Supplementary Online Content

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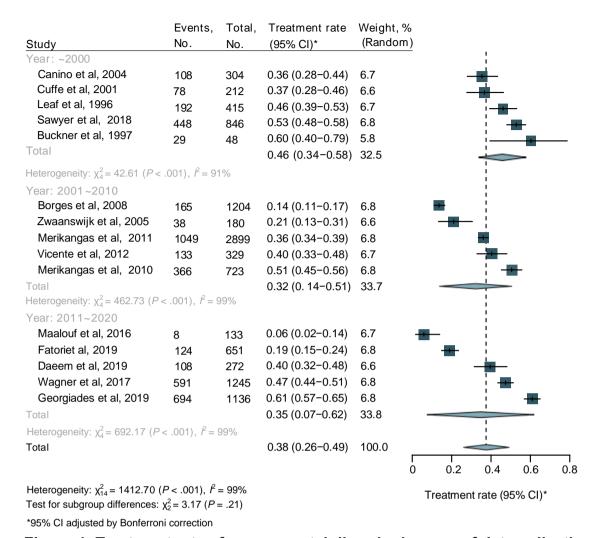
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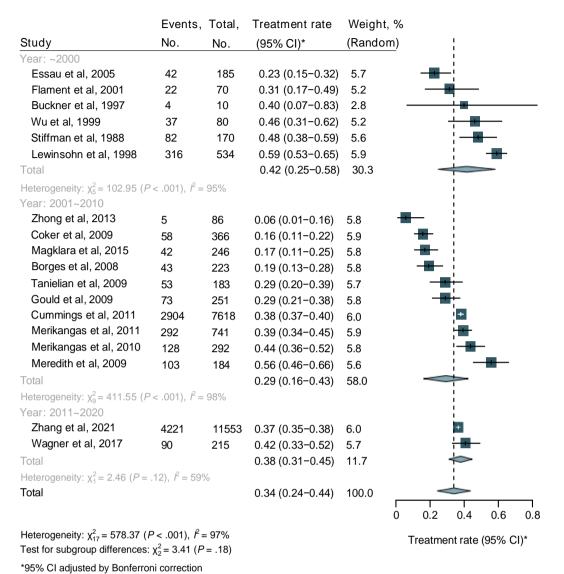
This supplementary material has been provided by the authors to give readers additional information about their work.

eTable. JBI Quality Scores of Included Studies (N=40)

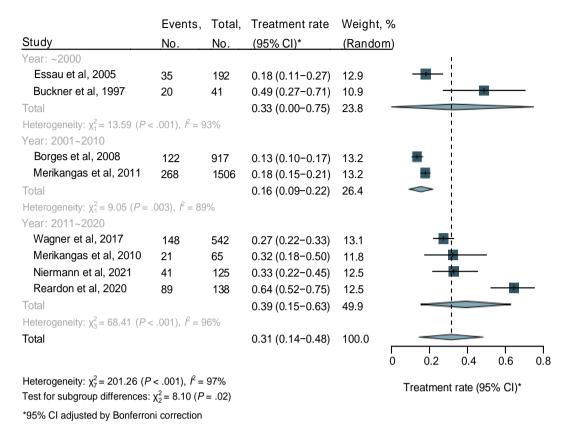
Ctudy		le. JDI Q							Itam 0	Total
Study	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Total
Angold et al, 2002	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	7
Bird et al, 2008	Yes	Yes	Yes	No	Unclear	Yes	No	Yes	Unclear	5
Borges et al, 2008	Yes	Yes	Yes	No	No	Yes	Unclear	Yes	No	5
Buckner et al, 1997	No	Unclear	No	Yes	Yes	Yes	Yes	Yes	Yes	6
Bussing et al, 2003	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	7
Bussing et al, 2011	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	7
Canino et al, 2004	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	7
Chavira et al, 2004	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	6
Coker et al, 2009	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	7
Cuffe et al, 2001	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8
Cummings et al, 2011	Yes	Unclear	Yes	No	Yes	Yes	No	Yes	Unclear	5
Daeem et al, 2019	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	7
Essau et al, 2005	No	Yes	Yes	Yes	Unclear	Yes	No	Yes	No	5
Fatori et al, 2019	Yes	Unclear	Yes	Yes	No	Yes	Yes	Yes	Unclear	6
Flament et al, 2001	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	7
Georgiades et al, 2019	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	7
Gómez-Beneyto et al, 1994	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	8
Gould et al, 2009	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Yes	No	7
Heiervang et al, 2007	Yes	Unclear	Yes	No	No	Yes	Yes	Yes	No	5
Leaf et al, 1996	Yes	No	Yes	Yes	Unclear	Yes	Yes	Yes	Unclear	6
Lewinsohn et al, 1998	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	6
Locke et al, 2017	No	No	Yes	Yes	Yes	Yes	No	Yes	No	5
Maalouf et al, 2016	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	7
Magklara et al, 2015	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9
Meredith et al, 2009	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	6
Merikangas et al, 2010	Yes	Yes	Yes	No	No	Yes	No	Yes	No	5
Merikangas et al, 2011	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8
Niermann et al, 2021	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	7
Reardon et al, 2020	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Unclear	6
Sawyer et al, 2004	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	6
Sawyer et al, 2018	Yes	Unclear	Yes	Yes	No	Yes	No	Yes	No	5
Stiffman et al, 1988	Yes	Unclear	Yes	Yes	Yes	Yes	No	Yes	Yes	7
Tanielian et al, 2009	No	No	Yes	Yes	Yes	Yes	No	Yes	Unclear	5
Vicente et al, 2012	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	8
Wagner et al, 2017	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	6
Wu et al, 1999	Yes	Yes	Yes	Yes	Unclear	Yes	No	Yes	Unclear	6
Wu et al, 2001	Yes	Unclear	Yes	Yes	Unclear	Yes	Yes	Yes	Unclear	6
Zhang et al, 2021	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Unclear	7
=	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	8
Zhong et al, 2013	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	6
Zwaanswijk et al, 2005	INU	162	162	162	162	169	INU	162	INU	U



eFigure 1. Treatment rates for any mental disorder by year of data collection



eFigure 2. Treatment rates for depressive disorders by year of data collection



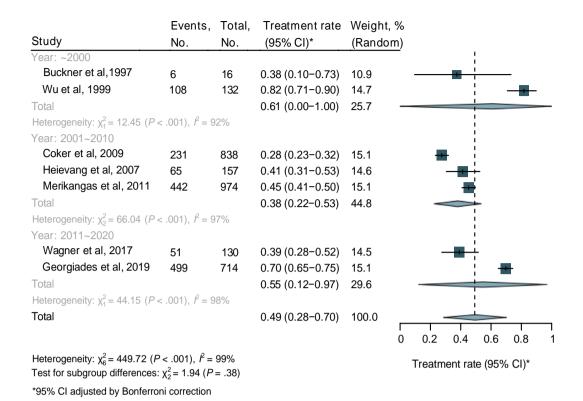
eFigure 3. Treatment rates for anxiety disorders by year of data collection

Study	Events, No.	Total, No.	Treatment rate (95% CI)*	Weight, % (Random)					
Year: ~2000				· · ·			!		
Bussing et al, 2003	89	389	0.23 (0.17-0.29)	12.5			į		
Sawyer et al, 2004	112	398	0.28 (0.22-0.35)		-+	H	i		
Total			0.25 (0.18-0.33)	25.1		>	1		
Heterogeneity: $\chi_1^2 = 2.88$ ($P =$.09), $l^2 = 65^\circ$	%					1		
Year: 2001~2010							1		
Coker et al, 2009	149	513	0.29 (0.24-0.35)	12.5	-	-	1		
Merikangas et al, 2010	218	457	0.48 (0.41-0.54)	12.5		-+	H'		
Merikangas et al, 2011	369	617	0.60 (0.54-0.65)	12.6			+-		
Heiervang et al, 2007	61	82	0.74 (0.59-0.86)	12.2			; <u> </u>	-	
Bussing et al, 2011	133	168	0.79 (0.69-0.87)	12.5			1 .		
Locke et al, 2017	9192	9412	0.98 (0.97-0.98)	12.6			1	_	+
Total			0.65 (0.37-0.92)	74.9			-		_
Heterogeneity: $\chi_5^2 = 2019.42$ ($P < .001), I^2$	= 100%					1		
Total			0.55 (0.28-0.82)	100.0	_		!		
									\neg
					0.2	0.4	0.6	0.8	1
Heterogeneity: $\chi_7^2 = 4127.42$ (A	P < .001), <i>f</i> ²	= 100%			Т	reatme	nt rate	(95% C	I)*

eFigure 4. Treatment rates for ADHD by year of data collection

Test for subgroup differences: $\chi_1^2 = 14.27 \ (P < .001)$

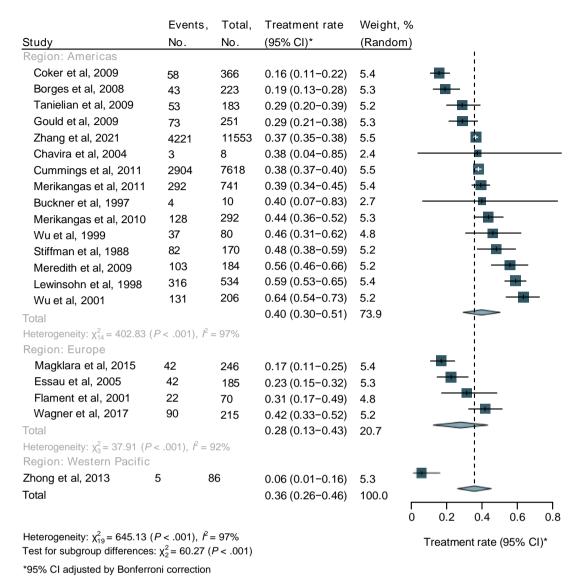
*95% CI adjusted by Bonferroni correction



