

## APPENDIX 15:

### CLINICAL EVIDENCE - FOREST PLOTS

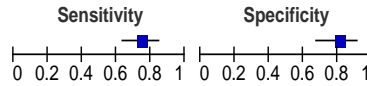
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# 1.1 CASE IDENTIFICATION

## 1.1.1 Sensitivity and specificity for the ASQ/SCQ, AQ (10-, 20-, 21- and 50-item versions), PDD-MRS and ABC

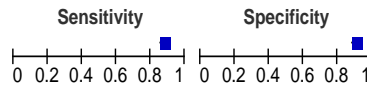
### ABC

Study	TP	FP	FN	TN	Sensitivity	Specificity
VOLKMAR1988	54	9	18	39	0.75 [0.63, 0.84]	0.81 [0.67, 0.91]



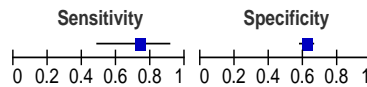
### AQ-10

Study	TP	FP	FN	TN	Sensitivity	Specificity
ALLISON2012	657	49	90	492	0.88 [0.85, 0.90]	0.91 [0.88, 0.93]



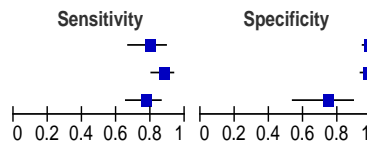
### AQ-20

Study	TP	FP	FN	TN	Sensitivity	Specificity
BRUGHA2012	14	227	5	370	0.74 [0.49, 0.91]	0.62 [0.58, 0.66]



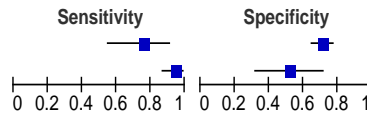
### AQ-50 (cut-off 32/33)

Study	TP	FP	FN	TN	Sensitivity	Specificity
BARONCOHEN2001	46	4	12	170	0.79 [0.67, 0.89]	0.98 [0.94, 0.99]
WAKABAYASHI2006	99	4	14	140	0.88 [0.80, 0.93]	0.97 [0.93, 0.99]
WOODBURYSMITH2005	56	7	17	20	0.77 [0.65, 0.86]	0.74 [0.54, 0.89]



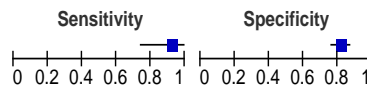
### AQ-50 & AQ-J-50 (cut-off 26)

Study	TP	FP	FN	TN	Sensitivity	Specificity
KURITA2005	19	62	6	153	0.76 [0.55, 0.91]	0.71 [0.65, 0.77]
WOODBURYSMITH2005	69	13	4	14	0.95 [0.87, 0.98]	0.52 [0.32, 0.71]



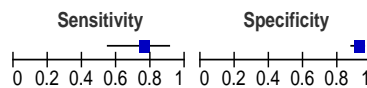
### AQ-J-21

Study	TP	FP	FN	TN	Sensitivity	Specificity
KURITA2005	23	39	2	176	0.92 [0.74, 0.99]	0.82 [0.76, 0.87]



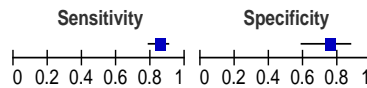
### AQ-J-10

Study	TP	FP	FN	TN	Sensitivity	Specificity
KURITA2005	19	17	6	198	0.76 [0.55, 0.91]	0.92 [0.88, 0.95]



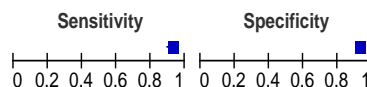
### ASQ

Study	TP	FP	FN	TN	Sensitivity	Specificity
BERUMENT1999	136	10	24	30	0.85 [0.79, 0.90]	0.75 [0.59, 0.87]



### PDD-MRS

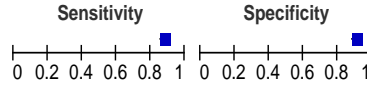
Study	TP	FP	FN	TN	Sensitivity	Specificity
KRAIJER2005	377	62	31	759	0.92 [0.89, 0.95]	0.92 [0.90, 0.94]



## 1.1.2 Sensitivity and specificity for the AQ (-10, -20, -21 and -50) alone at different cut-offs

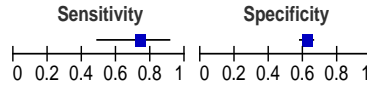
### AQ-10

Study	TP	FP	FN	TN	Sensitivity	Specificity
ALLISON2012	657	49	90	492	0.88 [0.85, 0.90]	0.91 [0.88, 0.93]



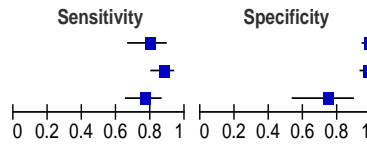
### AQ-20

Study	TP	FP	FN	TN	Sensitivity	Specificity
BRUGHA2012	14	227	5	370	0.74 [0.49, 0.91]	0.62 [0.58, 0.66]



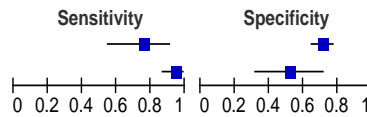
### AQ-50 (cut-off 32/33)

Study	TP	FP	FN	TN	Sensitivity	Specificity
BARONCOHEN2001	46	4	12	170	0.79 [0.67, 0.89]	0.98 [0.94, 0.99]
WAKABAYASHI2006	99	4	14	140	0.88 [0.80, 0.93]	0.97 [0.93, 0.99]
WOODBURYSMITH2005	56	7	17	20	0.77 [0.65, 0.86]	0.74 [0.54, 0.89]



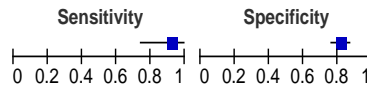
### AQ-50 & AQ-J-50 (cut-off 26)

Study	TP	FP	FN	TN	Sensitivity	Specificity
KURITA2005	19	62	6	153	0.76 [0.55, 0.91]	0.71 [0.65, 0.77]
WOODBURYSMITH2005	69	13	4	14	0.95 [0.87, 0.98]	0.52 [0.32, 0.71]



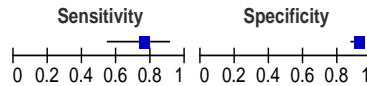
### AQ-J-21

Study	TP	FP	FN	TN	Sensitivity	Specificity
KURITA2005	23	39	2	176	0.92 [0.74, 0.99]	0.82 [0.76, 0.87]



### AQ-J-10

Study	TP	FP	FN	TN	Sensitivity	Specificity
KURITA2005	19	17	6	198	0.76 [0.55, 0.91]	0.92 [0.88, 0.95]

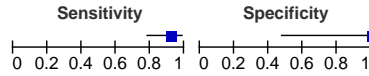


## 1.2 ASSESSMENT AND DIAGNOSIS

### 1.2.1 Sensitivity and specificity for the AAA, ADI and ADI-R, ADOS-G, ASD-DA, ASDI, RAADS and RAADS-R

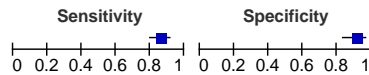
#### AAA

Study	TP	FP	FN	TN	Sensitivity	Specificity
BARONCOHEN2005	34	0	3	5	0.92 [0.78, 0.98]	1.00 [0.48, 1.00]



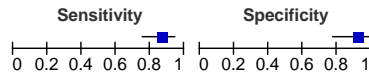
#### ADI & ADI-R (Verbal with MA = 3-12 years)

Study	TP	FP	FN	TN	Sensitivity	Specificity
LORD1997	131	7	21	75	0.86 [0.80, 0.91]	0.91 [0.83, 0.96]



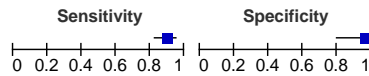
#### ADI & ADI-R (IQ>70)

Study	TP	FP	FN	TN	Sensitivity	Specificity
LORD1997	52	3	8	33	0.87 [0.75, 0.94]	0.92 [0.78, 0.98]



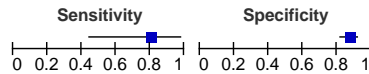
#### ADI & ADI-R (All non-verbal)

Study	TP	FP	FN	TN	Sensitivity	Specificity
LORD1997	96	1	11	24	0.90 [0.82, 0.95]	0.96 [0.80, 1.00]



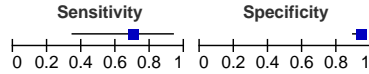
#### ADOS-G (cut-off 7)

Study	TP	FP	FN	TN	Sensitivity	Specificity
BRUGHA2012	8	24	2	165	0.80 [0.44, 0.97]	0.87 [0.82, 0.92]



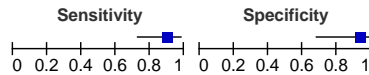
#### ADOS-G (cut-off 10)

Study	TP	FP	FN	TN	Sensitivity	Specificity
BRUGHA2012	7	12	3	177	0.70 [0.35, 0.93]	0.94 [0.89, 0.97]



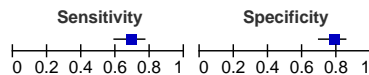
#### ADOS-G (cut-off 13)

Study	TP	FP	FN	TN	Sensitivity	Specificity
LORD2000	26	1	3	14	0.90 [0.73, 0.98]	0.93 [0.68, 1.00]



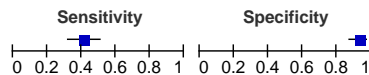
#### ASD-DA (cut-off 24)

Study	TP	FP	FN	TN	Sensitivity	Specificity
MATSON2007A	78	26	36	92	0.68 [0.59, 0.77]	0.78 [0.69, 0.85]



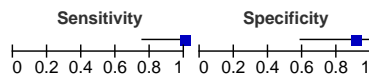
#### ASD-DA (cut-off 28)

Study	TP	FP	FN	TN	Sensitivity	Specificity
MATSON2007A	47	8	67	110	0.41 [0.32, 0.51]	0.93 [0.87, 0.97]



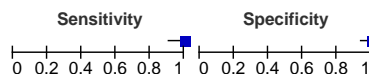
#### ASDI

Study	TP	FP	FN	TN	Sensitivity	Specificity
GILLBERG2001	13	1	0	10	1.00 [0.75, 1.00]	0.91 [0.59, 1.00]



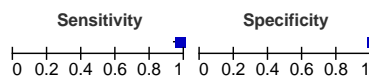
#### RAADS

Study	TP	FP	FN	TN	Sensitivity	Specificity
RITVO2008	37	0	0	57	1.00 [0.91, 1.00]	1.00 [0.94, 1.00]



#### RAADS-R

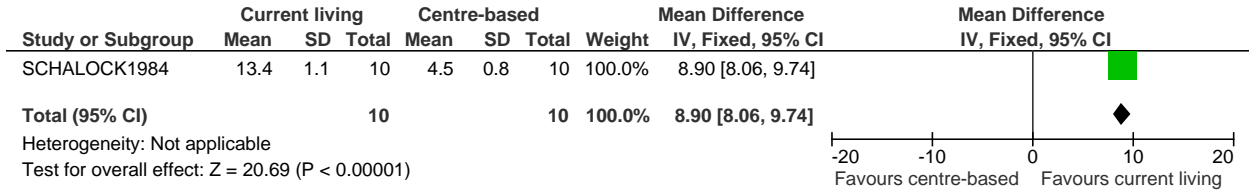
Study	TP	FP	FN	TN	Sensitivity	Specificity
RITVO2011	195	0	6	578	0.97 [0.94, 0.99]	1.00 [0.99, 1.00]



# 1.3 SETTINGS FOR CARE

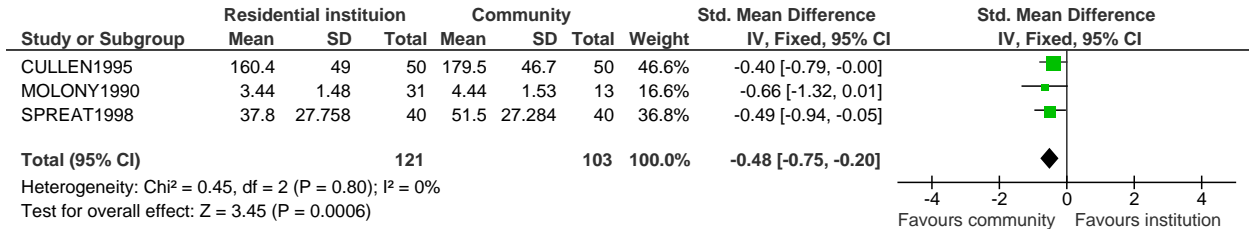
## 1.3.1 Community-based teams

*Current living training environment compared with developmental centre group home training environment for teaching community living skills to adults with a learning disability*

