-effect Meta-analysis Recidivism Rates Across Subgroups

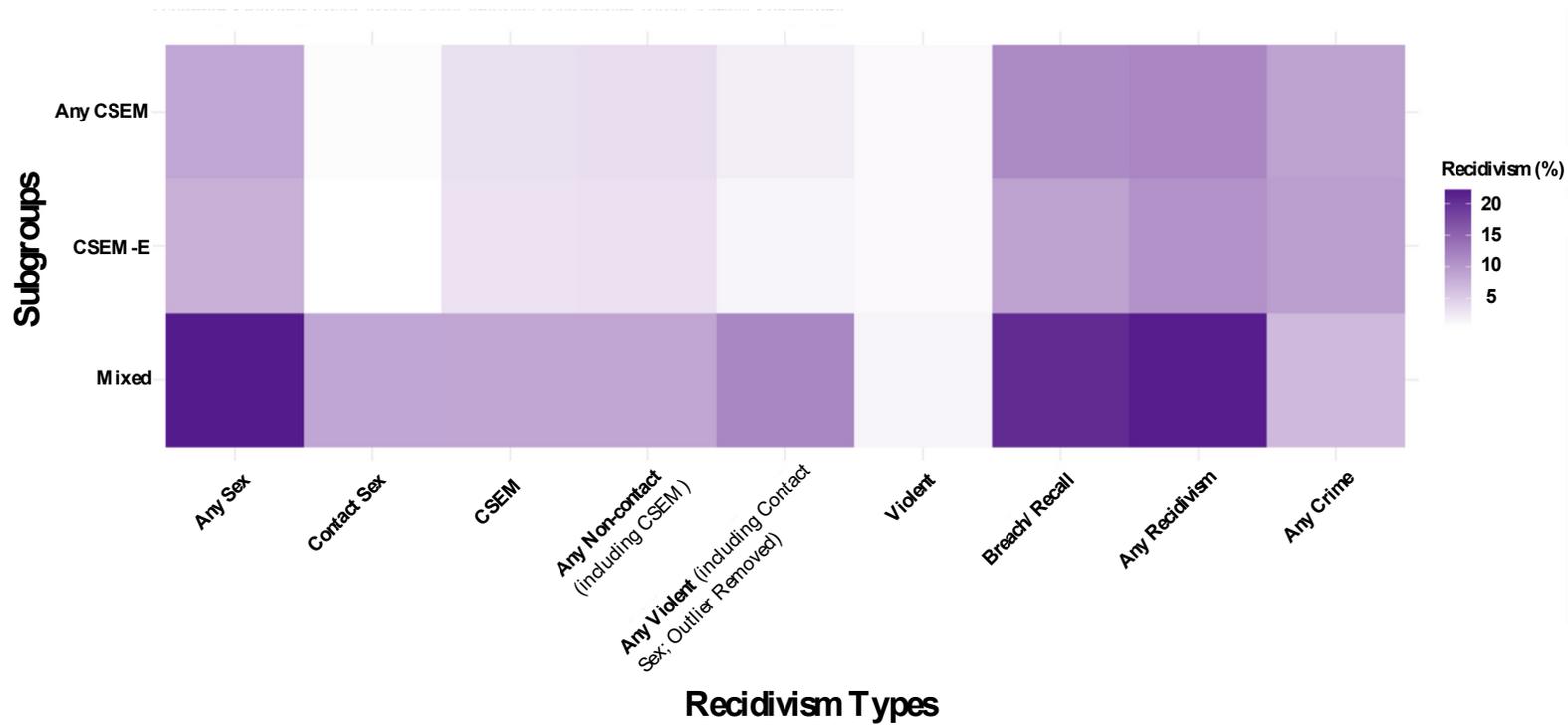
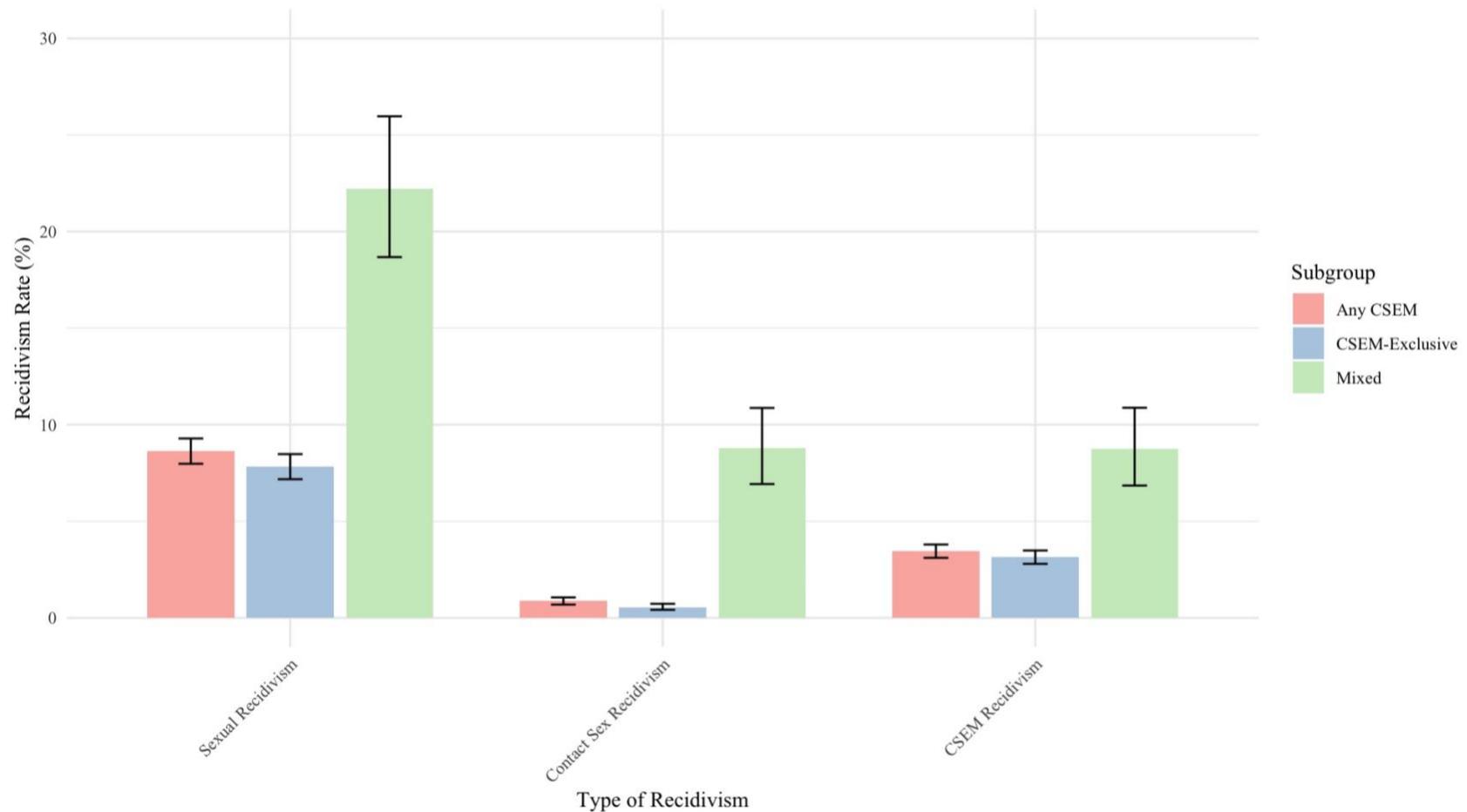