eFigure 5. Treatment rates for behavior disorders by year of data collection

	Events,	Total,	Treatment rate	Weight	, %
Study	No.	No.	(95% CI)*	(Rando	<u>m)</u>
Region: Americas					i
Borges et al, 200	165	1204	0.14 (0.11-0.17)	6.1	-
Fatoriet al, 2019	124	651	0.19 (0.15-0.24)	6.0	-
Canino et al, 2004	108	304	0.36 (0.28-0.44)	5.9	
Angoldet al, 2002	70	194	0.36 (0.27-0.46)	5.8	
Merikangas et al, 2011	1049	2899	0.36 (0.34-0.39)	6.1	曄
Cuffeet al, 2001	78	212	0.37 (0.28-0.46)	5.8	-
Leaf et al, 1996	192	415	0.46 (0.39-0.53)	5.9	;
Merikangas et al, 2010	366	723	0.51 (0.45-0.56)	6.0	
Sawyer et al, 2018	448	846	0.53 (0.48-0.58)	6.0	
Buckner et al, 1997	29	48	0.60 (0.40-0.79)	5.0	-
Georgiades et al, 2019	694	1136	0.61 (0.57-0.65)	6.0	-
Total			0.40 (0.28-0.53)	64.7	
Heterogeneity: $\chi_{10}^2 = 1110.61 \ (P <)$	001), $l^2 = 99$	9%			
Region: Europe					
Zwaanswijk et al, 2005	38	180	0.21 (0.13-0.31)	5.9	-
Gómez-Beneyto et al, 1994	49	114	0.43 (0.30-0.56)	5.6	- =
Wagner et al, 2017	591	1245	0.47 (0.44-0.51)	6.0	=
Total			0.37 (0.14-0.60)	17.5	
Heterogeneity: $\chi_2^2 = 61.73 \ (P < .001)$), $l^2 = 97\%$				į
Region: Eastern Mediterranea	n				į
Maalouf et al, 2016	8	133	0.06 (0.02-0.14)	6.0	
Daeem et al, 2019	108	272	0.40 (0.32-0.48)	5.9	- -
Vicente et al, 2012	133	329	0.40 (0.33-0.48)	5.9	- <u>F</u>
Total			0.29 (0.00-0.60)	17.8	
Heterogeneity: $\chi_2^2 = 140.9 \ (P < .001)$), $l^2 = 99\%$;
Total			0.38 (0.27-0.48)	100.0	
					0 0.2 0.4 0.6 0.8
Heterogeneity: $\chi_{16}^2 = 1416.09 \ (P <$	001) ^P = 00	1%			
Test for subgroup differences: $\chi_2^2 = 0$					Treatment rate (95% CI)*
*95% CI adjusted by Bonferroni cor	rection				

eFigure 6. Treatment rates for any mental disorder by regions



eFigure 7. Treatment rates for depressive disorders by regions

	Events,	Total,	Treatment rate	Weight, %	, D
Study	No.	No.	(95% CI)*	(Random)	
Region: Americas					<u> </u>
Borges et al, 2008	122	917	0.13 (0.10-0.17)	11.9	=
Merikangas et al, 2011	268	1506	0.18 (0.15-0.21)	11.9	=
Chavira et al, 2004	21	67	0.31 (0.17-0.49)	10.6	
Merikangas et al, 2010	21	65	0.32 (0.18-0.50)	10.5	
Buckner et al, 1997	20	41	0.49 (0.27-0.71)	9.6	-
Total			0.27 (0.11-0.44)	54.4	
Heterogeneity: $\chi_4^2 = 41.2$ (P <	.001), $l^2 = 9$	0%			1
Region: Europe					1
Essau et al, 2005	35	192	0.18 (0.11-0.27)	11.6	-
Wagner et al, 2017	148	542	0.27 (0.22-0.33)	11.8	
Niermann et al, 2021	41	125	0.33 (0.22-0.45)	11.1	
Reardon et al, 2020	89	138	0.64 (0.52-0.75)	11.2	
Total			0.36 (0.08-0.63)	45.6	
Heterogeneity: $\chi_3^2 = 91.97$ (P	$< .001), I^2 = 1$	97%			;
Total			0.31 (0.16-0.46)	100.0	
				1	0 0.2 0.4 0.6 0.8
Heterogeneity: $\chi_8^2 = 205.69$ (F				Treatment rate (95% CI)*	

Test for subgroup differences: $\chi_1^2 = 0.51$ (P = .48)

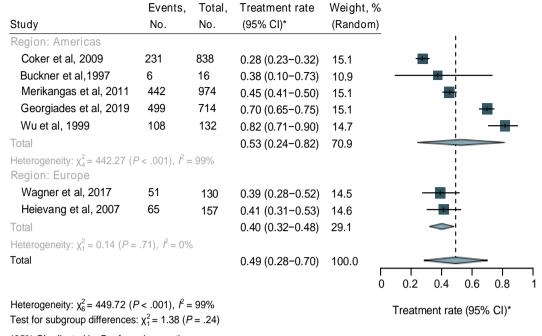
eFigure 8. Treatment rates for anxiety disorders by regions

	Events,	Total,	Treatment rate	Weight, %					
Study	No.	No.	(95% CI)*	(Random)					
Region: Americas							1		
Bussing et al, 2003	89	389	0.23 (0.17-0.29)	10.1	-		İ		
Sawyer et al, 2004	112	398	0.28 (0.22-0.35)	10.1	-+	H	1		
Coker et al, 2009	149	513	0.29 (0.24-0.35)	10.1	-	-	1		
Merikangas et al, 2010	218	457	0.48 (0.41-0.54)	10.1		-+	⊢¦		
Bird et al, 2008	65	109	0.60 (0.46-0.72)	9.9		_		_	
Merikangas et al, 2011	369	617	0.60 (0.54-0.65)	10.1			-		
Bussing et al, 2011	133	168	0.79 (0.69-0.87)	10.1			- [.		
Chavira et al, 2004	23	29	0.79 (0.53-0.95)	9.4			<u> </u>		_
Locke et al, 2017	9192	9412	0.98 (0.97-0.98)	10.2			i		+
Total			0.56 (0.31-0.80)	90.2			i		
Heterogeneity: $\chi_8^2 = 4172.18$ (P < .001), P	= 100%					!		
Region: Europe							į		
Heiervang et al, 2007	61	82	0.74 (0.59-0.86)	9.8			<u>:</u> —		
Total			0.58 (0.35-0.80)	100.0					
			, ,					ı	
					0.2	0.4	0.6	0.8	1
Heterogeneity: χ_{0}^{2} = 4192.28 (<i>H</i> Test for subgroup differences:					Trea	tment r	ate (95º	% CI)*	

*95% CI adjusted by Bonferroni correction

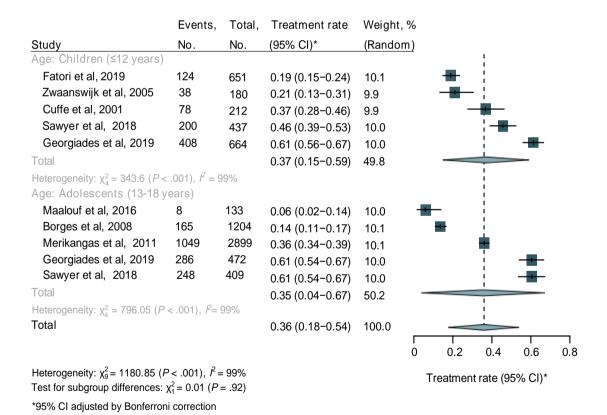
eFigure 9. Treatment rates for ADHD by regions

^{*95%} CI adjusted by Bonferroni correction

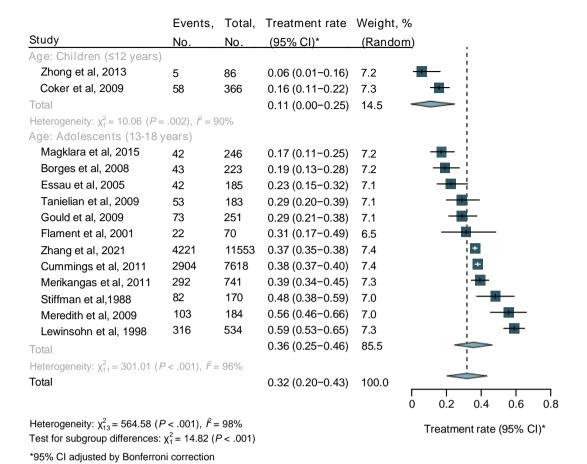


*95% CI adjusted by Bonferroni correction

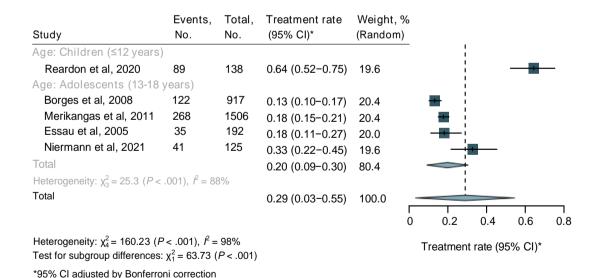
eFigure 10. Treatment rates for behavior disorders by regions



eFigure 11. Treatment rates for any mental disorder by age groups



eFigure 12. Treatment rates for depressive disorders by age groups

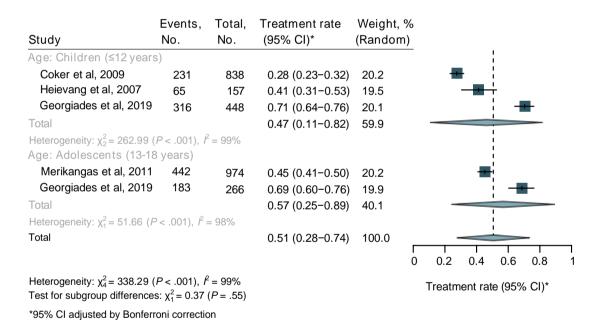


eFigure 13. Treatment rates for anxiety disorders by age groups

Study	Events, No.	Total, No.	Treatment rate (95% CI)*	Weight, % (Random)					
Age: Children (≤12 year	s)						 		
Bussing et al, 2003	89	389	0.23 (0.17-0.29)	16.9	-		1		
Coker et al, 2009	149	513	0.29 (0.24-0.35)	16.9	-	_	l I		
Bird et al, 2008	65	109	0.60 (0.46-0.72)	16.3		_	++	_	
Heiervang et al, 2007	61	82	0.74 (0.59-0.86)	16.3			¦ —		
Bussing et al, 2011	133	168	0.79 (0.69-0.87)	16.7			-		
Total			0.53 (0.21-0.85)	83.1					
Heterogeneity: $\chi_4^2 = 319.08$	(P < .001), <i>f</i>	$^{2} = 99\%$!		
Age: Adolescents (13-1	8 years)						:		
Merikangas et al, 2011	369	617	0.60 (0.54-0.65)	16.9			-		
Total			0.54 (0.28-0.80)	100.0	-				
									\neg
					0.2	0.4	0.6	0.8	1
H-4	(D 004) É	2 000/			Trea	tment r	ate (95	% CI)*	