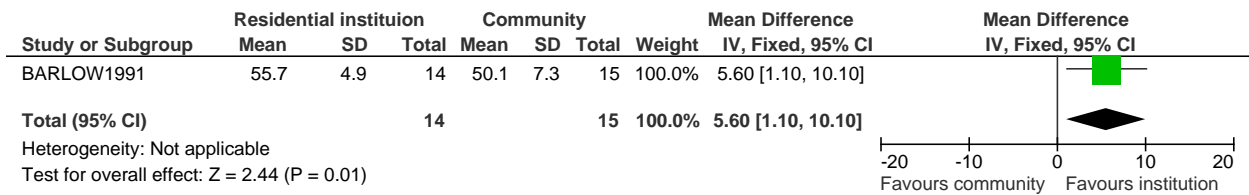


## 1.3.2 Residential accommodation and related services

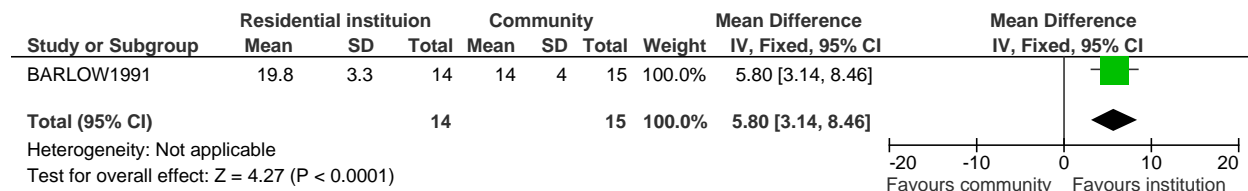
*Community housing compared with residential institution for adaptive behaviour in adults with a learning disability*



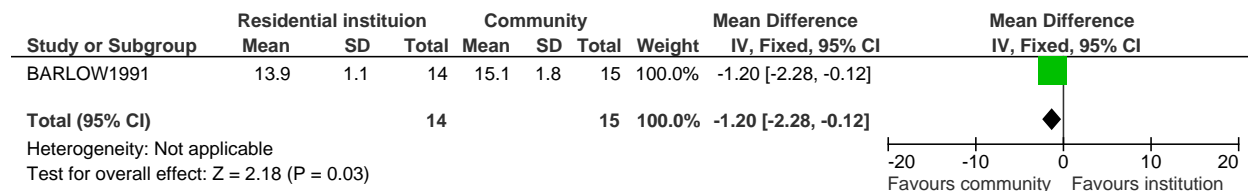
*Community housing compared with residential institution for residential satisfaction (total score) in adults with a learning disability*



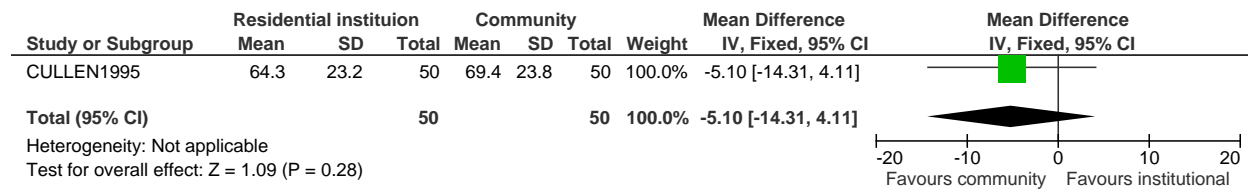
***Community housing compared with residential institution for residential satisfaction with social life in adults with a learning disability***



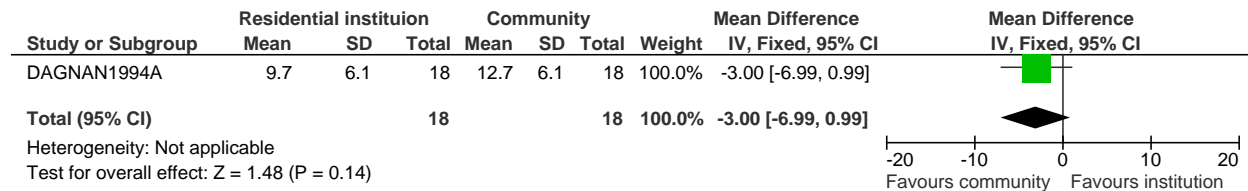
***Community housing compared with residential institution for residential satisfaction with autonomy in adults with a learning disability***



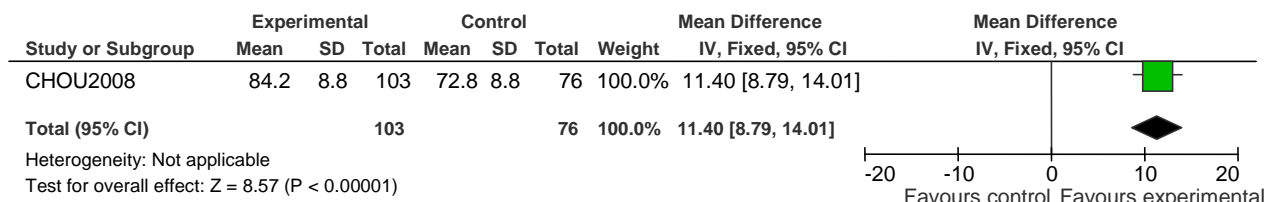
***Community housing compared with residential institution for social skills in adults with a learning disability***



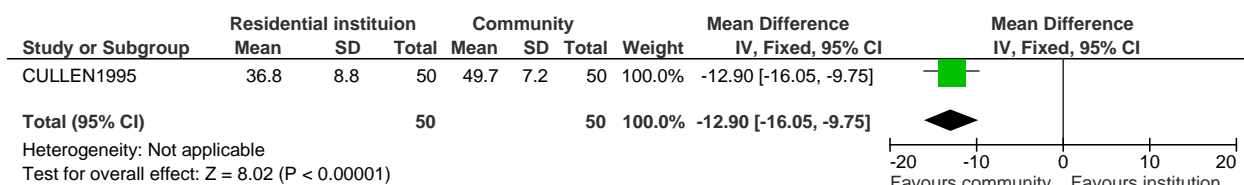
***Community housing compared with residential institution for social inclusion of adults with a learning disability***



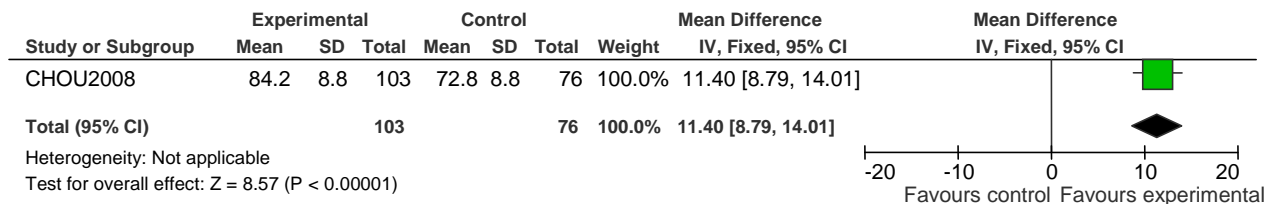
***Community housing compared with residential institution for social inclusion of adults with a learning disability***



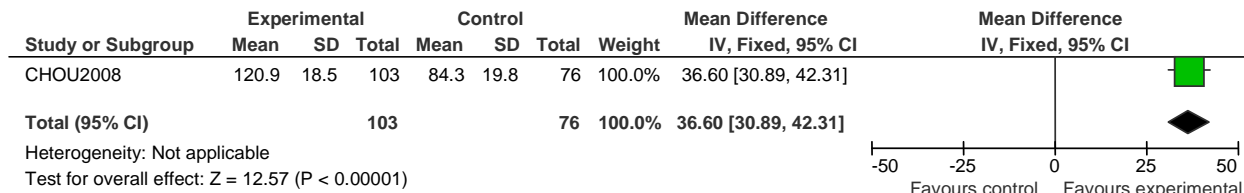
***Community housing compared with residential institution for quality of life of adults with a learning disability***



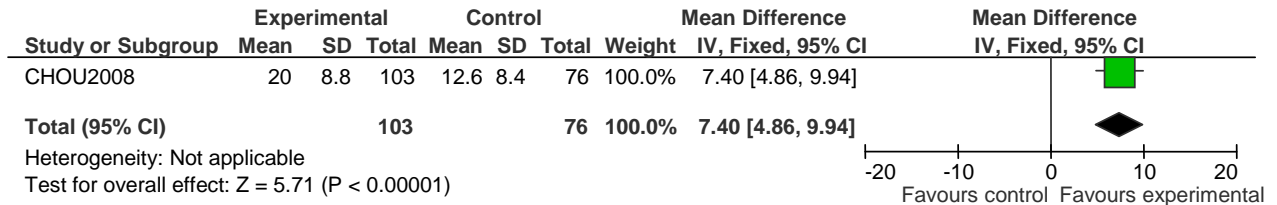
***Small residential homes compared with an institution for quality of life of adults with a learning disability***



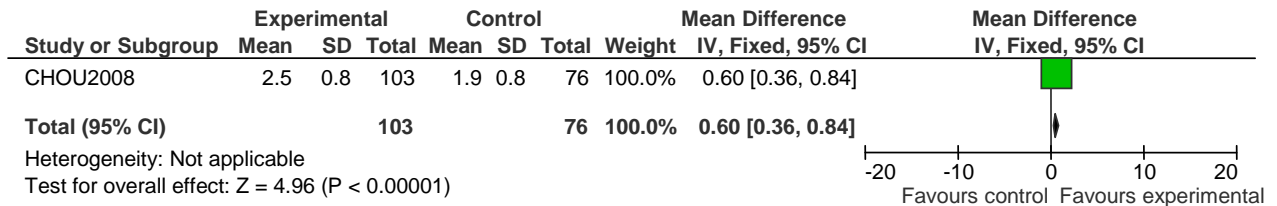
***Small residential homes compared with an institution for choice making of adults with a learning disability***



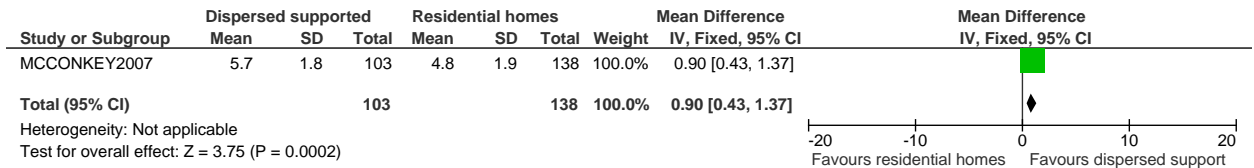
*Small residential homes compared with an institution for community inclusion of adults with a learning disability*



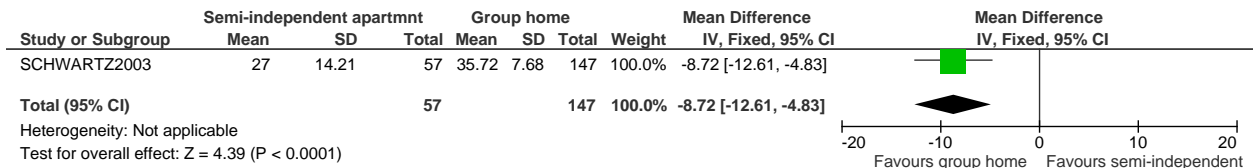
*Small residential homes compared with an institution for family contact of adults with a learning disability*



*Dispersed supported housing compared with residential homes for social inclusion of adults with a learning disability*

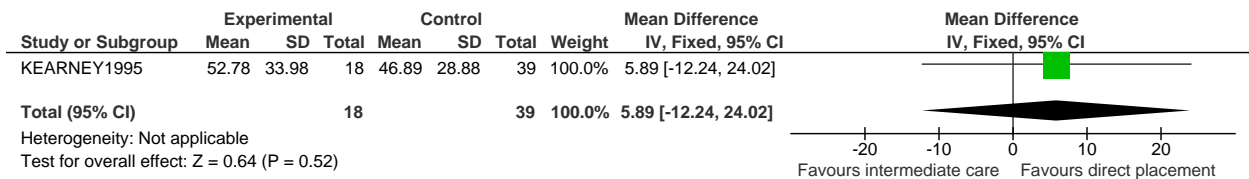


*Semi-independent apartments compared with group homes for resident satisfaction of adults with a learning disability*