Figure s5*Sexual Recidivism Rates by Type and Subgroup*

Note. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), Mixed = individuals with both CSEM and contact sexual offenses. Self-report samples ($k = 4$) were excluded from these analyses.

Table s7

Any Sex, Contact Sex, and CSEM Recidivism Fixed-Effect Meta-analysis Recidivism Rates of Any CSEM Group Divided by the Fixed and Variable Follow-Up Timeframes

	Any Sex Recidivism % [95% CI]; <i>n</i> (<i>k</i>); Study IDs	Contact Sex Recidivism % [95% CI]; <i>n</i> (<i>k</i>); Study IDs	CSEM Recidivism % [95% CI]; <i>n</i> (<i>k</i>); Study IDs
Fixed 5-year Follow-Up	4.90 [4.41, 5.41]; 7,186 (6); 4.2, 5, 6.1, 7.1, 20, 23	1.58 [1.34, 1.84]; 9,422 (4); 4.2, 6.1, 7.1, 13.1	4.45 [3.37, 5.71]; 1,189 (4); 6.1, 7.1, 20, 23
Variable Follow-Up	4.40 [4.02, 4.79]; 10,944 (14); 4.3, 6.1, 7.1, 10.2, 14, 15.1, 17, 18, 21, 22, 24, 25.1, 27.1, 28	2.38 [1.99, 2.82]; 5,214 (17); 3, 5, 6.1, 7.1, 11, 14, 15.1, 17, 18, 21, 24, 25.1, 27.1, 28, 29, 30	6.19 [5.57, 6.84]; 5,5759 (18); 3, 6.1, 7.1, 10.1, 11, 14, 15.1, 17, 18, 21, 22, 24, 25.1, 26, 27.1, 29, 30
Variable follow-up details (in months)	<i>M</i> = 56.69 <i>Mdn</i> = 51.30 <i>SD</i> = 27.62 <i>Min</i> = 13.50 <i>Max</i> = 102.00	<i>M</i> = 63.52 <i>Mdn</i> = 61.08 <i>SD</i> = 30.04 <i>Min</i> = 13.50 <i>Max</i> = 102.00	<i>M</i> = 60.55 <i>Mdn</i> = 59.34 <i>SD</i> = 28.37 <i>Min</i> = 13.50 <i>Max</i> = 102.00

Note. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, *k* = number of samples. Self-report samples (*k* = 4) were excluded from these analyses.

Table s8

Any Sex, Contact Sex, and CSEM Recidivism Fixed-Effect Meta-analysis Recidivism Rates of CSEM-E Subgroup Divided by the Fixed and Variable Follow-Up Timeframes

	Any Sex Recidivism % [95% CI]; <i>n</i> (<i>k</i>); Study IDs	Contact Sex Recidivism % [95% CI]; <i>n</i> (<i>k</i>); Study IDs	CSEM Recidivism % [95% CI]; <i>n</i> (<i>k</i>); Study IDs
Fixed 5-year Follow-Up	4.98 [3.52, 6.66]; 737 (5); 5, 6.1, 7.1, 23, 25.2	0.37 [0.20, 0.60]; 3,545 (4); 6.1, 7.1, 13.1, 25.2	3.66 [2.24, 5.40]; 542 (4); 6.1, 7.1, 23, 25.2
Variable Follow-Up	4.96 [4.09, 5.92]; 2,156 (7); 6.1, 7.1, 15.1, 17, 21, 22, 25.1	0.78 [0.44, 1.22]; 1,979 (8); 6.1, 7.1, 11, 15.1, 17, 21, 25.1, 29	4.41 [3.67, 5.22]; 2,686 (10); 6.1, 7.1, 10.1, 11, 15.1, 17, 21, 22, 25.1, 29
Variable follow-up details (in months)	<i>M</i> = 59.57 <i>Mdn</i> = 61.44 <i>SD</i> = 31.32 <i>Min</i> = 13.50 <i>Max</i> = 101.52	<i>M</i> = 54.64 <i>Mdn</i> = 49.37 <i>SD</i> = 31.80 <i>Min</i> = 13.50 <i>Max</i> = 101.52	<i>M</i> = 53.34 <i>Mdn</i> = 48.14 <i>SD</i> = 28.52 <i>Min</i> = 13.50 <i>Max</i> = 101.52

Note. CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), *k* = number of samples. Self-report samples (*k* = 4) were excluded from these analyses.