Heterogeneity: $\chi_5^2 = 393.15$ (P < .001), $f^2 = 99\%$ Test for subgroup differences: $\chi_1^2 = 0.35$ (P = .55)

eFigure 14. Treatment rates for ADHD by age groups



eFigure 15. Treatment rates for behavior disorders by age groups

^{*95%} CI adjusted by Bonferroni correction

	Events,	Total,	Treatment rate	Weight, %	6
Study	No.	No.	(95% CI)*	(Random)	
Income level: High					į
Zwaanswijk et al, 2005	38	180	0.21 (0.13-0.31)	5.9	 ;
Canino et al, 2004	108	304	0.36 (0.28-0.44)	5.9	- =
Angold et al, 2002	70	194	0.36 (0.27-0.46)	5.8	
Merikangas et al, 2011	1049	2899	0.36 (0.34-0.39)	6.1	=
Cuffe et al, 2001	78	212	0.37 (0.28-0.46)	5.8	
Daeem et al, 2019	108	272	0.40 (0.32-0.48)	5.9	- -
Gómez-Beneyto et al, 1994	49	114	0.43 (0.30-0.56)	5.6	- ;
Leaf et al, 1996	192	415	0.46 (0.39-0.53)	5.9	; -
Wagner et al, 2017	591	1245	0.47 (0.44-0.51)	6.0	; =
Merikangas et al, 2010	366	723	0.51 (0.45-0.56)	6.0	; =
Sawyer et al, 2018	448	846	0.53 (0.48-0.58)	6.0	; =
Buckner et al, 1997	29	48	0.60 (0.40-0.79)	5.0	
Georgiades et al, 2019	694	1136	0.61 (0.57-0.65)	6.0	-
Total			0.43 (0.35-0.52)	76.0	-
Heterogeneity: $\chi_{12}^2 = 346.76$ ($P < 0.00$) Income level: Upper middle	001), P = 97	%	, ,		
Borges et al, 2008	165	1204	0.14 (0.11-0.17)	6.1	į
Fatori et al, 2019	124	651	0.14 (0.11-0.17) 0.19 (0.15-0.24)	6.1	=
Vicente et al, 2012	133			6.0	-
Total	100	329	0.40 (0.33-0.48) 0.24 (0.02-0.47)	5.9 18.0	
Heterogeneity: $\chi_2^2 = 87.47$ ($P < .00$ Income level: Lower middle	1), <i>f</i> ² = 98%		0.24 (0.02-0.47)	16.0	
Maalouf et al, 2016	8	133	0.06 (0.02-0.14)	6.0	_
Total			0.38 (0.27-0.48)	100.0	
			,	Г	
				Ċ	0.2 0.4 0.6 0.8
Heterogeneity: $\chi_{16}^2 = 1416.09 \ (P < .001), \ \hat{P} = 99\%$ Test for subgroup differences: $\chi_2^2 = 104.70 \ (P < .001)$					Treatment rate (95% CI)*

^{*95%} CI adjusted by Bonferroni correction

eFigure 16. Treatment rates for any mental disorder by income groups

	Events,	Total,	Treatment rate	Weight, %
Study	No.	No.	(95% CI)*	(Random)
Income level: High				<u> </u>
Coker et al, 2009	58	366	0.16 (0.11-0.22)	5.4
Magklara et al, 2015	42	246	0.17 (0.11-0.25)	5.4
Essau et al, 2005	42	185	0.23 (0.15-0.32)	5.3
Tanielian et al, 2009	53	183	0.29 (0.20-0.39)	5.2
Gould et al, 2009	73	251	0.29 (0.21-0.38)	5.3
Flament et al, 2001	22	70	0.31 (0.17-0.49)	4.8
Zhang et al, 2021	4221	11553	0.37 (0.35-0.38)	5.5
Chavira et al, 2004	3	8	0.38 (0.04-0.85)	2.4
Cummings et al, 2011	2904	7618	0.38 (0.37-0.40)	5.5
Merikangas et al, 2011	292	741	0.39 (0.34-0.45)	5.4
Buckner et al, 1997	4	10	0.40 (0.07-0.83)	2.7
Wagner et al, 2017	90	215	0.42 (0.33-0.52)	5.2
Merikangas et al, 2010	128	292	0.44 (0.36-0.52)	5.3
Wu et al, 1999	37	80	0.46 (0.31-0.62)	4.8
Stiffman et al, 1988	82	170	0.48 (0.38-0.59)	5.2
Meredith et al, 2009	103	184	0.56 (0.46-0.66)	5.2
Lewinsohn et al, 1998	316	534	0.59 (0.53-0.65)	5.4
Wu et al, 2001	131	206	0.64 (0.54-0.73)	5.2
Total			0.39 (0.29-0.48)	89.3
Heterogeneity: $\chi_{17}^2 = 452.16$ (F	$p < .001$), $l^2 =$	96%		
Income level: Upper midd	lle			
Zhong et al, 2013	5	86	0.06 (0.01-0.16)	5.3
Borges et al, 2008	43	223	0.19 (0.13-0.28)	5.3
Total			0.13 (0.00-0.31)	10.7
Heterogeneity: $\chi_1^2 = 13.59$ (P <	$(.001), I^2 = 9$	3%		
Total			0.36 (0.26-0.46)	100.0
				0 0.2 0.4 0.6 0.8
Heterogeneity: $\chi_{19}^2 = 645.13$ (F	P < .001), <i>P</i> =	97%		Treatment rate (95% CI)*
Test for subgroup differences:				rieatilientrate (93 % CI)

rest τοι subgroup afferences: χ₁= 11.93 (*P* *95% CI adjusted by Bonferroni correction

eFigure 17. Treatment rates for depressive disorders by income groups

	Events,	Total,	Treatment rate	Weight, %	0				
Study	No.	No.	(95% CI)*	(Random)					
Income level: High					_		! !		
Merikangas et al, 2011	268	1506	0.18 (0.15-0.21)	11.9		-	 		
Essau et al, 2005	35	192	0.18 (0.11-0.27)	11.6			1 1		
Wagner et al, 2017	148	542	0.27 (0.22-0.33)	11.8		-+	<u> </u> 		
Chavira et al, 2004	21	67	0.31 (0.17-0.49)	10.6			-		
Merikangas et al, 2010	21	65	0.32 (0.18-0.50)	10.5			•		
Niermann et al, 2021	41	125	0.33 (0.22-0.45)	11.1			<u> </u>		
Buckner et al, 1997	20	41	0.49 (0.27-0.71)	9.6		-			
Reardon et al, 2020	89	138	0.64 (0.52-0.75)	11.2			!		_
Total			0.34 (0.18-0.49)	88.1					
Heterogeneity: $\chi_7^2 = 160.35$ (P < .001), I	² = 96%					! !		
Income level: Upper mic	ldle						! !		
Borges et al, 2008	122	917	0.13 (0.10-0.17)	11.9		+	 		
Total			0.31 (0.16-0.46)	100.0					
						ı	ı	ı	
					0	0.2	0.4	0.6	0.8
		_			T	reatmen	t rate (9	5% CI)*	

Heterogeneity: $\chi_8^2 = 205.69 \ (P < .001), \ \hat{l}^2 = 96\%$ Test for subgroup differences: $\chi_1^2 = 12.61 \ (P < .001)$

eFigure 18. Treatment rates for anxiety disorders by income groups

	Study,	Events,	Total,	Treatment rate	
Outcomes	No.	No.	No.	(95% CI)*	
Current				, ,	
ADHD	1	89	389	0.23 (0.17-0.29)	-
Last 3 months					
Any mental disorder	1	70	194	0.36 (0.27-0.46)	-
Last 6 months					
Any mental disorder	2	711	1184	0.49 (0.14-0.85)	
Depressive disorders	3	158	377	0.37 (0.07-0.67)	
Anxiety disorders	1	11	41	0.27 (0.11-0.49)	
ADHD	1	112	398	0.35 (0.15-0.54)	
Behavior disorders	2	504	730	0.52 (0.00-1.00)	
Last year					
Any mental disorder	7	1451	4001	0.37 (0.22-0.53)	
Depressive disorders	10	7655	20647	0.37 (0.24-0.49)	
Anxiety disorders	2	143	982	0.22 (0.00-0.48)	
ADHD	3	354	734	0.53 (0.37-0.69)	
Behavior disorders	1	80	132	0.61 (0.48-0.72)	
Lifetime					
Any mental disorder	8	2036	5574	0.36 (0.19-0.52)	
Depressive disorders	9	866	2287	0.33 (0.17-0.49)	
Anxiety disorders	7	622	2611	0.34 (0.16-0.52)	
ADHD	6	9927	10821	0.70 (0.43-0.97)	
Behavior disorders	6	903	2247	0.46 (0.24-0.68)	
95% CI adjusted by Bonfe	erroni corre	ection			0 0.2 0.4 0.6 0.8 1 Treatment rate (95% CI)

^{95%} CI adjusted by Bonferroni correction

eFigure 19. Subgroup by timeframe

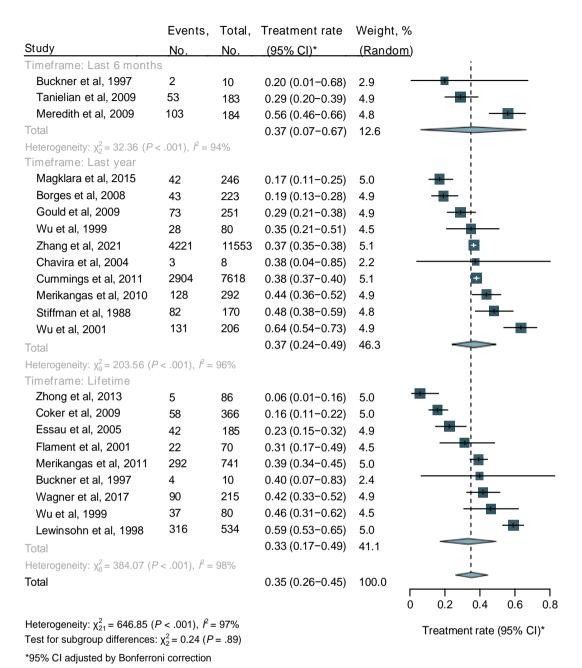
^{*95%} CI adjusted by Bonferroni correction

	Events,	Total,	Treatment rate	Weight,	%				
Study	No	No.	(95% CI)*	(Randor	n)				
Timeframe: Last 3 months							i i		
Angold et al, 2002	70	194	0.36 (0.27-0.46)	5.5		_	-		
Timeframe: Last 6 months							ļ		
Buckner et al, 1997	17	48	0.35 (0.18-0.56)	4.8			-	_	
Georgiades et al, 2019	694	1136	0.61 (0.57-0.65)	5.8			į	-	
Total			0.49 (0.14-0.85)	10.5					
Heterogeneity: $\chi_1^2 = 13.25 \ (P < .001)$), $l^2 = 92\%$						į		
Timeframe: Last year							į		
Borges et al, 2008	165	1204	0.14 (0.11-0.17)	5.8	- 1	•	i		
Zwaanswijket al, 2005	38	180	0.21 (0.13-0.31)	5.6		_	, <u>i</u>		
Canino et al, 2004	108	304	0.36 (0.28-0.44)	5.6		_	-		
Vicente et al, 2012	133	329	0.40 (0.33-0.48)	5.6			-		
Leaf et al, 1996	192	415	0.46 (0.39-0.53)	5.7				_	
Merikangas et al, 2010	366	723	0.51 (0.45-0.56)	5.7			¦ +	-	
Sawyer et al, 2018	448	846	0.53 (0.48-0.58)	5.7				+	
Total			0.37 (0.22-0.53)	39.7				-	
Heterogeneity: $\chi_6^2 = 643.37 \ (P < .00)$	(1), P = 99%						1		
Timeframe: Lifetime							I I		
Maalouf et al, 2016	8	133	0.06 (0.02-0.14)	5.7	-	-	1		
Fatori et al, 2019	124	651	0.19 (0.15-0.24)	5.8			1		
Merikangas et al, 2011	1049	2899	0.36 (0.34-0.39)	5.8			-		
Cuffe et al, 2001	78	212	0.37 (0.28-0.46)	5.5		_			
Daeem et al, 2019	108	272	0.40 (0.32-0.48)	5.6					
Gómez-Beneyto et al, 1994	49	114	0.43 (0.30-0.56)	5.3		-	- 	_	
Wagner et al, 2017	591	1245	0.47 (0.44-0.51)	5.8			-	-	
Buckner et al, 1997	29	48	0.60 (0.40-0.79)	4.7			ļ	•	_
Total			0.36 (0.19-0.52)	44.2				-	
Heterogeneity: $\chi_7^2 = 396.46 \ (P < .00)$	(1), F = 98%						į		
Total			0.38 (0.28-0.48)	100.0		-	\Diamond		
								ı	
					0	0.2	0.4	0.6	8.0
					Tr	eatmen	t rate (95	5% CI)*	
Heterogeneity: $v_{i-}^2 = 1416.10 (P < 1)$	001). $l^2 = 99$	%					`	,	