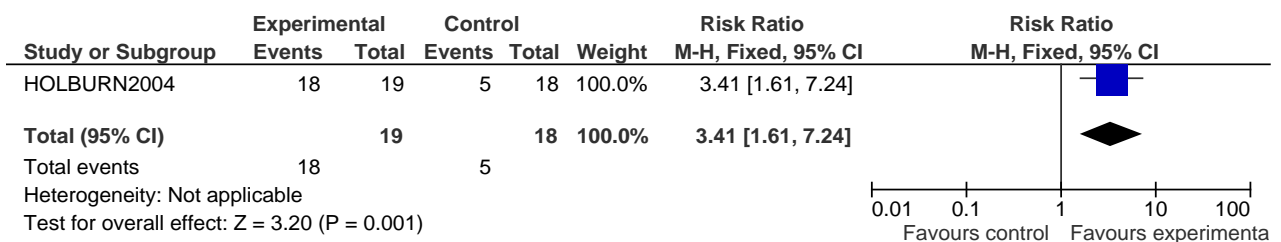




*Intermediate care placement compared with direct community placement for adaptive behaviour of adults with a learning disability*



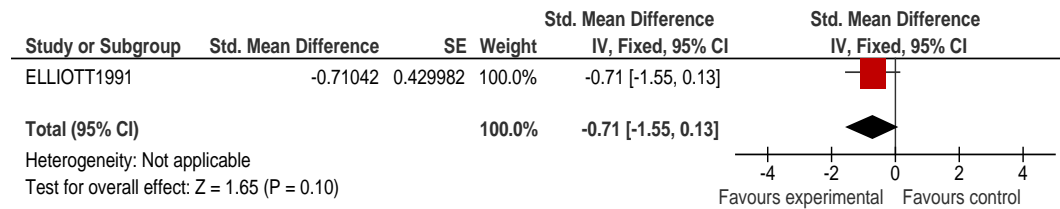
*Person-centred planning compared with system-centred planning for movement into the community of adults with a learning disability*



## 1.4 PSYCHOSOCIAL INTERVENTIONS

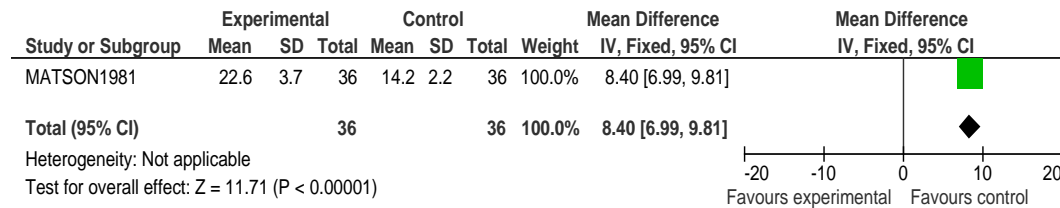
### 1.4.1 Behavioural therapies aimed at communication

*Natural language teaching compared with analogue language teaching for communication in adults with autism*

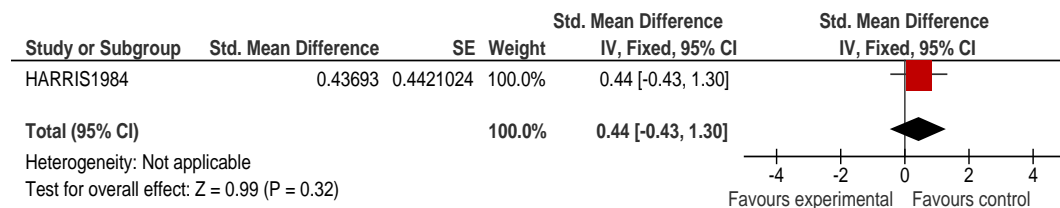


### 1.4.2 Behavioural therapies aimed at behaviour management

*Independence training compared with no-treatment control group for activities of daily living (showering) in adults with a learning disability*

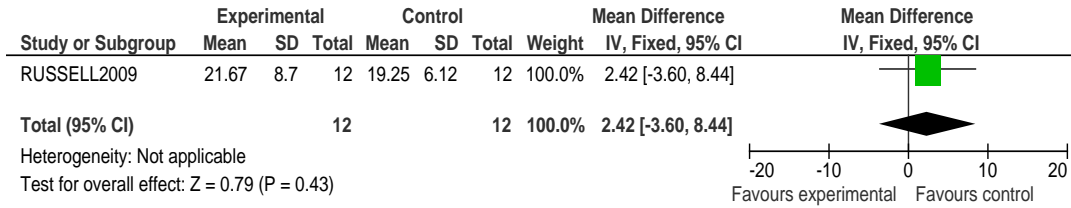


*Behavioural weight control programme compared with no-treatment control for self-care (weight loss) in adults with a learning disability*

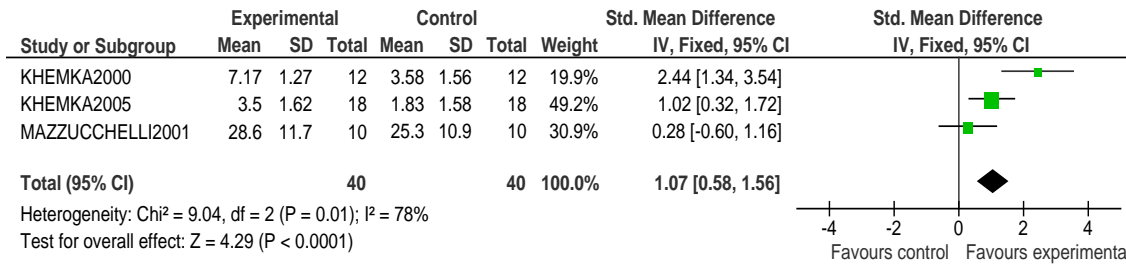


### 1.4.3 Cognitive behavioural therapies

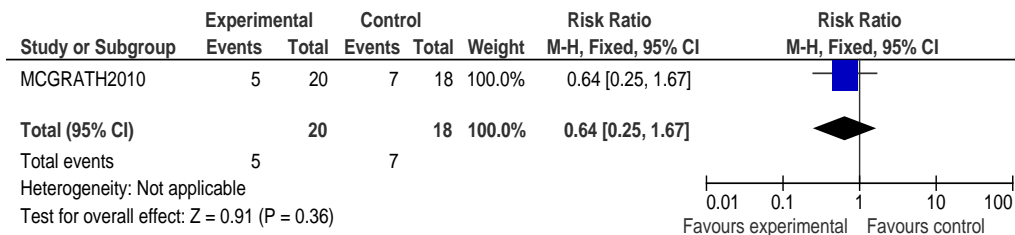
#### *Cognitive behavioural therapies compared with treatment as usual for severity of coexisting OCD symptoms in adults with autism*



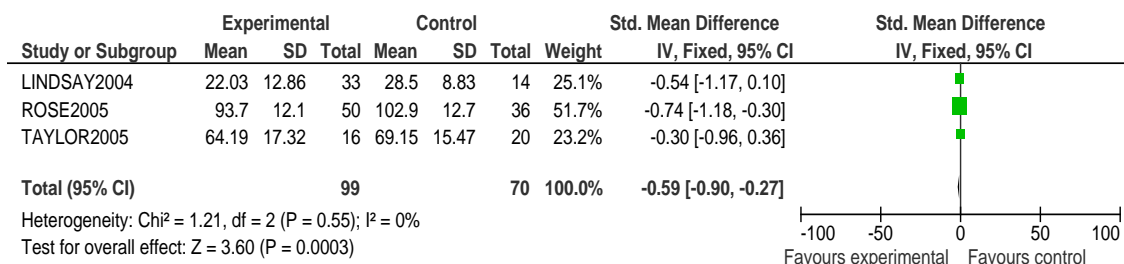
#### *Anti-victimisation interventions compared with waitlist control for anti-victimisation skills (continuous measure) in adults with a learning disability*



#### *Anti-victimisation interventions compared with waitlist control for anti-victimisation skills (dichotomous measure) in adults with a learning disability*

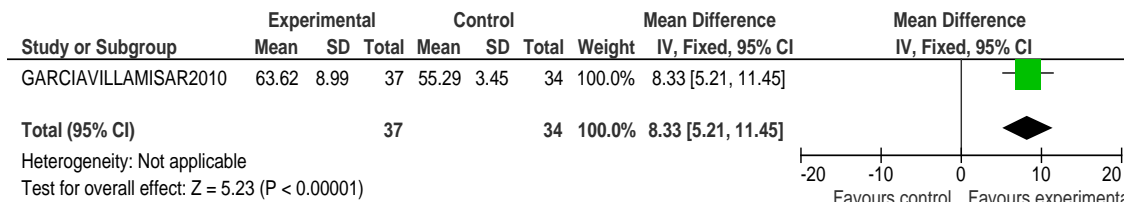


## Anger management compared with treatment as usual or waitlist control for anger in adults with a learning disability

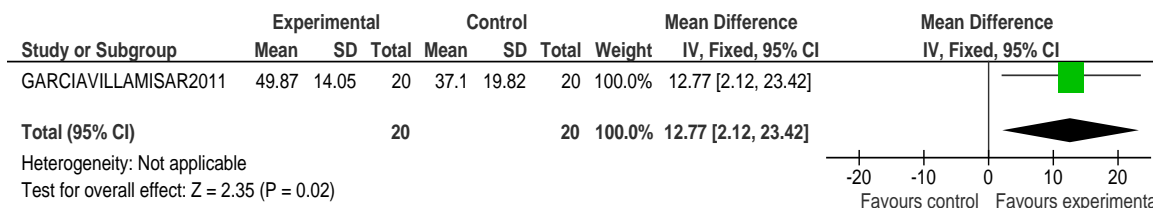


### 1.4.4 Leisure programmes

#### Leisure programmes compared with waitlist control for quality of life in adults with autism

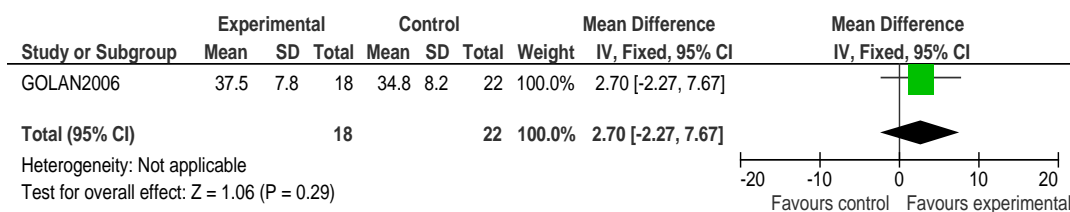


#### Leisure programmes compared with waitlist control for emotion recognition in adults with autism

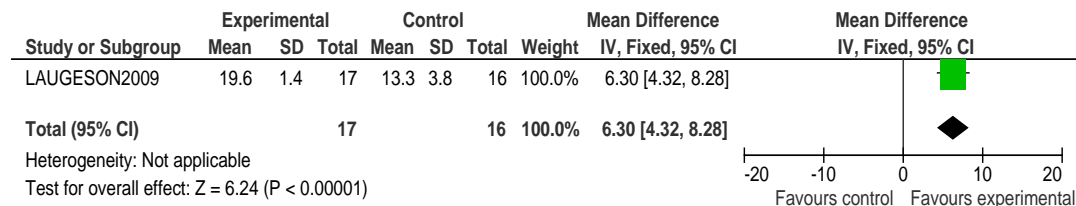


### 1.4.5 Social learning interventions

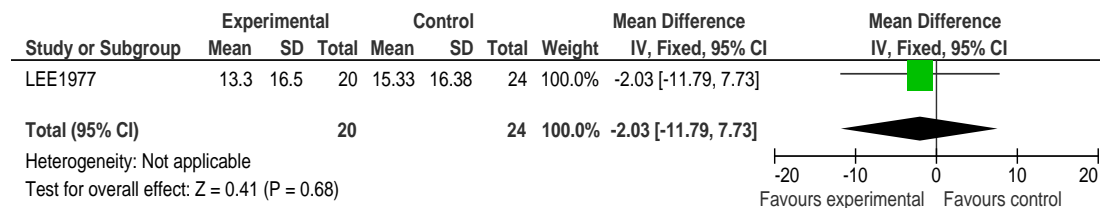
#### Emotion recognition training compared with treatment as usual for emotion recognition in adults with autism



