

Table 2. Detailed Overview of Detected Clinical Studies on Aggression and Violence and Schizophrenia.

BPRS-Brief Psychiatric Rating Scale; n.r.-not reported; MOAS-Modified Overt Aggression Scale; OAS-Overt Aggression Scale; PANSS-Positive And Negative Syndrome Scale; SOAS-Staff Observation Aggression Scale; USE-Unwanted Side Effect

Author(s)	Objective	Sample (N) (Total/ Aggressive)	Inclusion Criteria: Aggression	Percentage Non- Participants	Percentage Drop-outs	Characteristics of Non- Participants	Characteristics of Drop-outs	Comparison of Participants and Non- Participants	Legal Status
Cohen <i>et al.</i> [20]	Influence of family interactions on anti-aggressive effectiveness of neuroleptics	126/126	Score \geq 20 on Social Trait Score of Explicit Oppositionalism	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Tuason [21]	Course of violent patients over 4 years	30/30	Hospitalisation due to threat or violence	n.r.	5/30 (16.7%)	n.r.	gender, ethnicity	n.r.	n.r.
Tuason [22]	Comparison of loxapine and haloperidol in aggressive patients	52/52	BPRS (hostility and uncooperativeness) \geq 8	3/52 (5.8%)	23/52 (44.2%) (reasons: discharged prior completing-8, USE-2, transfer to other facility-4, protocol violation-6)	n.r.	n.r.	n.r.	n.r.
Krakowski <i>et al.</i> [23]	Associations of violence, psychiatric symptomatology and social functioning	44/44	Admission to a special unit for the management of violent behaviour (at least 2 instances of violence within the preceeding month)	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Krakowski <i>et al.</i> [24]	Neurological impairment in violent inpatients	89/55	Admission to a special unit for the management of violent behaviour (at least 2 instances of violence within the preceeding month)	Entire study cohort: n.r. neuropsychological examination: 1/89 (1.1%)	Entire study cohort: n.r. neuropsychological examination: 27/89 (30,3%) (reasons: psychosis-5, violence-2, limited staff resources-20)	n.r.	n.r.	n.r.	n.r.
Okuma <i>et al.</i> [25]	Therapeutic effect of carbamazepine vs. placebo on excited states	162/162	excited psychotic states	n.r.	15/162 (9.3%) (reasons: USE-7, other-n.r.)	n.r.	n.r.	n.r.	n.r.

Table 2. cont....

Lapierre <i>et al.</i> [26]	Neuropsychological correlates of violence	61/31	Physical aggression throughout the lifespan	6/37 (16.2%) (reasons: unwillingness to sustain testing-6)	0/31 (0.0%)	n.r.	--	n.r.	n.r.
Vartiainen <i>et al.</i> [27]	Antiaggressive effect of citalopram in the treatment of aggression	19/19	At least 1 physical aggressive episode (SOAS ≥ 3) during 4 weeks	n.r.	6/19 (31.6%) (reasons: refused further treatment-2, USE-3, transfer to another facility-1)	n.r.	n.r.	n.r.	n.r.
Allan <i>et al.</i> [28]	Efficacy of nadolol vs. placebo in the treatment of aggression	34/34	Admission to a special unit by reason of aggressive behaviour	n.r.	2/34 (5.9%) (reasons: USE-2)	n.r.	n.r.	n.r.	n.r.
Cheung <i>et al.</i> [29]	Association of extrapyramidal side effects and aggressive behaviour	62/31	Two or more aggressive incidents, continuation of aggression	n.r.	n.r.	n.r.	n.r.	n.r.	involuntary patients part of sample, % not reported
Cheung <i>et al.</i> [30]	Role of state vs. trait factors in determining aggressive behaviour	62/31	Two or more aggressive incidents, continuation of aggression	n.r.	n.r.	n.r.	n.r.	n.r.	involuntary patients part of sample, % not reported
Cheung <i>et al.</i> [31]	Relationship between hallucinations/delusions and violent behaviour	62/31	Two or more aggressive incidents, continuation of aggression	n.r.	n.r.	n.r.	n.r.	n.r.	involuntary patients part of sample, % not reported
Cheung <i>et al.</i> [32]	Psychopathological correlates of aggressive behaviour	62/31	Two or more aggressive incidents, continuation of aggression	n.r.	n.r.	n.r.	n.r.	n.r.	involuntary patients part of sample, % not reported
Krakowski & Czobor [33]	Role of psychosis, frontal lobe impairment and ward turmoil with violence	137/75	Physical assault within 2 months of admission, additional assault during a period of 4 weeks	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Maguire <i>et al.</i> [34]	Relationship between serotonin function and aggressive behaviour	40/20	Two or more aggressive incidents, continuation of aggression	n.r.	n.r.	n.r.	n.r.	n.r.	involuntary patients part of sample, % not reported

Table 2. cont....