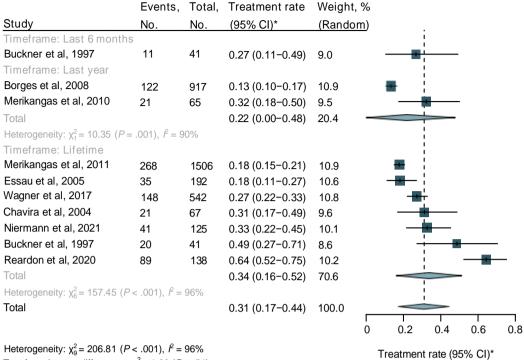
Heterogeneity: χ^2_{17} = 1416.10 (P < .001), \hat{f} = 99% Test for subgroup differences: χ^2_3 = 1.02 (P = .80)

eFigure 20. Treatment rates for any mental disorder by timeframes

^{*95%} CI adjusted by Bonferroni correction



eFigure 21. Treatment rates for depressive disorders by timeframes



Test for subgroup differences: $\chi_2^2 = 1.23 \ (P = .54)$

eFigure 22. Treatment rates for anxiety disorders by timeframes

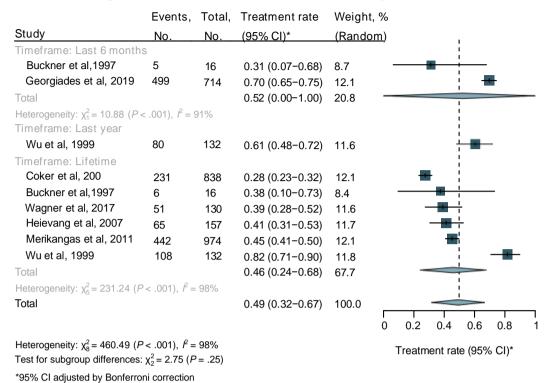
Study	Events, No.	Total, No.	Treatment rate (95% CI)*	Weight, % (Random)				
Timeframe: Current					ſ			
Bussing et al, 2003	89	389	0.23 (0.17-0.29)	9.2	-	:		
Timeframe: Last 6 month	1S				i	:		
Sawyer et al, 2004	112	398	0.28 (0.22-0.35)	9.2		:		
Bussing et al, 2011	71	168	0.42 (0.32-0.53)	9.1		į		
Total			0.35 (0.15-0.54)	18.3		į		
Heterogeneity: $\chi_1^2 = 10.17$ (P	= .001), 12 =	= 90%			j	į		
Timeframe: Last year					ļ	į		
Merikangas et al, 2010	218	457	0.48 (0.41-0.54)	9.2		i i		
Bird et al, 2008	65	109	0.60 (0.46-0.72)	9.0		-		
Tota			0.53 (0.37-0.69)	18.2				
Heterogeneity: $\chi_1^2 = 5.17$ ($P =$	$.02), \ l^2 = 8$	1%				1		
Timeframe: Lifetime					!	1		
Coker et al, 2009	149	513	0.29 (0.24-0.35)	9.2		1		
Merikangas et al, 2011	369	617	0.60 (0.54-0.65)	9.2		-		
Heiervang et al, 2007	61	82	0.74 (0.59-0.86)	8.9	!			
Bussing et al, 2011	133	168	0.79 (0.69-0.87)	9.1	!	: -	•	
Chavira et al, 2004	23	29	0.79 (0.53-0.95)	8.5				_
Locke et al, 2017	9192	9412	0.98 (0.97-0.98)	9.3		;		+
Total			0.70 (0.43-0.97)	54.3		!		_
Heterogeneity: $\chi_5^2 = 1582.49$	(P < 001)	$l^2 = 100\%$,			! !		
Total	(1 < .001),	. – 10070	0.56 (0.36-0.77)	100.0				
						\neg	1	\neg
					0.2 0.4	0.6	8.0	1
Heterogeneity: $\chi_{10}^2 = 4390.73$	(P < .001)	$l^2 = 100\%$			Treatment rate	e (95% (CI)*	

Heterogeneity: $\chi_{10}^2 = 4390.73 \ (P < .001), \ \hat{F} = 100\%$ Test for subgroup differences: $\chi_3^2 = 42.78 \ (P < .001)$

^{*95%} CI adjusted by Bonferroni correction

^{*95%} CI adjusted by Bonferroni correction

eFigure 23. Treatment rates for ADHD by timeframes

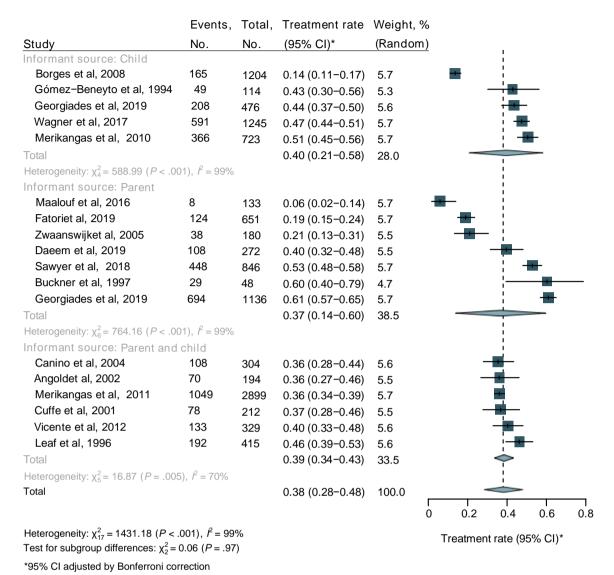


eFigure 24. Treatment rates for behavior disorders by timeframes

	Study,	Events,	Patients,	Treatment rate						
Outcomes	No.	No.	No.	(95% CI)*						
Child							_			
Any mental disorder	5	1379	3762	0.40 (0.21-0.58)		_				
Depressive disorders	12	8066	21541	0.37 (0.26-0.48)		_				
Anxiety disorders	5	367	1841	0.24 (0.13-0.35)						
ADHD	3	9475	9978	0.68 (0.26-1.00)			_			
Behavior disorders	2	147	324	0.45 (0.30-0.59)		_				_
Parent							_	_		
Any mental disorder	7	1449	3266	0.37 (0.14-0.60)						
Depressive disorders	3	65	384	0.25 (0.00-0.50)		_				
Anxiety disorders	3	130	246	0.48 (0.21-0.76)					_	
ADHD	6	567	1579	0.52 (0.20-0.83)						
Behavior disorders	4	801	1725	0.45 (0.18-0.72)					_	
Parent and Child										
Any mental disorder	6	1630	4353	0.39 (0.34-0.43)						
Depressive disorders	5	518	1296	0.37 (0.10-0.63)						
Anxiety disorders	1	268	1506	0.18 (0.15-0.21)		-				
ADHD	1	369	617	0.60 (0.54-0.65)						
Behavior disorders	2	550	1106	0.63 (0.13-1.00)						
	_			(Г	I	I	I		\neg
					0	0.2	0.4	0.6	0.8	1
						Treatr	nent ra	ate (95	5% CI)	*

^{*95%} CI adjusted by Bonferroni correction

eFigure 25. Subgroup by informant source



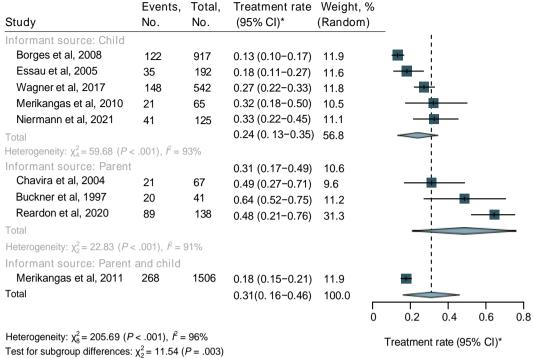
eFigure 26. Treatment rates for any mental disorder by informant sources

Study	Events, No.	Total, No.	Treatment rate (95% CI)*	Weight, %					
Informant source: Child	INU.	INO.	(95% CI)	(Kanuoni	<u>'</u>)		!		
Magklara et al, 2015	42	246	0.17 (0.11-0.25)	5.4		_	į		
Borges et al, 2008	43	223	0.17 (0.11 0.23)	5.3			- [
Essau et al, 2005	42	185	0.19 (0.15-0.26)	5.3			_ !		
Gould et al, 2009	73	251	0.29 (0.21-0.38)	5.3			<u> i</u>		
Flament et al, 2001	73 22	70	,	5.3 4.8					
Zhang et al, 2021	4221	11553	0.31 (0.17-0.49)						
Cummings et al, 2011	2904	7618	0.37 (0.35-0.38)	5.5 5.5					
Wagner et al, 2017	90		0.38 (0.37-0.40)	5.5				_	
Merikangas et al, 2010		215	0.42 (0.33-0.52)	5.2				_	
Stiffman et al, 1988	128	292	0.44 (0.36-0.52)	5.3				_	
Meredith et al, 2009	82	170	0.48 (0.38-0.59)	5.2					
	103	184	0.56 (0.46-0.66)	5.2			: -		
Lewinsohn et al, 1998	316	534	0.59 (0.53-0.65)	5.4				_	
Total			0.37 (0.26-0.48)	63.4		-	$\overline{}$		
Heterogeneity: $\chi_{11}^2 = 301$ ($P <$	001), $I^2 = 96$	5%					į		
Informant source: Parent						_	į		
Coker et al, 2009	58	366	0.16 (0.11-0.22)	5.4					
Chavira et al, 2004	3	8	0.38 (0.04-0.85)	2.4	_		-		
Buckner et al, 1997	4	10	0.40 (0.07-0.83)	2.7	-		-		
Total			0.25 (0.00-0.50)	10.5	_			-	
Heterogeneity: $\chi_2^2 = 3.92$ ($P =$	14), $l^2 = 49\%$	/ o					į		
Informant source: Parent a							į		
Zhong et al, 2013	5	86	0.06 (0.01-0.16)	5.3	-	—	į		
Tanielian et al, 2009	53	183	0.29 (0.20-0.39)	5.2			⊢		
Merikangas et al, 2011	292	741	0.39 (0.34-0.45)	5.4			-		
Wu et al, 1999	37	80	0.46 (0.31-0.62)	4.8					
Wu et al, 2001	131	206	0.64 (0.54-0.73)	5.2			į		-
Total			0.37 (0. 10-0.63)	26.1					
Heterogeneity: $\chi_4^2 = 218.8$ (P <	.001), $l^2 = 9$	98%					į		
Total			0.36 (0.26-0.46)	100.0		-			
						1	ı		
				(0	0.2	0.4	0.6	8.0
	_				-	Treatme	nt rate	(95% C	:1)*
Heterogeneity: v ² 645 13 (P	' ~ 001\	- 97%							