***Social skills group interventions compared with waitlist control for social interaction in adolescents with autism***

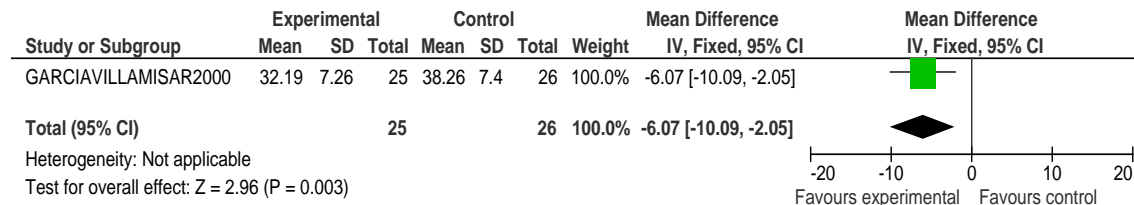


***Social skills group interventions compared with treatment as usual for maladaptive behaviour in adults with a learning disability***

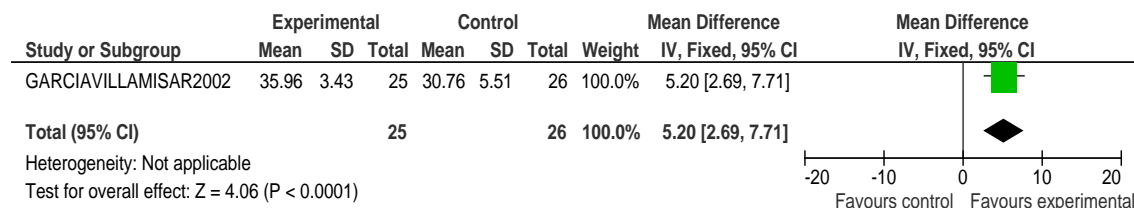


**1.4.6 Supported employment programmes**

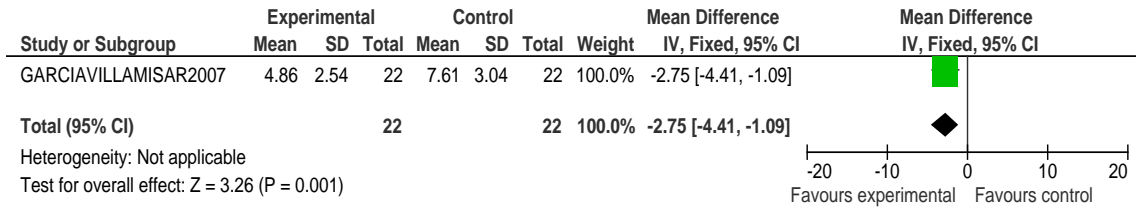
***Supported employment programmes compared with sheltered workshop programmes for autistic behaviours in adults with autism***



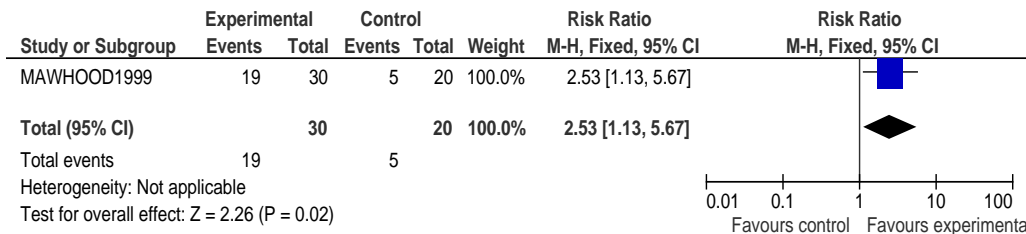
***Supported employment programmes compared with sheltered workshop programmes for quality of life in adults with autism***



***Supported employment programmes compared with waitlist control for executive function in adults with autism***

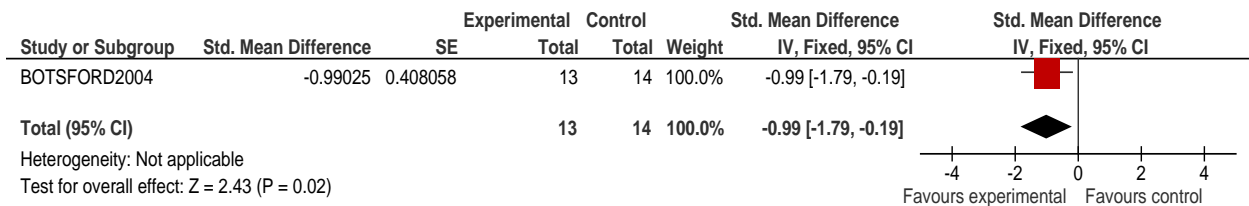


***Supported employment programmes compared with treatment as usual for job placements in adults with autism***

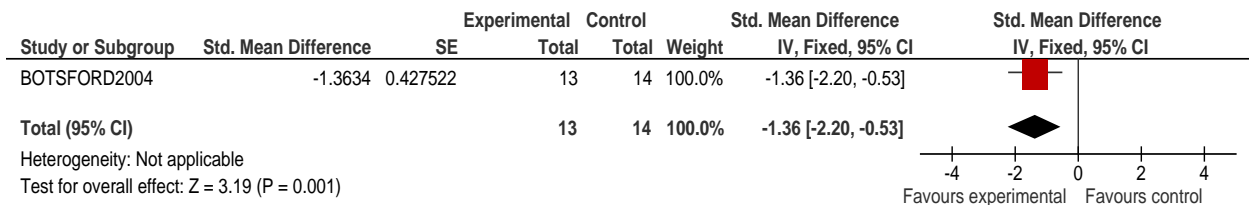


**1.4.7 Support for families, partners and carers**

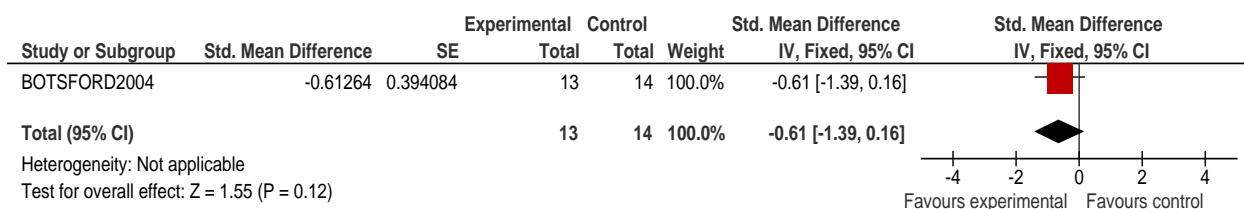
***Psychoeducational group permanency planning programme compared with treatment as usual for knowledge and awareness about planning in mothers of adults with a learning disability***



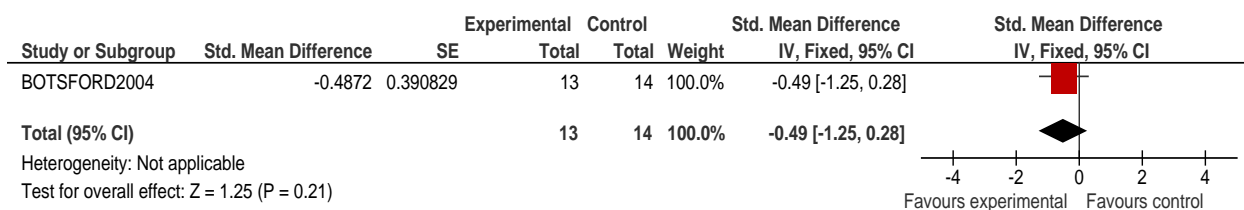
***Psychoeducational group permanency planning programme compared with treatment as usual for competence and confidence to plan in mothers of adults with a learning disability***



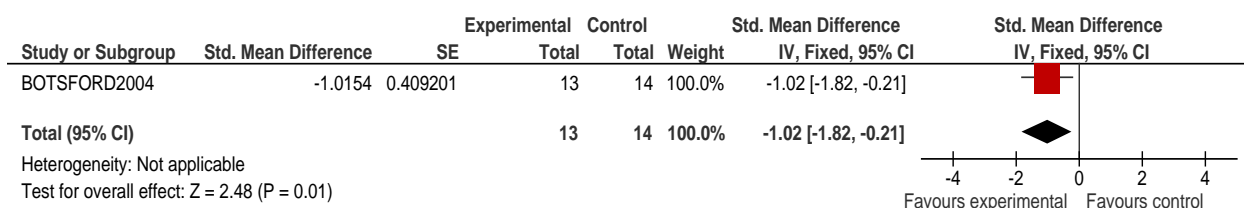
*Psychoeducational group permanency planning programme compared with treatment as usual for appraisals of the planning process by mothers of adults with a learning disability*



*Psychoeducational group permanency planning programme compared with treatment as usual for intermediate planning behaviours of mothers of adults with a learning disability*



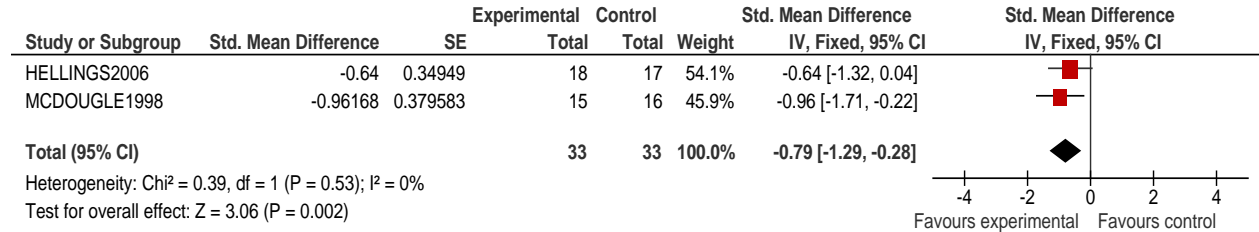
*Psychoeducational group permanency planning programme compared with treatment as usual for residential and legal planning of mothers of adults with a learning disability*



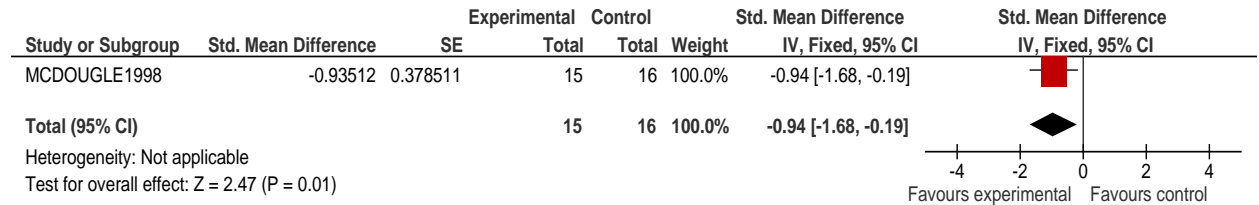
# 1.5 BIOMEDICAL INTERVENTIONS

## 1.5.1 Antipsychotics

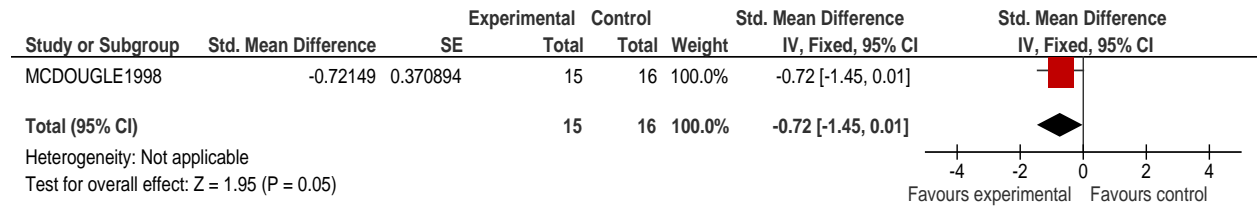
### *Risperidone compared with placebo for challenging behaviour (irritability and aggression) in adults with autism*