Table s9

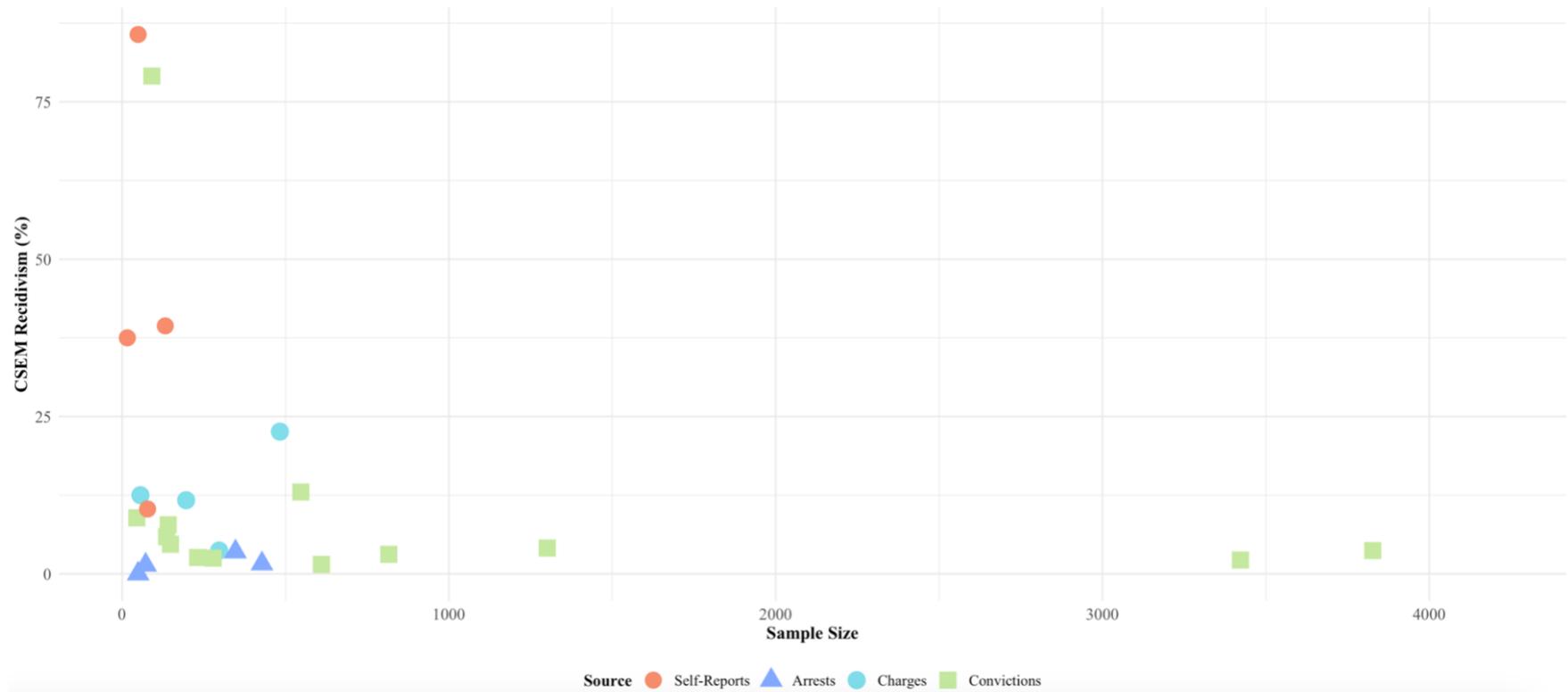
Any Sex, Contact Sex, and CSEM Recidivism Fixed-Effect Meta-analysis Recidivism Rates of Mixed Subgroup Divided by the Fixed and Variable Follow-Up Timeframes

	Any Sex Recidivism % [95% CI]; <i>n</i> (<i>k</i>)	Contact Sex Recidivism % [95% CI]; <i>n</i> (<i>k</i>)	CSEM Recidivism % [95% CI]; <i>n</i> (<i>k</i>)
Fixed 5-year Follow-Up	1.72 [1.41, 2.07]; 5,889 (5); 4.2, 5, 6.1, 7.1, 23 <i>Outlier removed (4.2) = 28.15</i> [20.52, 36.47]; 121 (4); 5, 6.1, 7.1, 23	4.34 [2.53, 6.60]; 383 (4); 6.1, 7.1, 13.1, 23	17.43 [10.20, 26.12]; 86 (3); 6.1, 7.1, 23
Variable Follow-Up	26.82 [22.40, 31.48]; 365 (6); 6.1, 7.1, 14, 15.1, 21, 25.1	11.86 [8.91, 15.15]; 411 (8); 6.1, 7.1, 11, 14, 15.1, 21, 25.1, 29	17.35 [13.85, 21.16]; 411 (8); 6.1, 7.1, 11, 14, 15.1, 21, 25.1, 29
Variable follow-up details (in months)	<i>M</i> = 72.18 <i>Mdn</i> = 74.10 <i>SD</i> = 22.28 <i>Min</i> = 37.30 <i>Max</i> = 101.50	<i>M</i> = 61.49 <i>Mdn</i> = 64.86 <i>SD</i> = 27.33 <i>Min</i> = 28.80 <i>Max</i> = 101.52	<i>M</i> = 61.49 <i>Mdn</i> = 64.86 <i>SD</i> = 27.33 <i>Min</i> = 28.80 <i>Max</i> = 101.52

Note. CSEM = Child Sexual Exploitation Material, Mixed = individuals with both CSEM and contact sexual offenses, *k* = number of samples. Self-report samples (*k* = 4) were excluded from these analyses.