Heterogeneity: χ^2_{19} = 645.13 (P < .001), f^2 = 97% Test for subgroup differences: χ^2_2 = 1.40 (P = .50)

eFigure 27. Treatment rates for depressive disorders by informant sources

^{*95%} CI adjusted by Bonferroni correction



eFigure 28. Treatment rates for anxiety disorders by informant sources

Study	Events, No.	Total, No.	Treatment rate (95% CI)*	Weight, % (Random)	
Informant source: Parent					- :
Bussing et al, 2003	89	389	0.23 (0.17-0.29)	10.1	-
Sawyer et al, 2004	112	398	0.28 (0.22-0.35)	10.1	-
Coker et al, 2009	149	513	0.29 (0.24-0.35)	10.1	
Heiervang et al, 2007	61	82	0.74 (0.59-0.86)	9.8	
Bussing et al, 2011	133	168	0.79 (0.69-0.87)	10.1	-
Chavira et al, 2004	23	29	0.79 (0.53-0.95)	9.4	'
Total			0.52 (0.20-0.83)	59.7	
Heterogeneity: $\chi_5^2 = 348.04$ (P	o < .001), <i>f</i> ² =	99%			
Informant source: Child			0.48 (0.41-0.54)	10.1	-
Merikangas et al, 2010	218	457	0.60 (0.46-0.72)	9.9	
Bird et al, 2008	65	109	0.98 (0.97-0.98)	10.2	•
Locke et al, 2017	9192	9412	0.68 (0.26-1.00)	30.2	
Total					i 1
Heterogeneity: $\chi_2^2 = 519.87$ (P	p' < .001), $p'' = 1$	100%			1
Informant source: Parent					
Merikangas et al, 2011	369	617	0.60 (0.54-0.65)	10.1	
Total			0.58 (0.35-0.80)	100.0	
					0.2 0.4 0.6 0.8 1
Heterogeneity: $v_{z}^{2} = 4192.28$ (P < .001). P	= 100%			Treatment rate (95% CI)*

Heterogeneity: $\chi_9^2 = 4192.28 \ (P < .001), \ l^2 = 100\%$ Test for subgroup differences: $\chi_2^2 = 0.82$ (P = .66)

eFigure 29. Treatment rates for ADHD by informant sources

^{*95%} CI adjusted by Bonferroni correction

^{*95%} CI adjusted by Bonferroni correction

Study	Events, No.	Total, No.	Treatment rate (95% CI)*	Weight, % (Random)	
Informant source: Child					į
Wagner et al, 2017	51	130	0.39 (0.28-0.52)	12.6	-■ ;
Georgiades et al, 2019	96	194	0.49 (0.39-0.60)	12.8	
Total			0.45 (0.30-0.59)	25.5	
Heterogeneity: $\chi_1^2 = 3.37$ ($P =$.07), $l^2 = 70^\circ$	%			į
Informant source: Parent					į
Coker et al, 2009	231	838	0.28 (0.23-0.32)	13.3	- :
Buckner et al,1997	6	16	0.38 (0.10-0.73)	9.2	
Heievang et al, 2007	65	157	0.41 (0.31-0.53)	12.7	- ■ ;
Georgiades et al, 2019	499	714	0.70 (0.65-0.75)	13.2	
Total			0.45 (0. 18-0.72)	48.4	
Heterogeneity: $\chi_3^2 = 338.09$ (P	$l^2 < .001$), $l^2 =$	99%			;
Informant source: Parent	and child				;
Merikangas et al, 2011	442	974	0.45 (0.41-0.50)	13.2	=
Wu et al, 1999	108	132	0.82 (0.71-0.90)	12.9	
Total			0.63 (0.13-1.00)	26.1	<u> </u>
Heterogeneity: $\chi_1^2 = 96.11$ (P	$< .001), l^2 = 9$	99%			1
Total			0.49 (0.31-0.68)	100.0	
					0 00 04 06 00 4
					0 0.2 0.4 0.6 0.8 1
H-t					Treatment rate (95% CI)*

Heterogeneity: χ^2_7 = 449.90 (P < .001), l^2 = 98% Test for subgroup differences: χ^2_2 = 1.01 (P = .60)

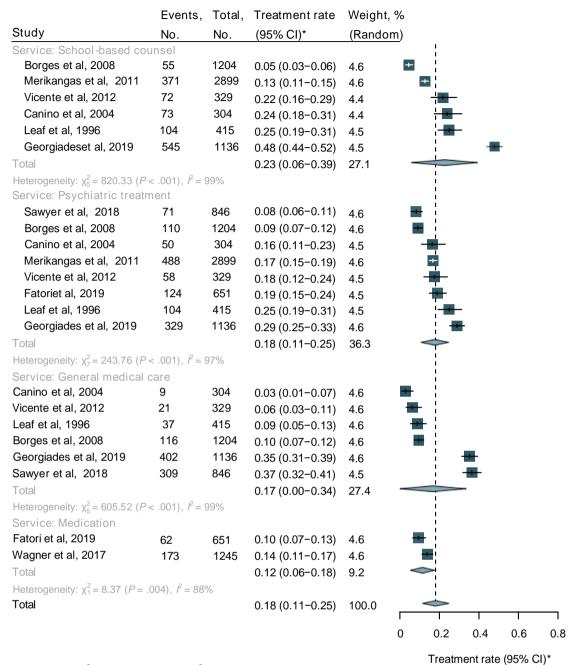
eFigure 30. Treatment rates for behavior disorders by informant sources

^{*95%} CI adjusted by Bonferroni correction

Outcomes	Study, No.	Events, No.	Total, No.	Treatment rate (95% CI)						
School-based counsel				,	-					
Any mental disorder	6	1220	6287	0.23 (0.06-0.39)	_					
Depressive disorders	3	2022	8335	0.23 (0.14-0.33)	_		-			
Anxiety disorders	1	77	1506	0.05 (0.04-0.07)						
ADHD	2	301	1015	0.27 (0.00-0.56)	_			_		
Behavior disorders	2	651	1688	0.41 (0.00-0.88)						
Psychiatric treatment					_					
Any mental disorder	8	1334	7784	0.18 (0.11-0.25)			_			
Depressive disorders	3	2560	8335	0.36 (0.24-0.48)	_	_	_			
Anxiety disorders	3	173	1823	0.16 (0.02-0.31)		_				
ADHD	5	1213	10677	0.36 (0.03-0.69)			_			
Behavior disorders	3	572	1845	0.33 (0.24-0.42)						
General medical care										
Any mental disorder	6	894	4234	0.17 (0.00-0.34)			_			
Depressive disorders	5	4949	19708	0.24 (0.14-0.37)		_	_			
Anxiety disorders	1	23	125	0.18 (0.10-0.30)						
ADHD	1	66	168	0.39 (0.29-0.50)						
Behavior disorders	2	585	1688	0.36 (0.18-0.53)				_		
Medication										
Any mental disorder	2	235	1896	0.12 (0.06-0.18)	_					
Depressive disorders	7	3507	20312	0.17 (0.12-0.23)						
Anxiety disorders	3	13	330	0.03 (0.00-0.06)	-					
ADHD	3	124	536	0.41 (0.00-0.93)						_
	Ŭ		000	0.00		Т			\neg	\neg
					0	0.2	0.4	0.6	8.0	1
						Treat	tment	rate(9	5% C	l)*
								•		•

*95% CI adjusted by Bonferroni correction

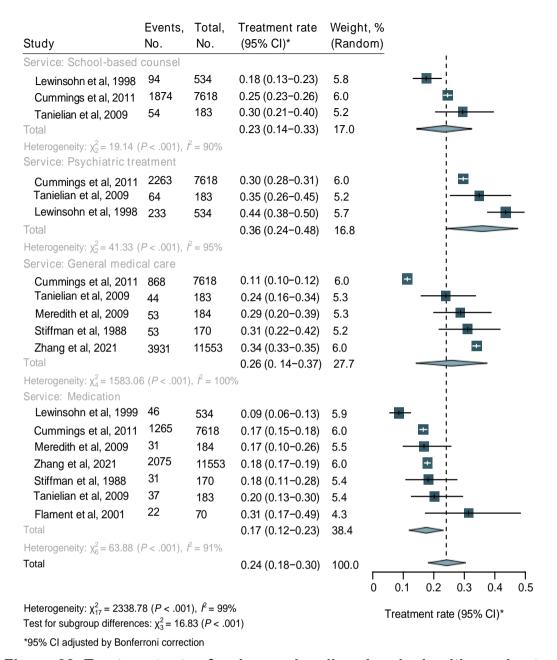
eFigure 31. Subgroup by health service type



Heterogeneity: χ^2_{21} = 1704.05 (P < .001), \hat{F} = 99% Test for subgroup differences: χ^2_3 = 4.96 (P = .17)

*95% CI adjusted by Bonferroni correction

eFigure 32. Treatment rates for any mental disorder by health service types



eFigure 33. Treatment rates for depressive disorders by health service types

Study	Events, No.	Total, No.	Treatment rate (95% CI)*	Weight, %	
Service: School-based co	unsel		(<u>′</u> ;
Merikangas et al, 2011	77	1506	0.05 (0.04-0.07)	13.7	-
Service: Psychiatric treati	ment				1
Merikangas et al, 2011	107	1506	0.07 (0.05-0.09)	13.7	= ;
Essau et al, 2005	35	192	0.18 (0.11-0.27)	12.2	
Niermann et al, 2021	31	125	0.25 (0.15-0.37)	11.0	
Total			0.16 (0.02-0.31)	36.8	
Heterogeneity: $\chi_2^2 = 34.16$ (P <	< .001), <i>f</i> ² = 1	94%			
Service: General medical	care				
Niermann et al, 2021 Service: Medication	23	125	0.18 (0.10-0.30)	11.4	
Niermann et al, 2021	3	125	0.02 (0.00-0.09)	13.3	—
Reardon et al, 2020	4	138	0.03 (0.00-0.09)	13.3	 ;
Chavira et al, 2004	6	67	0.09 (0.02-0.23)	11.4	
Total			0.03 (0.00-0.06)	38.1	
Heterogeneity: $\chi_2^2 = 3.1$ ($P = .2$	$(21), l^2 = 35\%$				1
Total			0.10 (0.03-0.18)	100.0	
					0 0.1 0.2 0.3 0.4 0.5
Heterogeneity: $y_7^2 = 73.30 (P <$	(.001). <i>f</i> ² = 1	90%			Treatment rate (95% CI)*