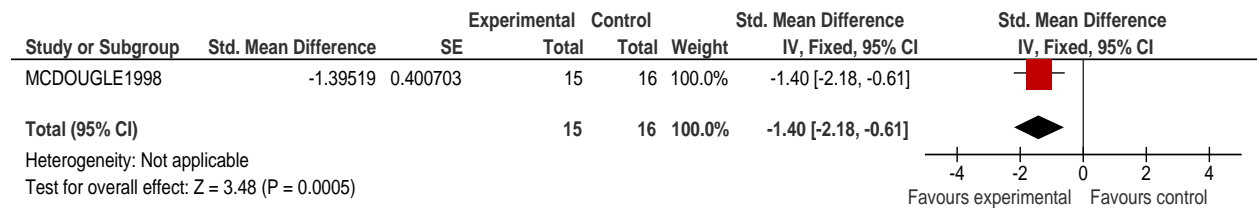
### *Risperidone compared with placebo for core symptoms of autism (repetitive behaviour) in adults with autism*



### *Risperidone compared with placebo for autistic behaviours in adults with autism*

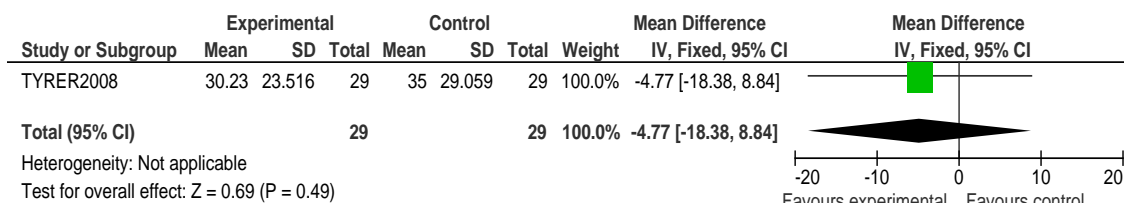


### *Risperidone compared with placebo for symptom severity or improvement in adults with autism*

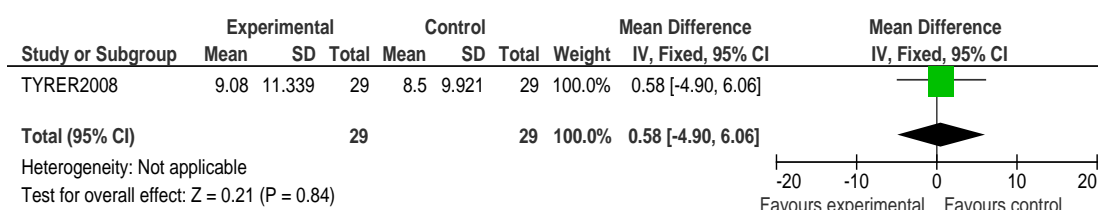




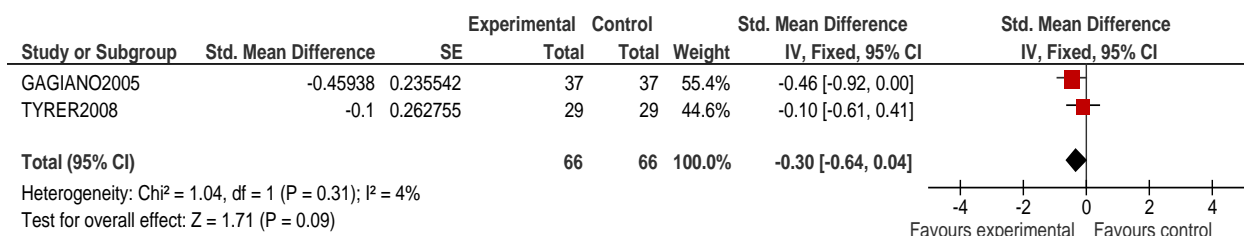
### *Risperidone compared with placebo for challenging behaviour in adults with a learning disability*



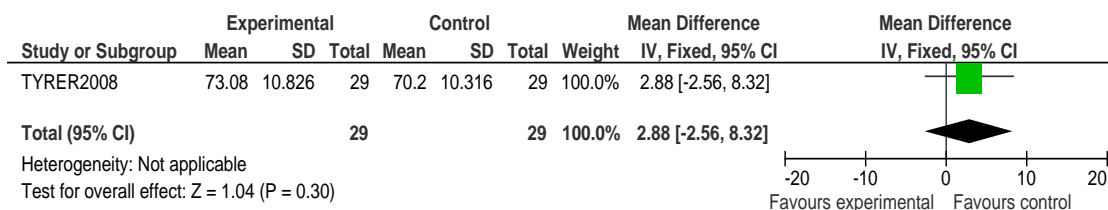
### *Risperidone compared with placebo for aggression in adults with a learning disability*



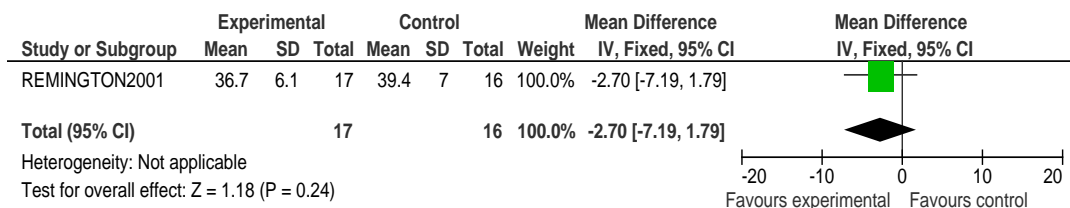
### *Risperidone compared with placebo for symptom severity or improvement in adults with a learning disability*



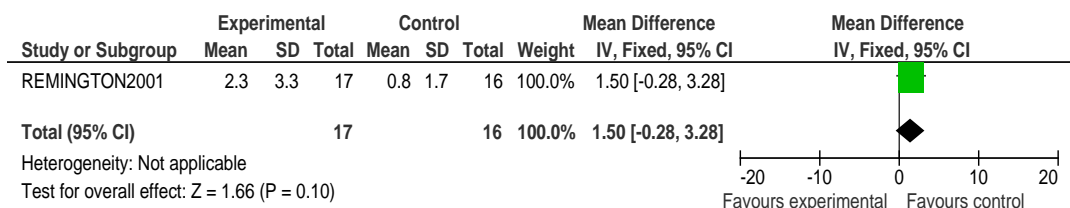
### *Risperidone compared with placebo for quality of life in adults with a learning disability*



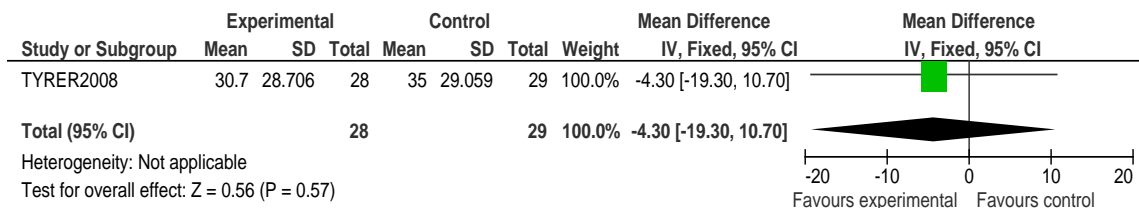
### *Haloperidol compared with placebo for autistic behaviours in adolescents with autism*



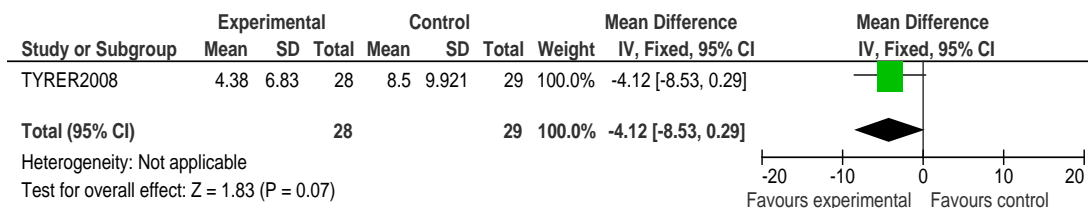
### *Haloperidol compared with placebo for side effects (global) in adolescents with autism*



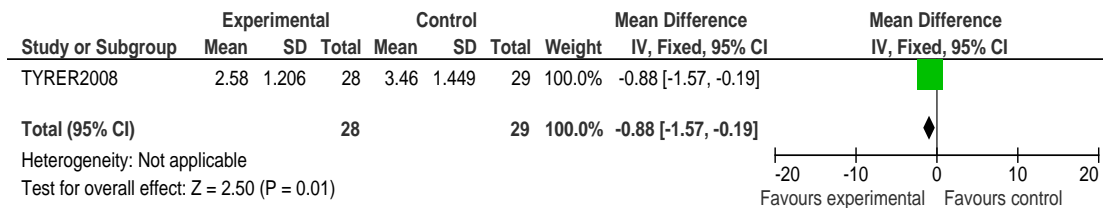
### *Haloperidol compared with placebo for challenging behaviour in adults with a learning disability*



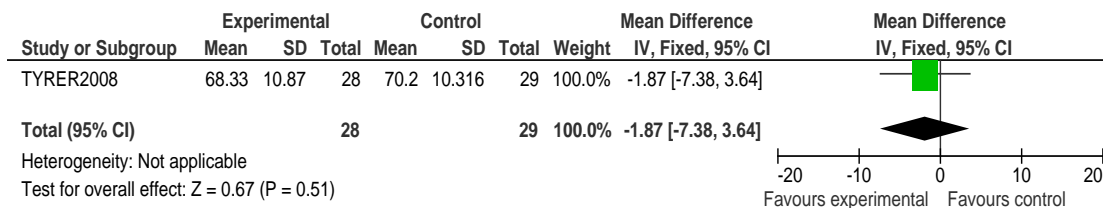
### *Haloperidol compared with placebo for aggression in adults with a learning disability*



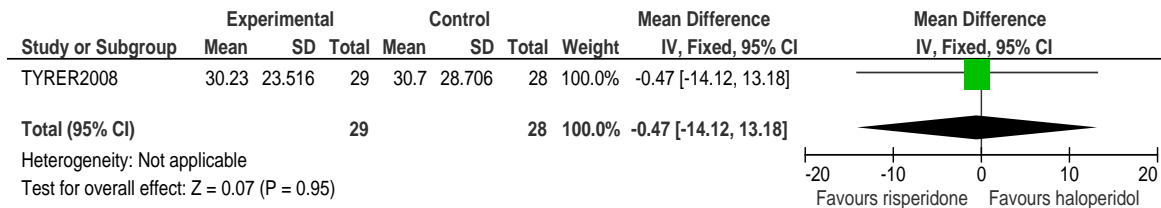
### *Haloperidol compared with placebo for symptom severity or improvement in adults with a learning disability*



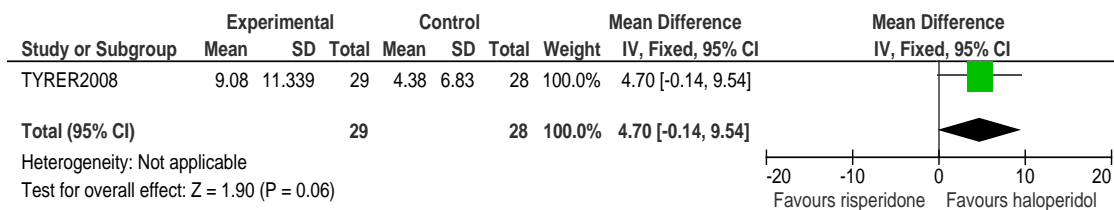
### *Haloperidol compared with placebo for quality of life in adults with a learning disability*



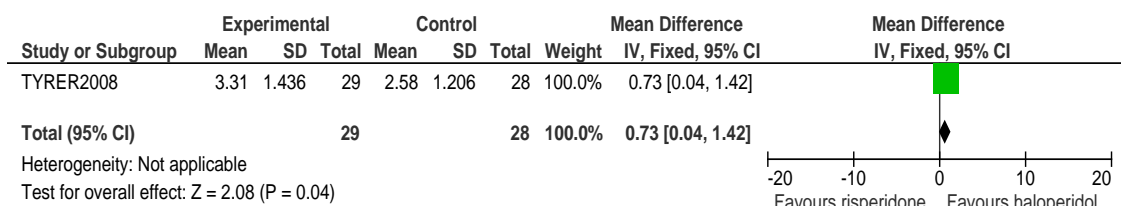
### *Risperidone compared with haloperidol for challenging behaviour in adults with a learning disability*