Figure s6

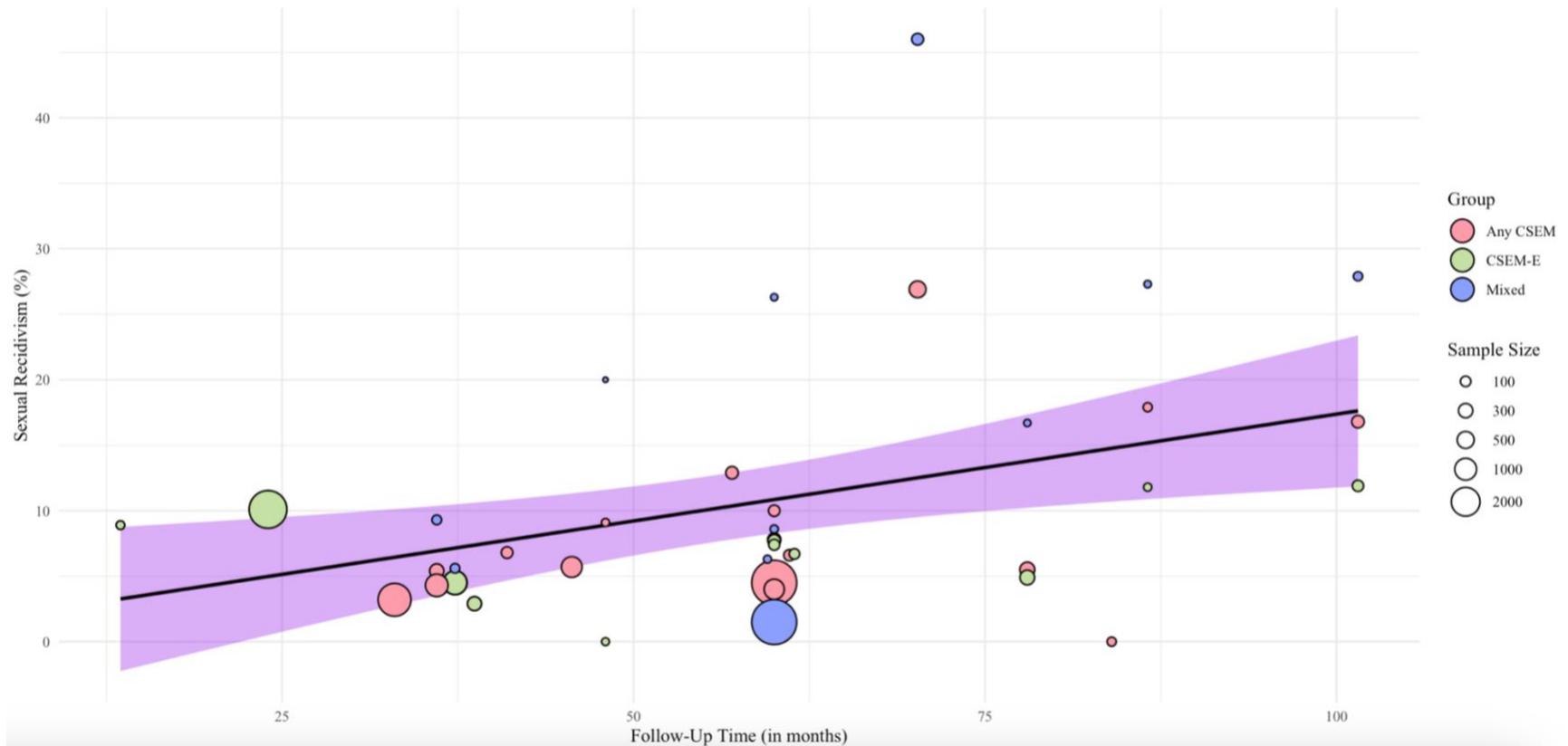
Percentage of CSEM Recidivism Rates by Self-Reports, Arrests, Charges, and Convictions