Heterogeneity: $\chi_7^2 = 73.30 \ (P < .001), \ f^2 = 90\%$ Test for subgroup differences: $\chi_3^2 = 23.47 \ (P < .001)$

eFigure 34. Treatment rates for anxiety disorders by health service types

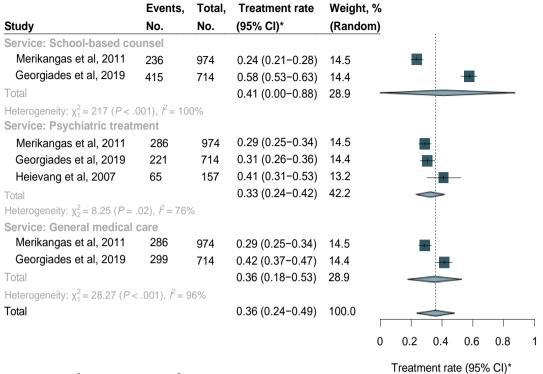
^{*95%} CI adjusted by Bonferroni correction

	Events,	Total,	Treatment rate	Weight	, %
Study	No.	No.	(95% CI)*	(Rando	m)
Service: School-based cou	ınsel				_
Sawyer et al, 2004	68	398	0.17 (0.12-0.23)	9.2	
Merikangas et al, 2011	233	617	0.38 (0.32-0.43)	9.2	
Total			0.27 (0.00-0.56)	18.5 -	
Heterogeneity: $\chi_1^2 = 58.03$ ($P <$.001), $l^2 = 9$	98%			
Service: Psychiatric treatn	nent				
Locke et al, 2017	774	9412	0.08 (0.07-0.09)	9.3	
Sawyer et al, 2004	50	398	0.13 (0.08-0.18)	9.3	■-
Merikangas et al, 2011	251	617	0.41 (0.35-0.46)	9.2	
Bussing et al, 2011	77	168	0.46 (0.35-0.57)	9.1	-
Heiervang et al, 2007	61	82	0.74 (0.59-0.86)	8.9	
Total			0.36 (0.03-0.69)	45.8	<u> </u>
Heterogeneity: $\chi_4^2 = 542.68$ (P	$< .001), l^2 =$	99%			
Service: General medical of	care				
Bussing et al, 2011	66	168	0.39 (0.29-0.50)	9.1	
Service: Medication					
Sawyer et al, 2004	73	398	0.18 (0.13-0.24)	9.2	-
Bird et al, 2008	28	109	0.26 (0.15-0.39)	9.0	
Chavira et al, 2004	23	29	0.79 (0.53-0.95)	8.4	
Total			0.41 (0.00-0.93)	26.7 -	
Heterogeneity: $\chi_2^2 = 62.19$ ($P <$.001), $l^2 = 9$	97%			
Total			0.36 (0.16-0.55)	100.0	
					0.2 0.4 0.6 0.8 1
0					Treatment rate (95% CI)*

Heterogeneity: $\chi^2_{10} = 938.10 \ (P < .001), \ \hat{f} = 99\%$ Test for subgroup differences: $\chi^2_3 = 1.21 \ (P = .75)$

eFigure 35. Treatment rates for ADHD by health service types

^{*95%} CI adjusted by Bonferroni correction



Heterogeneity: $\chi_6^2 = 266.19 \ (P < .001), \ \hat{f}^2 = 98\%$ Test for subgroup differences: $\chi_2^2 = 0.32 \ (P = .85)$

eFigure 36. Treatment rates for behavior disorders by health service types

	Study,	Events,	Patients,	Treatment rate						
Outcomes	No.	No.	No.	(95% CI)*						
School				<u> </u>						
Any mental disorder	4	847	1923	0.41 (0.33-0.49)						
Depressive disorders	7	643	1867	0.31 (0.15-0.47)						
Anxiety disorders	3	272	872	0.37 (0.00-0.75)	_		_		_	
ADHD	4	432	1152	0.51 (0.10-0.92)						
Behavior disorders	3	347	1125	0.35 (0.23-0.48)		_	_			
Community										
Any mental disorder	11	3336	8754	0.37 (0.22-0.51)		_	_	-		
Depressive disorders	8	7761	20799	0.36 (0.19-0.54)			_	_		
Anxiety disorders	4	452	2613	0.23 (0.09-0.37)			_			
ADHD	4	764	1581	0.49 (0.28-0.69)		-	_			
Behavior disorders	3	1049	1820	0.66 (0.36-0.95)						-
Health care institution										
Any mental disorder	2	67	228	0.40 (0.00-0.95)	_		_			_
Depressive disorders	5	245	555	0.43 (0.26-0.60)		_	_			
Anxiety disorders	2	41	108	0.39 (0.15-0.63)			_			
ADHD	2	9215	9441	0.90 (0.65-1.00)				_		—
Behavior disorders	1	6	16	0.38 (0.10-0.73)	_		_	1		\neg
					0	0.2 Treatn	0.4 nent ra	0.6 ate (95	0.8 5% CI)*	. 1

*95% CI adjusted by Bonferroni correction

eFigure 37. Subgroup by sample origin population

^{*95%} CI adjusted by Bonferroni correction

	Events,	Total,	Treatment rate	Weight, %	6
Study	No.	No.	(95% CI)*	(Random)	<u>)</u>
Sample origin: School					1
Angold et al, 2002	70	194	0.36 (0.27-0.46)	5.8	
Cuffe et al, 2001	78	212	0.37 (0.28-0.46)	5.8	- 4
Daeem et al, 2019	108	272	0.40 (0.32-0.48)	5.9	- 2-
Wagner et al, 2017	591	1245	0.47 (0.44-0.51)	6.0	-
Total			0.41 (0.33-0.49)	23.5	
Heterogeneity: $\chi_3^2 = 18.11 \ (P < .001)$), $l^2 = 83\%$				<u> </u>
Sample origin: Community					1
Maalouf et al, 2016	8	133	0.06 (0.02-0.14)	6.0	-
Borges et al, 2008	165	1204	0.14 (0.11-0.17)	6.1	
Fatori et al, 2019	124	651	0.19 (0.15-0.24)	6.0	
Canino et al, 2004	108	304	0.36 (0.28-0.44)	5.9	
Merikangas et al, 2011	1049	2899	0.36 (0.34-0.39)	6.1	≕
Vicente et al, 2012	133	329	0.40 (0.33-0.48)	5.9	-
Gómez-Beneyto et al, 1994	49	114	0.43 (0.30-0.56)	5.6	- -
Leaf et al, 1996	192	415	0.46 (0.39-0.53)	5.9	-
Merikangas et al, 2010	366	723	0.51 (0.45-0.56)	6.0	-
Sawyer et al, 2018	448	846	0.53 (0.48-0.58)	6.0	-
Georgiades et al, 2019	694	1136	0.61 (0.57-0.65)	6.0	=
Total			0.37 (0.22-0.51)	65.6	
Heterogeneity: $\chi_{10}^2 = 1289.41 \ (P <)$	001), $l^2 = 99$	%			1
Sample origin: Health care ins	stitution				1
Zwaanswijk et al, 2005	38	180	0.21 (0.13-0.31)	5.9	
Buckner et al, 1997	29	48	0.60 (0.40-0.79)	5.0	
Total			0.40 (0.00-0.95)	10.9	
Heterogeneity: $\chi_1^2 = 26.15 \ (P < .001)$), $l^2 = 96\%$				1
Total			0.38 (0.27-0.48)	100.0	
				(0 0.2 0.4 0.6 0.8
					Treatment rate (95% CI)*
Heterogeneity: $\chi_{16}^2 = 1416.09 \ (P <$	001), $l^2 = 99$	%			110411101111410 (0070 01)

Heterogeneity: χ_{16}^2 = 1416.09 (P < .001), \hat{F} = 99% Test for subgroup differences: χ_2^2 = 0.41 (P = .81)

eFigure 38. Treatment rates for any mental disorder by the sample origin population

^{*95%} CI adjusted by Bonferroni correction

	Events,	Total,	Treatment rate	Weight, %			
Study	No.	No.	(95% CI)*	(Random)			
Sample origin: School	50	000	0.40 (0.44, 0.00)	F 4	_		
Coker et al, 2009	58	366	0.16 (0.11-0.22)	5.4	-		
Magklara et al, 2015	42	246	0.17 (0.11-0.25)	5.4			
Essau et al, 2005	42	185	0.23 (0.15-0.32)	5.3	-		
Gould et al, 2009	73	251	0.29 (0.21-0.38)	5.3	-		
Flament et al, 2001	22	70	0.31 (0.17-0.49)	4.8	-	_	
Wagner et al, 2017	90	215	0.42 (0.33-0.52)	5.2	-	_	
Lewinsohn et al, 1998	316	534	0.59 (0.53-0.65)	5.4		-	
Total			0.31 (0.15-0.47)	36.8		_	
Heterogeneity: $\chi_6^2 = 290.1$ ($P <$ Sample origin: Communi	$(1.001), l^2 = 9$	98%					
Zhong et al, 2013	5	86	0.06 (0.01-0.16)	5.3	-		
Borges et al, 2008	43	223	0.19 (0.13-0.28)	5.3	-		
Zhang et al, 2021	4221	11553	0.37 (0.35-0.38)	5.5	+		
Cummings et al, 2011	2904	7618	0.38 (0.37-0.40)	5.5	+		
Merikangas et al, 2011	292	741	0.39 (0.34-0.45)	5.4	-	ŀ	
Merikangas et al, 2010	128	292	0.44 (0.36-0.52)	5.3		-	
Wu et al, 1999	37	80	0.46 (0.31-0.62)	4.8	-	-	
Wu et al, 2001	131	206	0.64 (0.54-0.73)	5.2			_
Total			0.36 (0.19-0.54)	42.4			
Heterogeneity: $\chi_7^2 = 275.45$ (P	< .001), $l^2 =$	97%	,				
Sample origin: Health car							
Tanielian et al, 2009	53	183	0.29 (0.20-0.39)	5.2			
Chavira et al, 2004	3	8	0.38 (0.04-0.85)	2.4			
Buckner et al, 1997	4	10	0.40 (0.07-0.83)	2.7			
Stiffman et al, 1988	82	170	0.48 (0.38-0.59)	5.2	-		
Meredith et al, 2009	103	184	0.56 (0.46-0.66)	5.2			
Total			0.43 (0.26-0.60)	20.7			
Heterogeneity: $\chi_4^2 = 32.1 (P <$.001), $l^2 = 88$	3%	` ,				
Total			0.36 (0.26-0.46)	100.0		>	
			,	[
				C	0.2 0.	4 0.6	8.0
					Treatment ra	oto (05% C	`I*
Heterogeneity: $\chi_{19}^2 = 645.13$ (F	P < .001), P :	= 97%			i realineill ia	110 (30 /0 C	/1 <i>)</i>

Heterogeneity: χ^2_{19} = 645.13 (P < .001), \hat{P} = 97% Test for subgroup differences: χ^2_2 = 2.06 (P = .36) *95% CI adjusted by Bonferroni correction

eFigure 39. Treatment rates for depressive disorders by the sample origin population