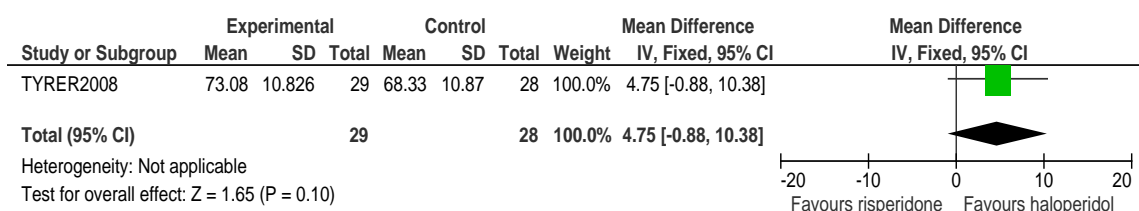
### *Risperidone compared with haloperidol for aggression in adults with a learning disability*



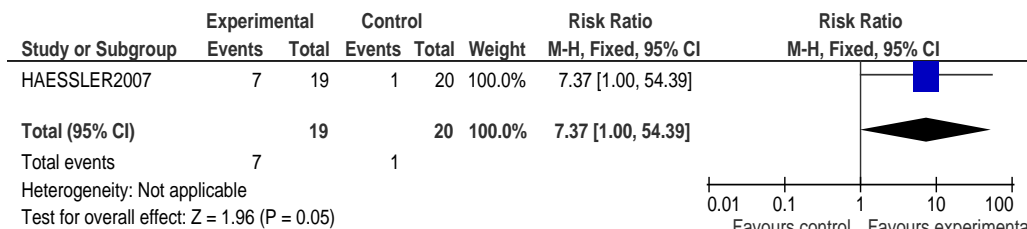
### *Risperidone compared with haloperidol for symptom severity or improvement in adults with a learning disability*



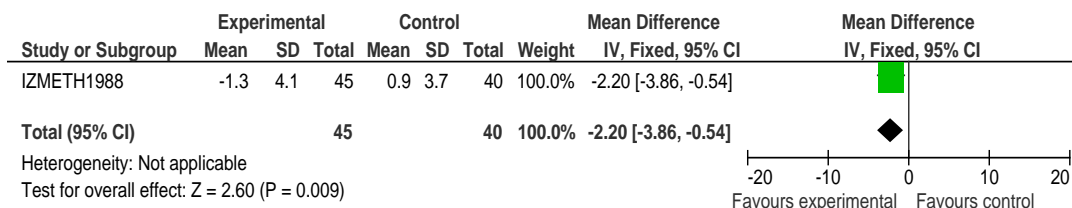
### *Risperidone compared with haloperidol for quality of life in adults with a learning disability*



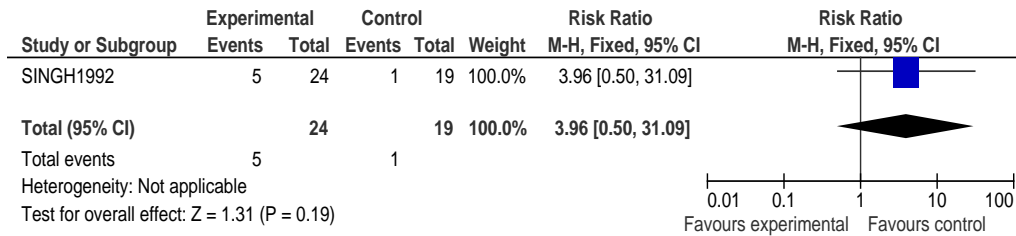
### *Zuclopenthixol compared with placebo for challenging behaviour (aggression; endpoint data) in adults with a learning disability*



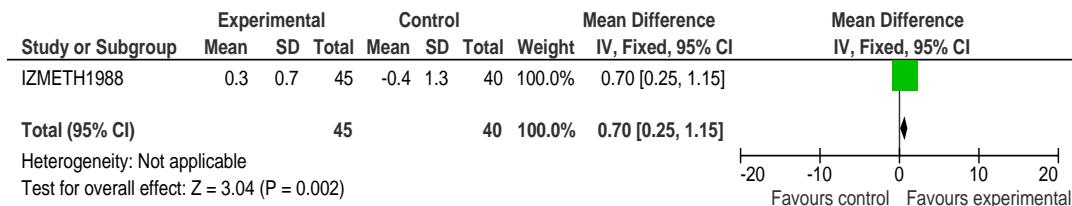
### *Zuclopenthixol compared with placebo for challenging behaviour (irritability; change from baseline data) in adults with a learning disability*



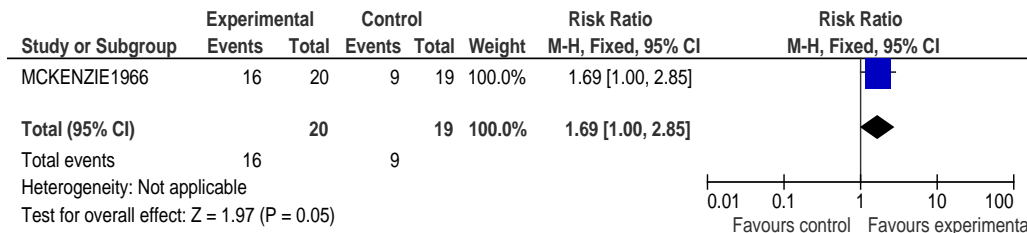
***Zuclopenthixol compared with placebo for symptom severity or improvement (endpoint data) in adults with a learning disability***



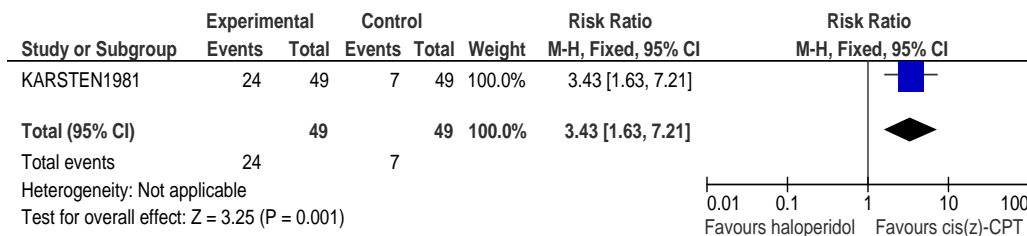
***Zuclopenthixol compared with placebo for symptom severity or improvement (change from baseline data) in adults with a learning disability***



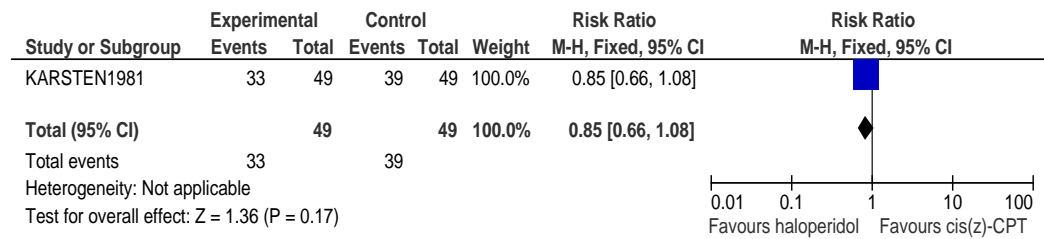
***Prothipendyl compared with placebo for symptom severity or improvement in adults with a learning disability***



***Cis(z)-clopenthixol compared with haloperidol for symptom severity or improvement in adults with a learning disability***

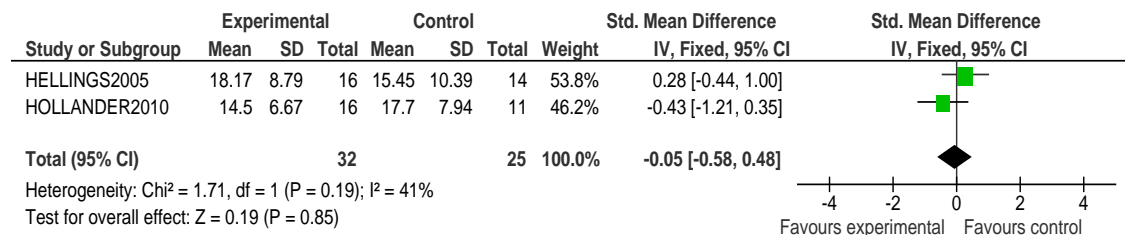


***Cis(z)-clopenthixol (cis(z)-CPT) compared with haloperidol for side effects in adults with a learning disability***

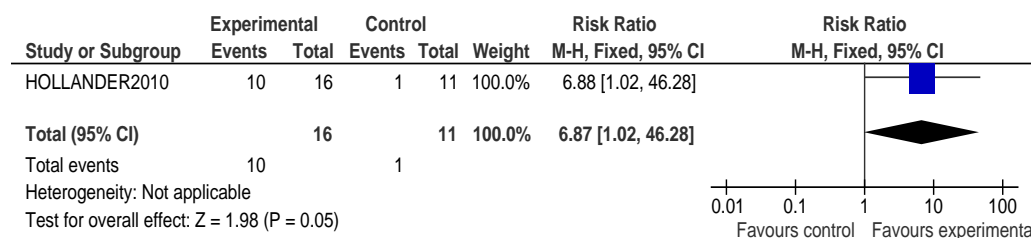


**1.5.2 Anticonvulsants**

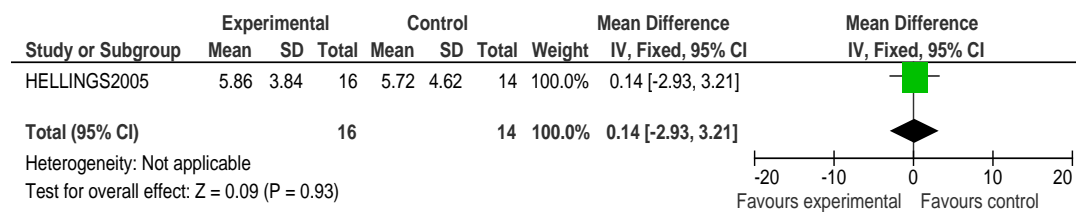
***Valproate compared with placebo for challenging behaviour (irritability; continuous data) in children with autism***



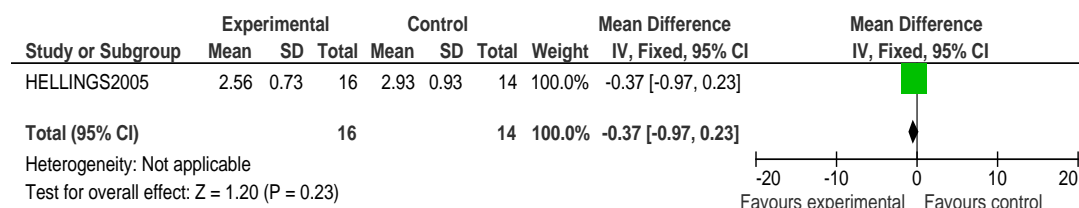
***Valproate compared with placebo for challenging behaviour (irritability; dichotomous data) in children with autism***



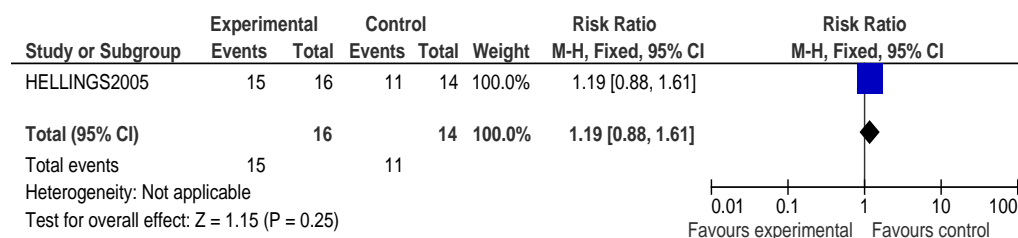
***Valproate compared with placebo for challenging behaviour (aggression) in children with autism***