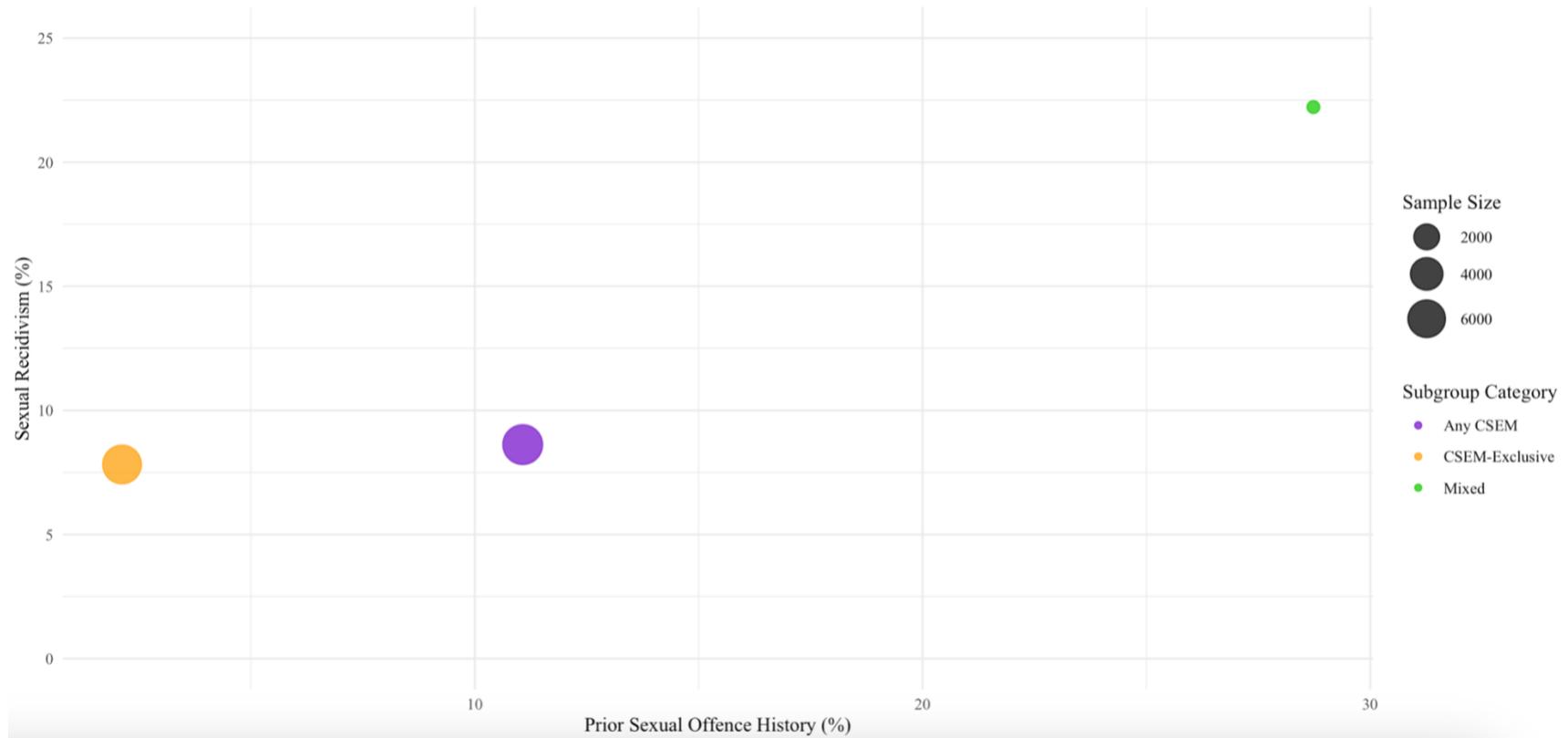
Note. CSEM = Child Sexual Exploitation Material.

Figure s7

Meta-Regression of Sexual Recidivism on Follow-up Time



Note. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), Mixed = individuals with both CSEM and contact sexual offenses. Self-report samples ($k = 4$) were excluded from these analysis.

Figure s8*Sexual Recidivism by Subgroup with Sexual Offense History*

Note. Any CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses, CSEM-E = Child Sexual Exploitation Material-Exclusive (i.e., individuals with CSEM offenses but without any contact sexual offenses), Mixed = individuals with both CSEM and contact sexual offenses. Self-report samples ($k = 4$) were excluded from these analyses.