	Events,	Total,	Treatment rate	Weight, %	6				
Study	No.	No.	(95% CI)*	(Random)				
Sample origin: School					_				
Essau et al, 2005	35	192	0.18 (0.11-0.27)	11.6		-			
Wagner et al, 2017	148	542	0.27 (0.22-0.33)	11.8		-	-		
Reardon et al, 2020	89	138	0.64 (0.52-0.75)	11.2					
Total			0.37 (0.00-0.75)	34.5	_				_
Heterogeneity: $\chi_2^2 = 91.46$ (P <	< .001), <i>l</i> ² = 9	98%							
Sample origin: Communit	У								
Borges et al, 2008	122	917	0.13 (0.10-0.17)	11.9		•			
Merikangas et al, 2011	268	1506	0.18 (0.15-0.21)	11.9		-			
Merikangas et al, 2010	21	65	0.32 (0.18-0.50)	10.5		_	-		
Niermann et al, 2021	41	125	0.33 (0.22-0.45)	11.1		-	-		
Total			0.23 (0.09-0.37)	45.4			_		
Heterogeneity: $\chi_3^2 = 32.32$ (<i>P</i> <	$(.001), l^2 = 9$	91%							
Sample origin: Health ca	re instituti	on							
Chavira et al, 2004	21	67	0.31 (0.17-0.49)	10.6		_	_		
Buckner et al, 1997	20	41	0.49 (0.27-0.71)	9.6		_			
Total			0.39 (0.15-0.63)	20.1					
Heterogeneity: $\chi_1^2 = 3.27$ ($P =$.07), $l^2 = 699$	%							
Total			0.31 (0.16-0.46)	100.0					
					0	0.2	0.4	0.6	8.0
Heterogeneity: $v^2 - 205.69 (P)$	004)	000/			T	reatment	rate (98	5% CI)*	

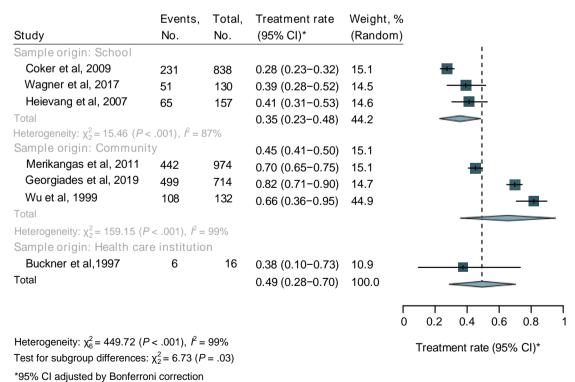
Heterogeneity: χ_8^2 = 205.69 (P < .001), f^2 = 96% Test for subgroup differences: χ_2^2 = 3.03 (P = .22) *95% CI adjusted by Bonferroni correction

eFigure 40. Treatment rates for anxiety disorders by the sample origin population

	Events,	Total,	Treatment rate	Weight, %	
Study	No.	No.	(95% CI)*	(Random)	
Sample origin: School		-			ı
Bussing et al, 2003	89	389	0.23 (0.17-0.29)	10.1	-
Coker et al, 2009	149	513	0.29 (0.24-0.35)	10.1	-
Heiervang et al, 2007	61	82	0.74 (0.59-0.86)	9.8	
Bussing et al, 2011	133	168	0.79 (0.69-0.87)	10.1	-
Total			0.51 (0.10-0.92)	40.2	
Heterogeneity: $\chi_3^2 = 299.93$ (P	< .001), l² =	99%			
Sample origin: Communit	У				
Sawyer et al, 2004	112	398	0.28 (0.22-0.35)	10.1	-
Merikangas et al, 2010	218	457	0.48 (0.41-0.54)	10.1	-
Bird et al, 2008	65	109	0.60 (0.46-0.72)	9.9	- 4
Merikangas et al, 2011	369	617	0.60 (0.54-0.65)	10.1	- 1
Total			0.49 (0.28-0.69)	40.2	
Heterogeneity: $\chi_3^2 = 119.3$ (P <	.001), <i>l</i> ² = 9	97%			1
Sample origin: Health care	e institutio	n			1
Chavira et al, 2004	23	29	0.79 (0.53-0.95)	9.4	1 1
Locke et al, 2017	9192	9412	0.98 (0.97-0.98)	10.2	•
Total			0.90 (0.65-1.00)	19.6	
Heterogeneity: $\chi_1^2 = 5.95$ ($P =$	01), $l^2 = 83^\circ$	%			ļ
Total			0.58 (0.35-0.80)	100.0	
					0.2 0.4 0.6 0.8 1
					Treatment rate (95% CI)*
Hotorogonoity: v ² = 4102 28 (4	2 - 001) P	_ 100%			()

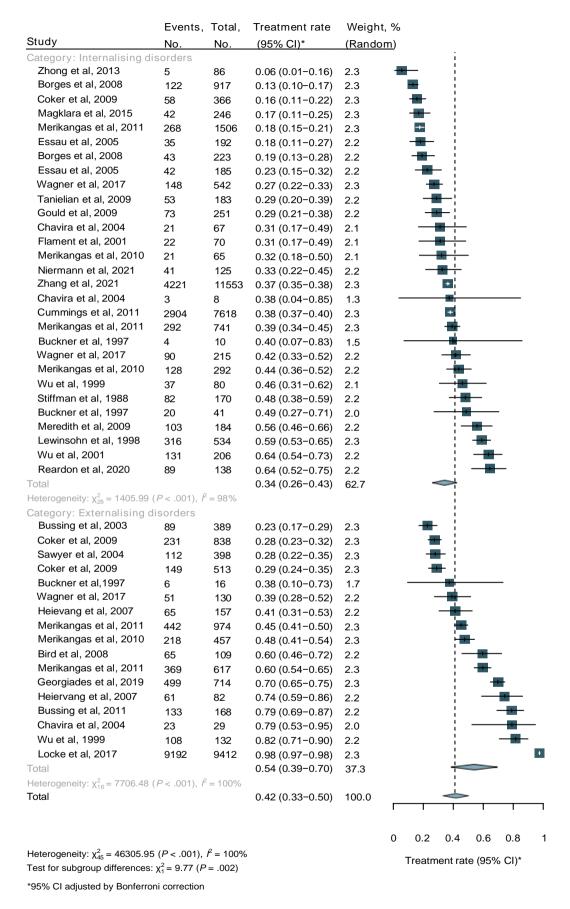
Heterogeneity: $\chi_9^2 = 4192.28 \ (P < .001), \ \hat{f} = 100\%$ Test for subgroup differences: $\chi_2^2 = 13.22 \ (P = .001)$

eFigure 41. Treatment rates for ADHD by the sample origin population

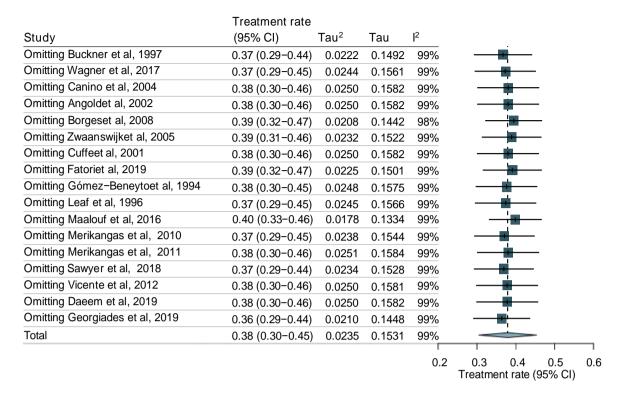


eFigure 42. Treatment rates for behavior disorders by the sample origin population

^{*95%} CI adjusted by Bonferroni correction



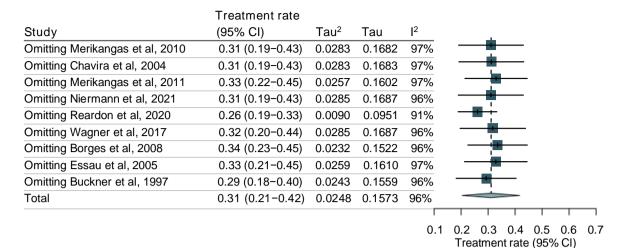
eFigure 43. Treatment rates for internalizing and externalizing disorders



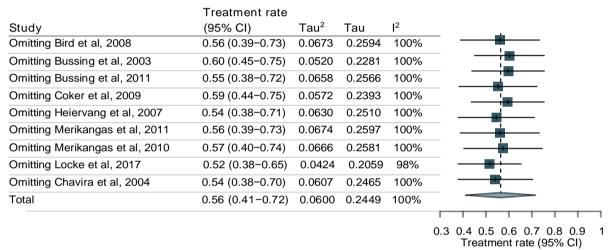
eFigure 44. Sensitivity analysis forest plots for any mental disorder

Study	Treatment rate (95% CI)	Tau ²	Tau	J ²					
Omitting Meredith et al, 2009	,				_	<u>.</u>			
	0.35 (0.28-0.42)	0.0222	0.1490	97%					
Omitting Borges et al, 2008	0.37 (0.30-0.44)	0.0230	0.1517	97%		•			
Omitting Lewinsohn et al, 1998	0.34 (0.28-0.41)	0.0212	0.1455	97%					
Omitting Gould et al, 2009	0.36 (0.29-0.44)	0.0244	0.1561	97%		•			
Omitting Buckner et al, 1997	0.36 (0.28-0.43)	0.0239	0.1547	97%	_	•			
Omitting Merikangas et al, 2011	0.36 (0.28-0.43)	0.0246	0.1568	97%		<u>i</u>			
Omitting Zhang et al, 2021	0.36 (0.28-0.43)	0.0247	0.1571	97%	_	<u> </u>			
Omitting Cummings et al, 2011	0.36 (0.28-0.43)	0.0246	0.1570	97%	_	<u> </u>			
Omitting Stiffman et al, 1988	0.35 (0.28-0.42)	0.0237	0.1539	97%		<u> </u>			
Omitting Flament et al, 2001	0.36 (0.29-0.43)	0.0244	0.1563	97%					
Omitting Tanielian et al, 2009	0.36 (0.29-0.44)	0.0244	0.1561	97%		<u> </u>			
Omitting Zhong et al, 2013	0.37 (0.31-0.44)	0.0192	0.1384	96%		-			
Omitting Wu et al, 1999	0.35 (0.28-0.43)	0.0240	0.1548	97%		-			
Omitting Magklara et al, 2015	0.37 (0.30-0.44)	0.0225	0.1501	97%		-			
Omitting Wagner et al, 2017	0.35 (0.28-0.43)	0.0244	0.1562	97%	_	-			
Omitting Coker et al, 2009	0.37 (0.30-0.44)	0.0222	0.1490	97%		<u> </u>			
Omitting Wu et al, 2001	0.34 (0.28-0.41)	0.0200	0.1414	97%		<u> </u>			
Omitting Merikangas et al, 2010	0.35 (0.28-0.43)	0.0242	0.1557	97%	_	<u> </u>			
Omitting Essau et al, 2005	0.37 (0.29-0.44)	0.0236	0.1537	97%		-			
Omitting Chavira et al, 2004	0.36 (0.29-0.43)	0.0239	0.1546	97%	_	-			
Total	0.36 (0.29-0.43)	0.0233	0.1525	97%					
				0.2	2 0.3 0.4 0.5 0.6 Treatment rate (95% CI)				