### Valproate compared with placebo for symptom severity or improvement in children with autism

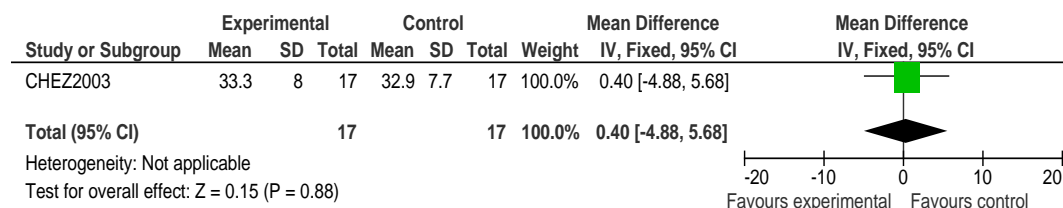


### Valproate compared with placebo for side effects in children with autism

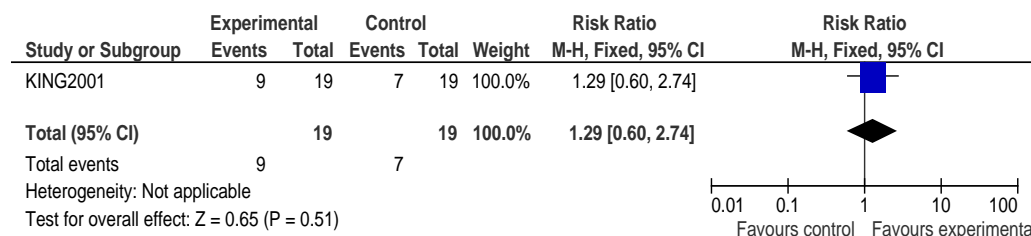


## 1.5.3 Drugs affecting cognition

### Donepezil hydrochloride compared with placebo for autistic behaviours in children with autism

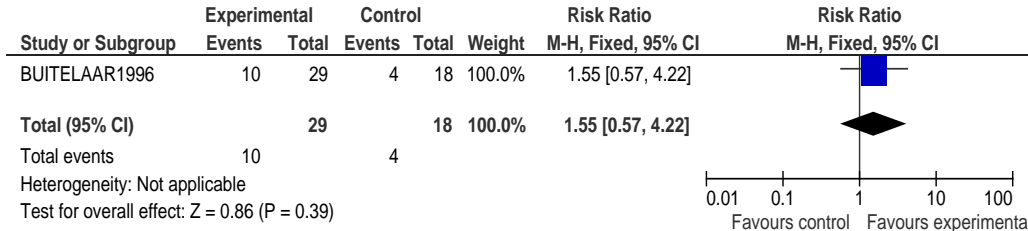


### Amantadine hydrochloride compared with placebo for challenging behaviour (irritability) in children with autism

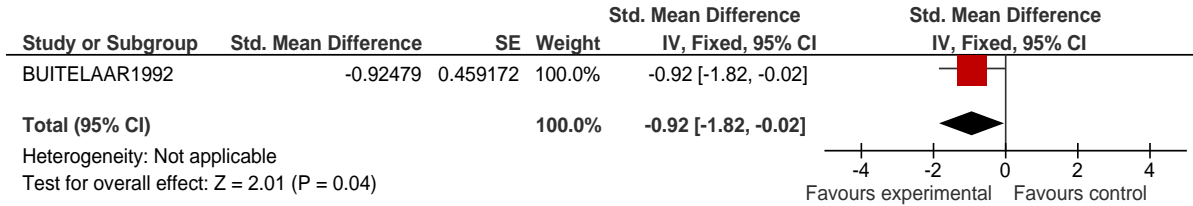


## 1.5.4 Adrenocorticotrophic hormones

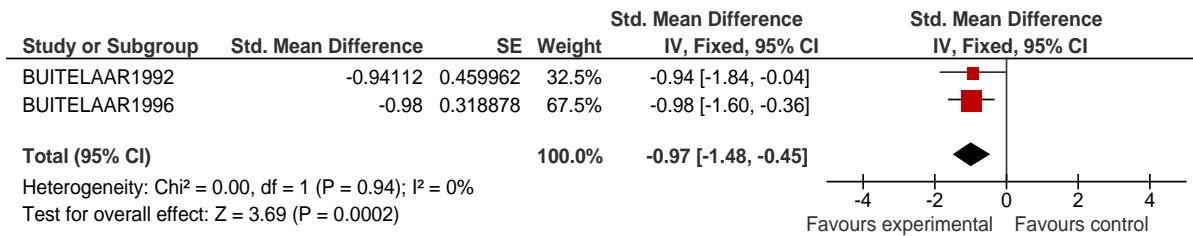
### *ORG 2766 compared with placebo for challenging behaviour (social withdrawal) in children with autism*



### *ORG 2766 compared with placebo for challenging behaviour (social isolation) in children with autism*



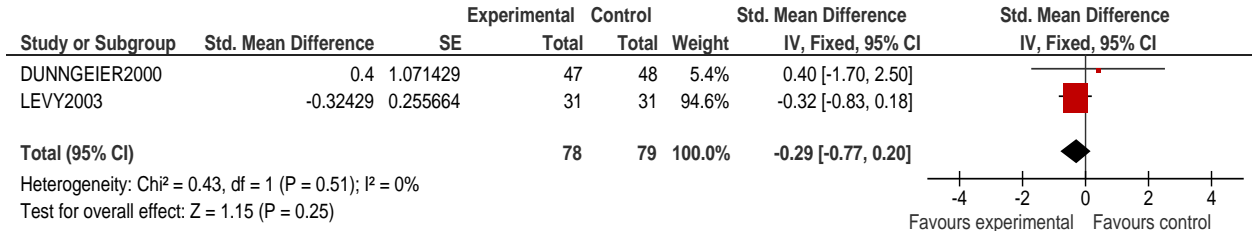
### *ORG 2766 compared with placebo for symptom severity or improvement in children with autism*



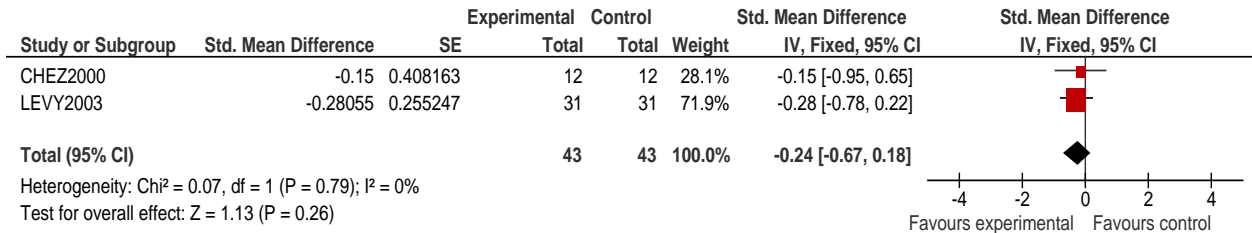


## 1.5.5 Secretin

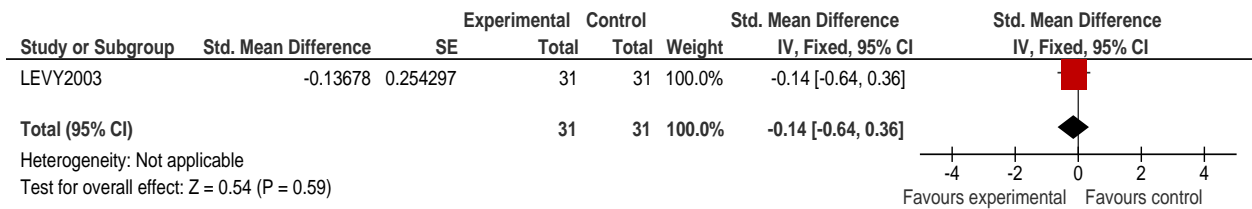
### *Secretin compared with placebo for core autistic symptoms of social-communication difficulties and symbolic behaviour in children with autism*



### *Secretin compared with placebo for autistic behaviours in children with autism*

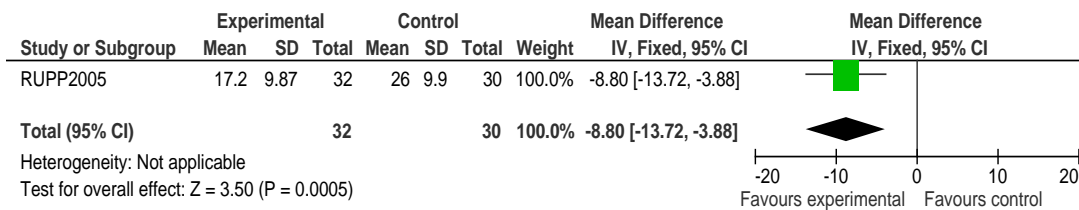


### *Secretin compared with placebo for challenging behaviour in children with autism*

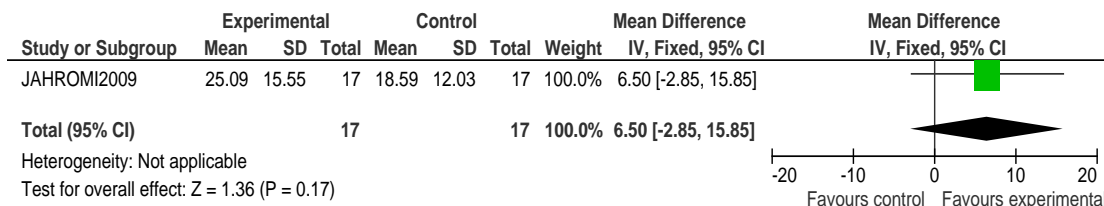


## 1.5.6 Stimulants

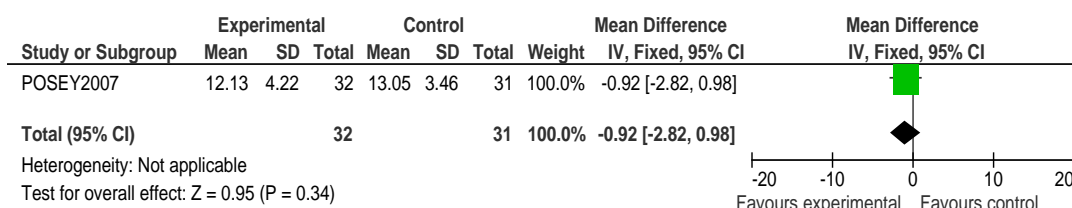
### *Methylphenidate compared with placebo for coexisting hyperactivity in children with autism*



### *Methylphenidate compared with placebo for the core autistic symptom of social-interaction difficulties in children with autism*

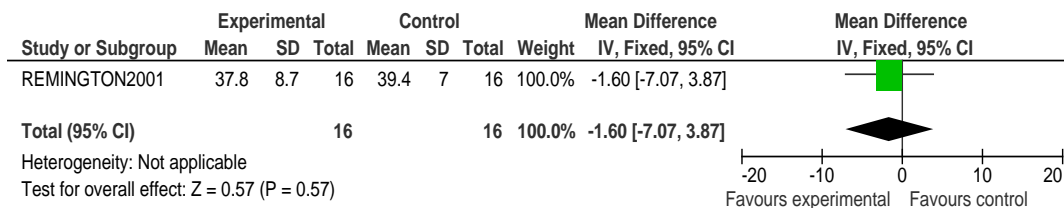


### *Methylphenidate compared with placebo for the core autistic symptom of repetitive behaviour in children with autism*

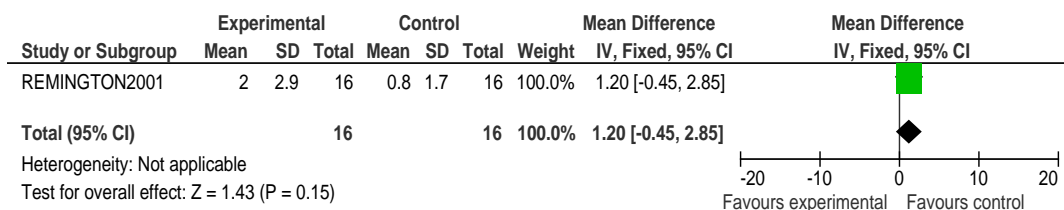


## 1.5.7 Antidepressants

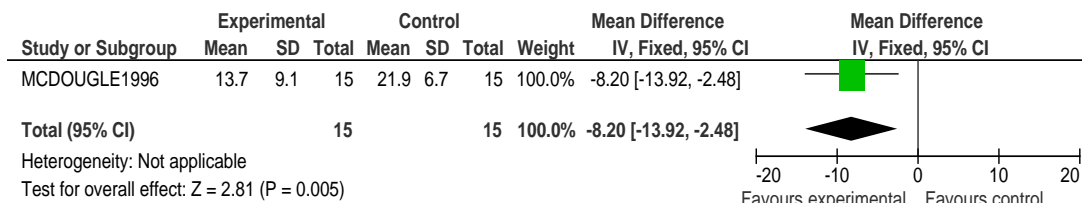
### *Clomipramine compared with placebo for autistic behaviours in adolescents with autism*