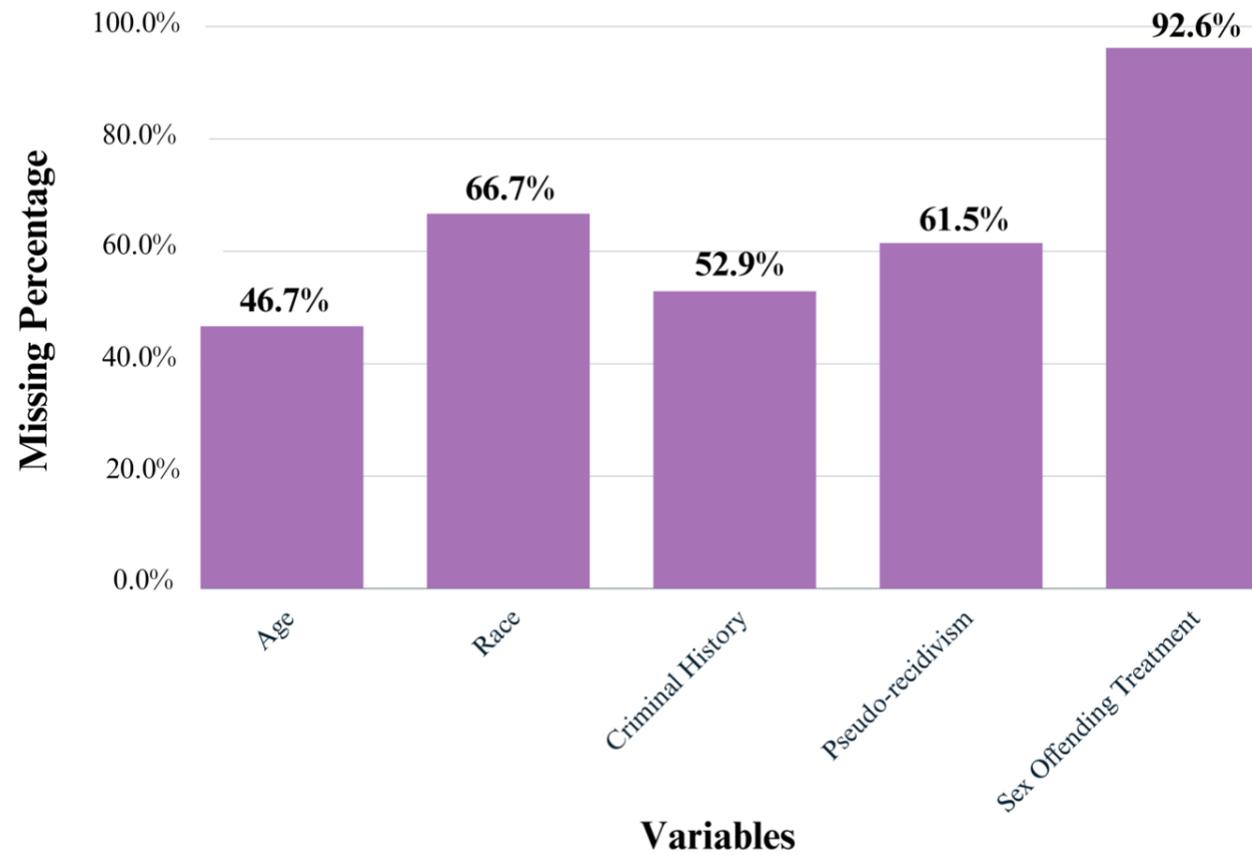
Table s10*CSEM-Exclusive Definition*

Study	CSEM-E definition included other non-contact sexual offenses (Y/N)
1 Babchishin et al. (2023)	Y
2 Beier et al. (2015)	-
4.1 Cohen & Spidell (2016)	-
5 Dowling et al. (2021)	Y
6.1 Eke et al. (2019) <u>Development</u>	N
7.1 Eke et al. (2024) <u>Validation</u>	N
9 Emeagi et al. (2024)	Y
10.1 Faust et al. (2015)	Y
11 Franqué et al. (2023)	-
12 Ghossoub & Khoury (2020)	N
13.1 Goller et al. (2016)	-
15.1 Howard et al. (2014)	Y
16 Howell (2018)	-
17 Jung et al. (2013)	N
18 Krone & Smith (2017)	N
21 Paquette et al. (unpublished data)	Y
22 Pilon (2016)	-
23 Savoie et al. (2022)	Y
25.1 Soldino et al. (2021)	Y
29 Wild et al. (2020)	-
30 Wollert et al. (2009)	-

Note. CSEM = overall group of individuals with Child Sexual Exploitation Material (CSEM) offenses. Dashes (-) indicate unclear definition.

Figure s9

Key Elements Missing in Recidivism Studies



Note. Self-report samples ($k = 4$) were excluded from these analyses.