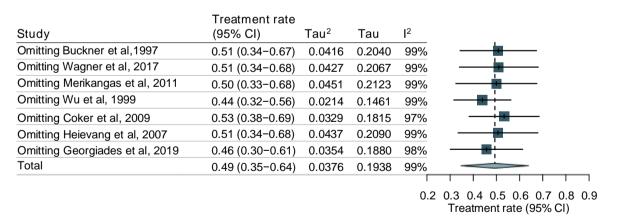
eFigure 45. Sensitivity analysis forest plots for depressive disorders



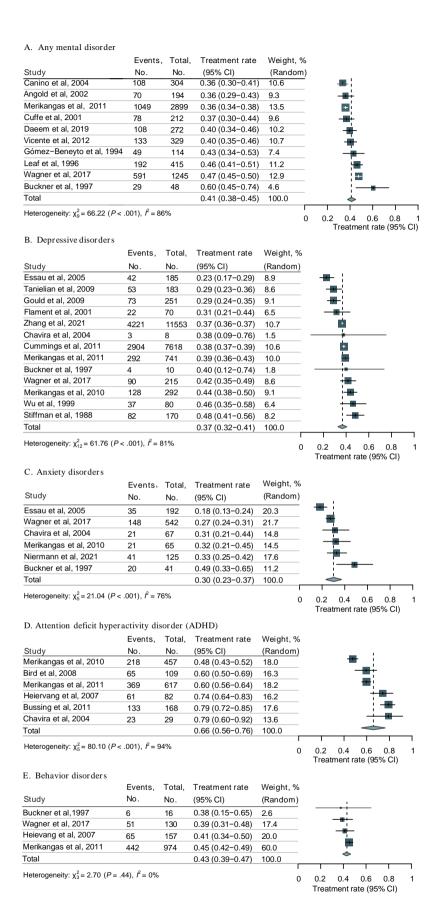
eFigure 46. Sensitivity analysis forest plots for anxiety disorders



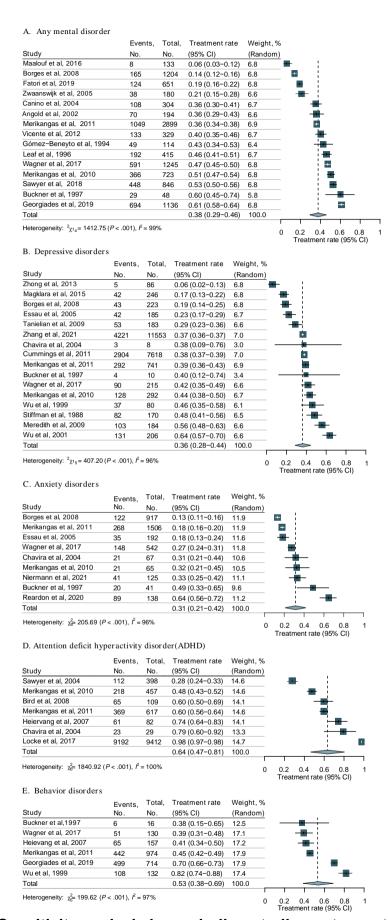
eFigure 47. Sensitivity analysis forest plots for ADHD



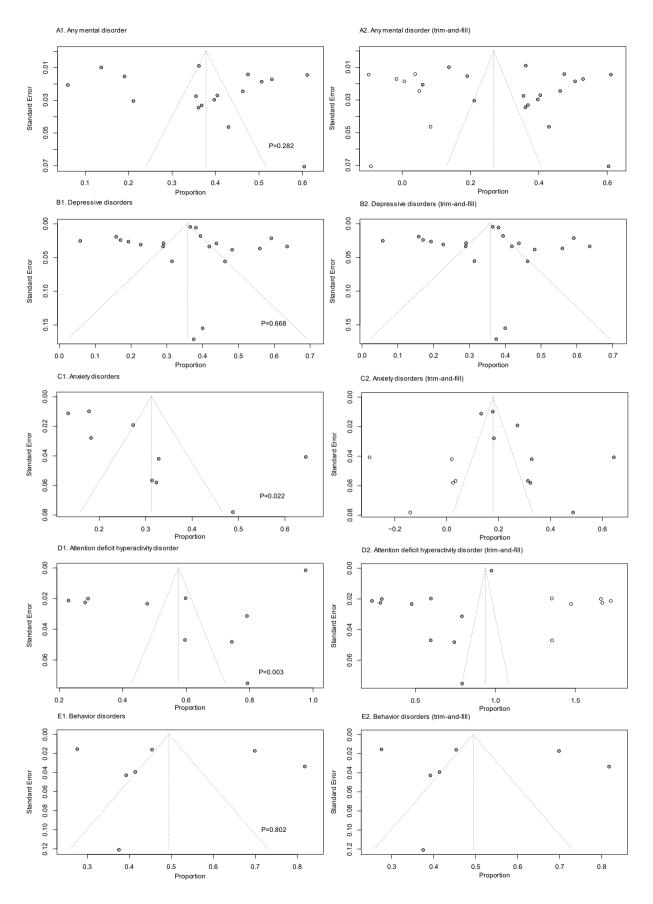
eFigure 48. Sensitivity analysis forest plots for behavior disorders



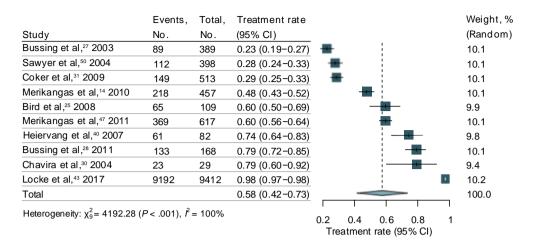
eFigure 49. Sensitivity analysis by excluding studies in which the 95% CI was outside the aggregated 95% CI of all studies



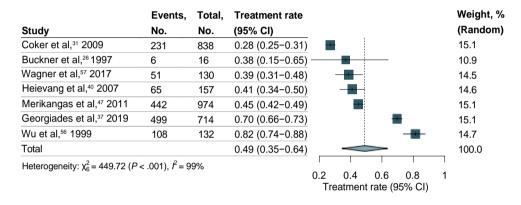
eFigure 50. Sensitivity analysis by excluding studies not reported age ranges



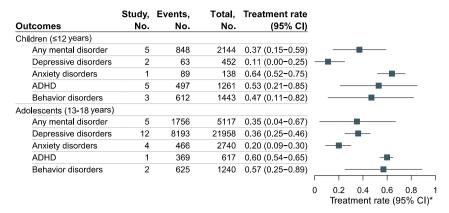
eFigure 51. Funnel plot (left) and trim-and-fill funnel plot (right)



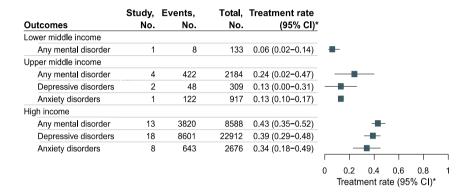
eFigure 52. Treatment Rates for ADHD



eFigure 53. Treatment Rates for Behavior Disorders



eFigure 54. Subgroup Analysis by Age Group



eFigure 55. Subgroup Analysis by Income Level

eMethods 1. Retrieval Strategy

According to the topic of this study, the keywords to be searched were "mental disorders", "depressive disorders", "anxiety disorders", "attention deficit hyperactivity disorder", "behavior disorders", "treatment rate", "children", "adolescent", and "seeking help". In order to find as many articles as we need, we looked for terms with the same meaning but different expressions as these keywords in other similar systematic reviews or Medical Subject Headings. The search terms were consistently used in different databases. Literature search was limited to English journals. (Take Pubmed for example, search entry available online: see eAppendix). Each retrieval step was performed by two researchers (SW and QL) independently. If there is a disagreement between the two researchers, a third party (Senior researcher, YX) will participate in discussion and resolve the inconsistencies.

eMethods 2. Exposure

Any mental disorder mainly included anxiety disorders (panic disorder, generalized anxiety disorders, agoraphobia without panic disorder, specific phobia, social phobia, posttraumatic stress disorder, obsessive-compulsive disorder, separation anxiety disorders), mood disorders (major depressive disorders, dysthymic disorder, bipolar disorder I or II), impulse control disorders (oppositional defiant disorder, conduct disorder, attention deficit hyperactivity disorder, intermittent explosive disorder), and substance use disorders (alcohol and drug abuse and dependence). This fact should arouse our attention, the partial literature collected in this study did not include all of the conditions mentioned above.

The diagnostic tools used include the Child and Adolescent Psychiatric Assessment (CAPA),¹ the Diagnostic Interview Schedule for Children (DISC-|V/ DISC 2.3),²⁻³ the anxiety disorders Interview Schedule for Children-Parent Version (ADIS-C/P),⁴ the World Mental Health Composite International Diagnostic Interview (CIDI; ICD-9/10),⁵ the Present Episode Version of the Schedule for Affective Disorders and Schizophrenia for School-Aged Children (K-SADS),⁶ the Development and Well-Being Assessment (DAWBA),⁷ the Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID),⁸ and the Diagnostic Interview for Children and Adolescents (DICA).⁹

eResults. Study Selection

A total of 39251 articles were initially included. When duplicates were removed, 26350 studies were left. Two authors conducted preliminary screening according to the title and abstract of the article respectively. 338 articles were screened for full-text reading, 68 literatures were obtained. By searching the references of the 68 literatures, a total of 9 records meeting the criteria were found. If multiple studies used overlapping samples but provided unique treatment rates for diseases, all studies were retained for analysis. If multiple studies with overlapping samples assess treatment rates for the same disease, determining which study to include in the meta-analysis is based on the largest sample size and the most detailed description. After excluding 34 studies with duplicate samples and three studies with a quality score of less than 5, 40 studies were eventually included analysis.

eAppendix. Explicit Search Entry

Search term for the systematic literature in Pubmed:

 gap"[Title/Abstract])) OR ("treatment gaps"[Title/Abstract])) OR ("treatment rates")) OR ("treatment rates")) OR ("under treatment"[Title/Abstract])) OR ("treatment need"[Title/Abstract])) OR ("treatment seeking"[Title/Abstract])) OR ("seeking treatment"[Title/Abstract])) OR ("health care seeking"[Title/Abstract])) OR ("seeking care"[Title/Abstract])) OR ("access to care"[Title/Abstract])) OR ("professional help"[Title/Abstract])) OR ("barriers to treatment"[Title/Abstract])) OR ("treatment barrier*"[Title/Abstract])) OR ("Patient Compliance"[Title/Abstract])) OR ("Patient Acceptance of Health Care"[Title/Abstract])) OR ("Medication Adherence"[Title/Abstract])) OR ("Treatment Adherence"[Title/Abstract])) OR ("Treatment Compliance"[Title/Abstract])) OR ("Treatment Compliance"[Title/Abstract]))

AND

- OR ("conduct disorders"[Title/Abstract])) OR (ODD[Title/Abstract])) OR ("attention deficit hyperactivity disorder*"[Title/Abstract])) OR ("ADHD" [Title/Abstract])) OR ("Disruptive behavior disorder*"[Title/Abstract])) OR ("Mental problem"[Title/Abstract])

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