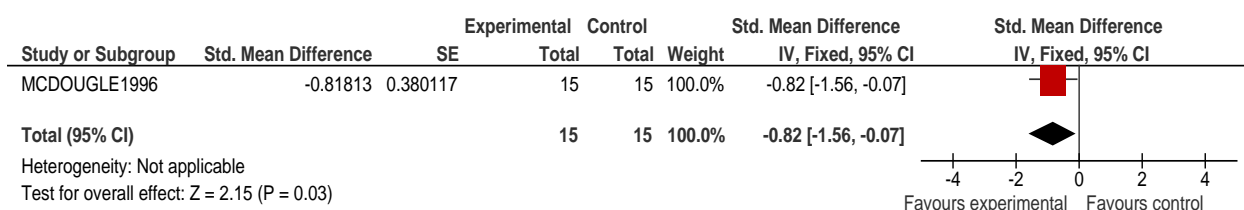
### *Clomipramine compared with placebo for global side effects in adolescents with autism*



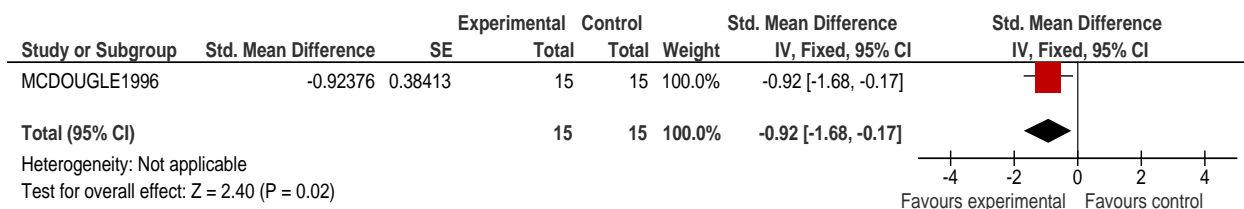
*Fluvoxamine compared with placebo for the core autistic symptom of repetitive behaviour in adults with autism*



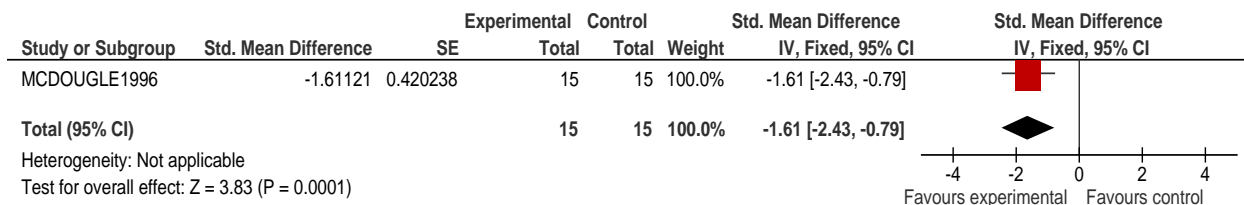
*Fluvoxamine compared with placebo for autistic behaviours in adults with autism*



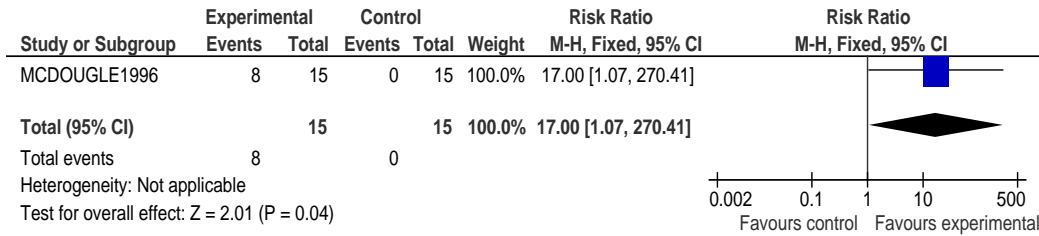
*Fluvoxamine compared with placebo for the challenging behaviour of aggression (change-from-baseline scores) in adults with autism*



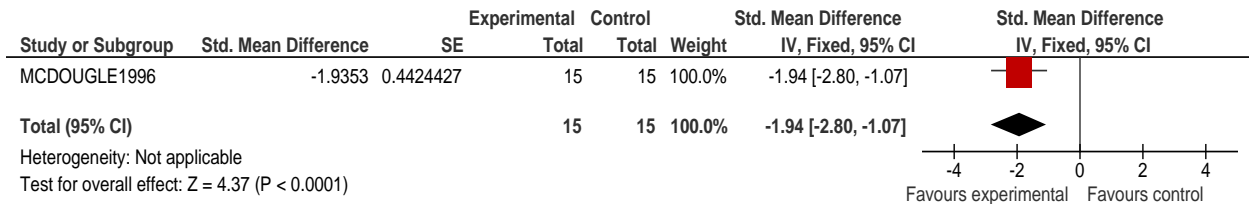
*Fluvoxamine compared with placebo for maladaptive behaviour (change-from-baseline scores) in adults with autism*



***Fluvoxamine compared with placebo for symptom severity or improvement (dichotomous measure) in adults with autism***

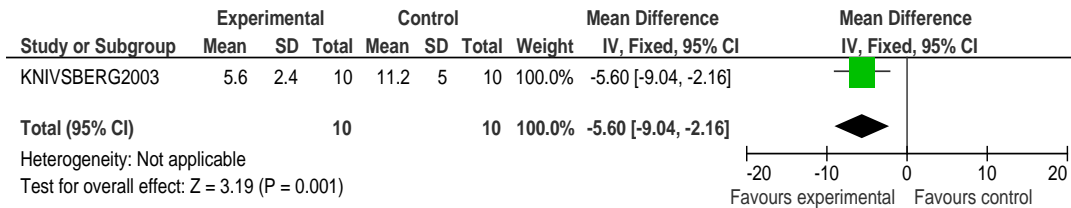


***Fluvoxamine compared with placebo for symptom severity or improvement (continuous measure) in adults with autism***

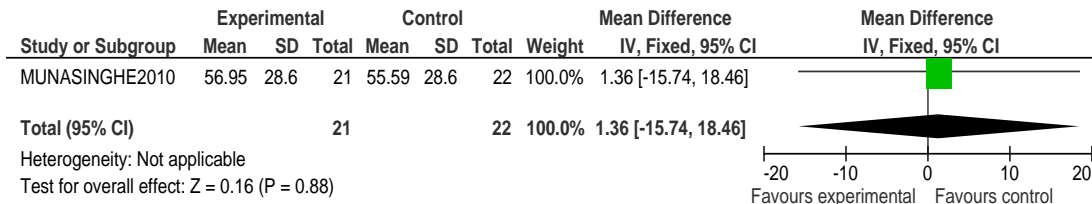


**1.5.8 Restrictive diets, vitamins, minerals and supplements**

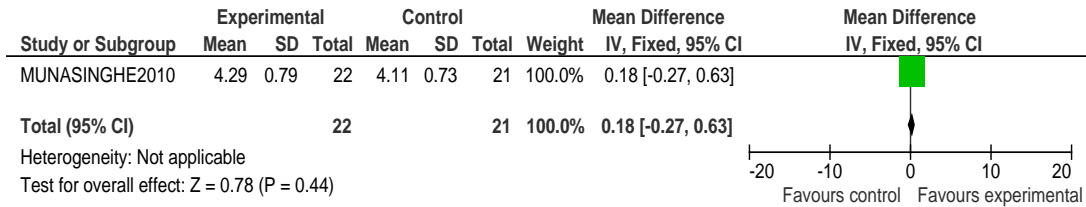
***Gluten- and casein-free diet compared with treatment as usual for autistic behaviours (social isolation and bizarre behaviour) in children with autism***



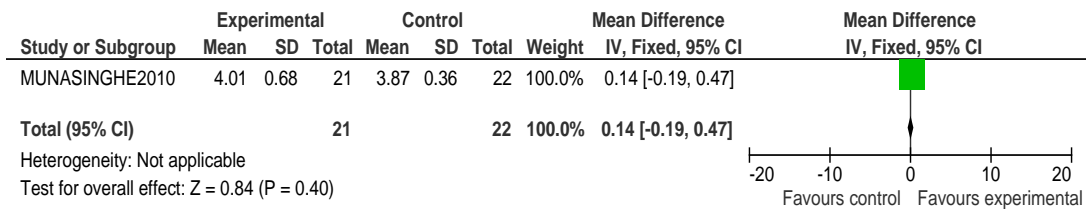
***Digestive enzyme supplementation compared with placebo for core autistic symptoms (social-communication difficulties) in children with autism***



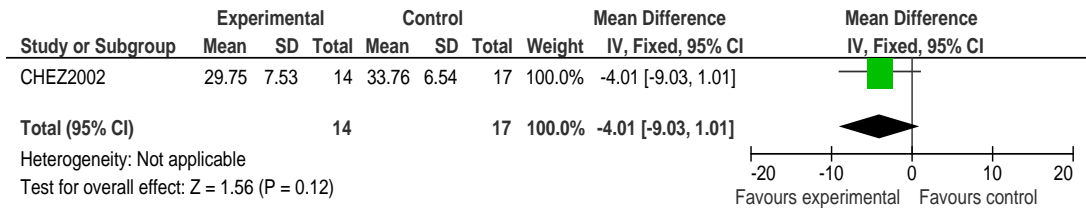
***Digestive enzyme supplementation compared with placebo for challenging behaviour in children with autism***



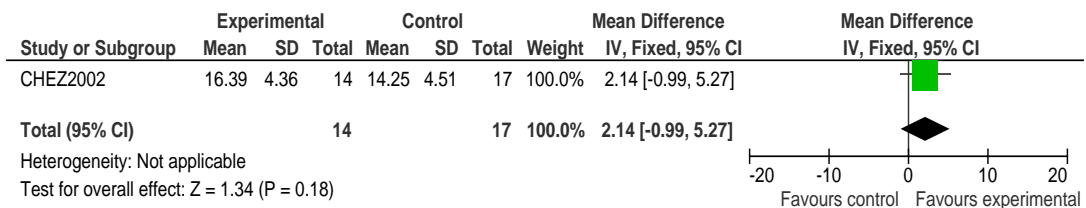
***Digestive enzyme supplementation compared with placebo for gastrointestinal symptoms in children with autism***



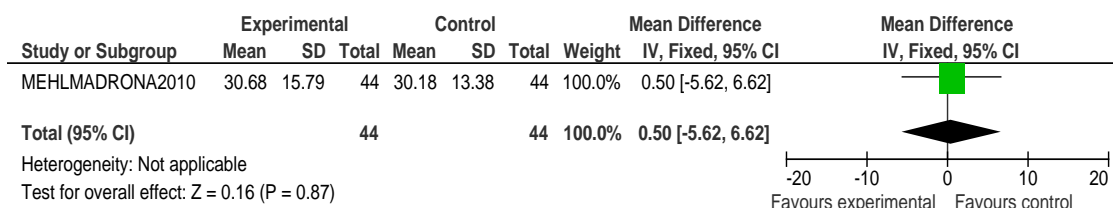
***L-carnosine compared with placebo for autistic behaviours in children with autism***



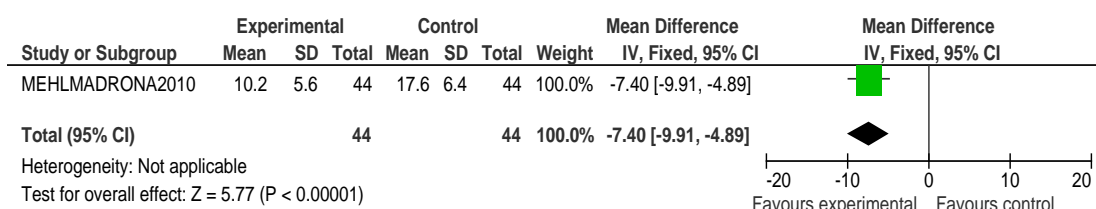
***L-carnosine compared with placebo for symptom severity or improvement in children with autism***



***Micronutrients compared with standard medication for autistic behaviours in children with autism***



***Micronutrients compared with standard medication for challenging behaviour (irritability) in children with autism***



***Micronutrients compared with standard medication for symptom severity or improvement in children with autism***