Sreenivasan <i>et al.</i> [35]	Predictors of recidivistic violence	109/109	„Danger to others“ throughout the lifespan	n.r.	n.r.	n.r.	n.r.	n.r.	61 % civilly committed, 39 % forensic
Hodgins <i>et al.</i> [36]	Criminal activities and substance use of patients with aggression	104/104	History of criminal activity or violence towards others	n.r.	Subjects reassessed: 6 months-89%, 12 months-78%, 18 months-62%, 24 months-46% (reasons: died-1; other-n.r.)	n.r.	n.r.	n.r.	n.r.
Krakowski <i>et al.</i> [37]	Course of violence in relation to clinical symptoms	177/96	Assault within 2 months to admission, additional assault within 4 weeks	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Nolan <i>et al.</i> [38]	Comorbidity of schizophrenia and psychopathy	51/26	At least 2 assaults on other people, minimum 1 assault within the preceding year	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Modai <i>et al.</i> [39]	Paroxetine binding in aggressive schizophrenic patients	56/26	At least 4 incidents of physical aggression within 2 months prior to the study	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Ritsner <i>et al.</i> [40]	Association of platelets peripheral-type benzodiazepine receptors binding with aggressive behaviour	55/26	At least 4 incidents of physical aggression within 2 months prior to study entry	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Krakowski & Czobor [19]	Gender differences in violent behaviours	246/246	At least 1 incident of physical assault during the 2 first months of hospitalisation	7/253 (2.8%) (reasons: n.r.)	24/246 (9.8%)	Yes (no differences in demographic characteristics, diagnosis or violence)	Yes (no differences in demographic characteristics, diagnosis or violence)	Yes (no differences)	n.r.
Omérov <i>et al.</i> [41]	Comparison of staff and patient experiences of violent incidents	82/41	Involved in violent incidents while hospitalisation	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.

Table 2. cont....

Arango <i>et al.</i> [42]	Comparison of oral versus depot formulations of zuclopenthixol	46/46	At least 1 incident of physical aggression in the previous year (score MOAS ≥ 3)	n.r.	5/46 (10.9%) (reasons: loss to follow-up-3, lack of efficacy-2)	n.r.	n.r.	n.r.	n.r.
Barkan <i>et al.</i> [43]	Role of central serotonin (5-HT) function in aggressive behaviour	40/20	At least 2 significant violent events per week in the last month, repeated confinement	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Krakowski <i>et al.</i> [44]	Atypical antipsychotic agents (clozapine and olanzapine) in the treatment of aggressive behaviour	110/110	At least 1 episode of physical assault during hospitalisation, persistence of aggression	24/134 (17.9%) (reasons: n.r.)	40/110 (36.4%) (reasons: clinical deterioration-11; USE-8; withdrew consent-14; other-7)	n.r.	n.r.	n.r.	n.r.
Citrome <i>et al.</i> [45]	Anti-aggressive efficacy of risperidone monotherapy vs. risperidone plus valproate	33/33	PANSS: at least score of 3 on at least 1 of the items that comprise the activation factor (hostility, impulsivity, excitement, uncooperativeness)	n.r.	13/33 (39.4%) (reasons: lack of efficacy-8; USE-2; protocol violation-2; withdrew consent-1)	n.r.	Yes (mean OAS total severity scores)	Yes (baseline: no significant difference between completers and noncompleters; periods weeks 1-4 and weeks 5-8: significant lower OAS total severity scores in completers)	n.r.
Kim <i>et al.</i> [46]	Association between Catechol-O-methyltransferase Val158Met polymorphism and aggression	580/61	episodes of violence at least twice per week in the 2 weeks prior to study entry, at least 2 serious assaults in past history	n.r.	Entire study cohort: n.r. Subgroup who completed MOAS: 13/61 (21.3%) (reasons: n.r.)	n.r.	n.r.	n.r.	n.r.
Krakowski <i>et al.</i> [11]	Effects of atypical antipsychotics (olanzapine and clozapine) on neurocognitive function in aggressive patients	110/110	Repeated episodes of verbal or physical aggression including at least 1 episode of physical aggression against persons during this hospitalisation	n.r.	10/110 (9.1%) no baseline cognitive evaluation (reasons: n.r.) 13/100 (13.0%) no endpoint assessment (reasons: n.r.)	n.r.	Yes (no significant differences on any demographic or clinical variables)	Yes (no significant differences on any demographic or clinical variables)	n.r.

Haddock <i>et al.</i> [47]	Effectiveness of cognitive-behavioural therapy vs. social activity therapy on violence	77/77	At least 2 incidents of violence against property or others in 12 months prior study entry or At least 3 incidents of verbal aggression in 12 months prior study entry or for participants in secure care: 1 violent index offence and indication for risk of further violence	31/108 (28.7%)	5/77 (6.5%) (reasons: refused therapy-3; died-1; moved out of area-1) Data collected end of treatment: 71/77 (92.2%) (reasons: received <10 therapy sessions) Data collected at follow-up: 68/77 (88.3%) (reasons: n.r.)	n.r.	n.r.	n.r.	n.r.
Kim <i>et al.</i> [48]	Association between the serotonin transporter gene (5-HTTLPR) and aggression	103/46	episodes of violence at least twice per week in the 2 weeks prior to study entry, at least 2 serious assaults in past history	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Krakowski <i>et al.</i> [49]	Effects of atypical antipsychotics (clozapine and olanzapine) on metabolic parameters in aggressive patients	93/93	At least 1 episode of physical assault during hospitalisation, persistence of aggression	n.r.	25/93 (26.9%) (reasons: n.r.)	n.r.	n.r.	n.r.	n.r.
Nolan <i>et al.</i> [50]	Staff and patient views of the reasons for aggressive incidents	44/44	Poor impulse control, aggressive behaviour and/or hostility	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.