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**SALUZZO** Venerdì, 22 Marzo 2024

RESP. SCIENTIFICI: ANDREA GATTOLIN, LAURA GIANOTTI

**L'OBESITÀ NEL 2024:  
NUOVI MODELLI  
E TRAGUARDI DI CURA**



UNIVERSITÀ  
DI TORINO



AZIENDA OSPEDALIERO - UNIVERSITARIA  
Città della Salute e della Scienza di Torino

# Il sommerso dei Disturbi dell'Alimentazione

**GIOVANNI ABBATE DAGA**

UNIVERSITÀ DEGLI STUDI DI TORINO

DIPARTIMENTO DI NEUROSCIENZE

SC CENTRO ESPERTO REGIONALE DCA

AOU CITTÀ DELLA SALUTE E DELLA SCIENZA

# Mental Health Conditions Among Patients Seeking and Undergoing Bariatric Surgery

## A Meta-analysis

Table 1. Prevalence of Preoperative Mental Health Conditions Among Patients Seeking and Undergoing Bariatric Surgery

Condition	Studies Reporting Data	Patients Reporting Data	Patients With Condition	Prevalence Estimate, % (95% CI) <sup>a</sup>
Any mood disorder	10	3307	788	23 (15-31)
Depression	34	51 908	12 009	19 (14-25)
Binge eating disorder	25	13 769	2400	17 (13-21)
Anxiety	22	38 459	10 515	12 (6-20)
Suicidal ideation or suicidality	6	3518	315	9 (5-13)
Personality disorders	6	3002	184	7 (1-16)
Substance abuse disorders <sup>b</sup>	19	40 725	1515	3 (1-4)
Posttraumatic stress disorder	10	15 039	187	1 (1-2)
Psychosis	6	3406	31	1 (0-1)

# Mental Illness and Psychotropic Medication use Among People Assessed for Bariatric Surgery in Ontario, Canada

Jennifer Hensel<sup>1,2</sup> • Melanie Selvadurai<sup>1</sup> • Mehran Anvari<sup>3</sup> • Valerie Taylor<sup>1,2</sup>

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**Table 1** Prevalence of past or present mental illness as assessed on the psychological assessment (*N*=10,698)


Mental illness	Number	Percent
Any mental illness	5420	50.7
Attention-deficit disorder	201	1.9
Bipolar disorder	233	2.2
Borderline personality disorder	56	0.5
Depression	4460	41.7
Panic disorder	161	1.5
Addiction (substance not specified)	186	1.7
Post traumatic stress disorder	343	3.2
Anxiety (type not specified)	2294	21.4

**Table 2** Reported psychotropic medication use overall and by class

Medication class	Number <sup>a</sup>	% of total population ( <i>N</i> =10,698)	% of all taking any psychotropic medication
Any psychotropic medication	4052	37.9	100
Any antidepressant	3811	35.6	94.1
Any neuroleptic	435	4.1	10.7
Selective serotonin reuptake inhibitor (SSRI)	2016	18.8	49.8
Serotonergic norepinephrine reuptake inhibitor (SNRI)	1255	11.7	31.0
Bupropion	647	6.0	16.0
Mirtazapine	59	0.5	1.5
Tricyclic antidepressant (TCA)	436 <sup>b</sup>	4.1	10.8
Monoamine oxidase inhibitory (MAOI)	3	0.0	0.0
Mood stabilizer	175	1.6	4.3
Stimulant	94	0.9	2.3
Trazodone	336	3.1	8.3
Other psychiatric	204	1.9	5.0

*Review*

# Psychiatric Disorders and Obesity in Childhood and Adolescence—A Systematic Review of Cross-Sectional Studies

Ioulia Kokka <sup>1,2</sup>, Iraklis Mourikis <sup>1,2</sup> and Flora Bacopoulou <sup>3,\*</sup> 

excluded. A total of 14 studies of 23,442 children and adolescents that investigated the relation of obesity with anxiety, mood disorders, and psychosis were included in this systematic review. Nine of the included studies reported a significant relationship between the psychiatric disorder under investigation and obesity. Understanding the nexus between obesity and psychiatric disorders in

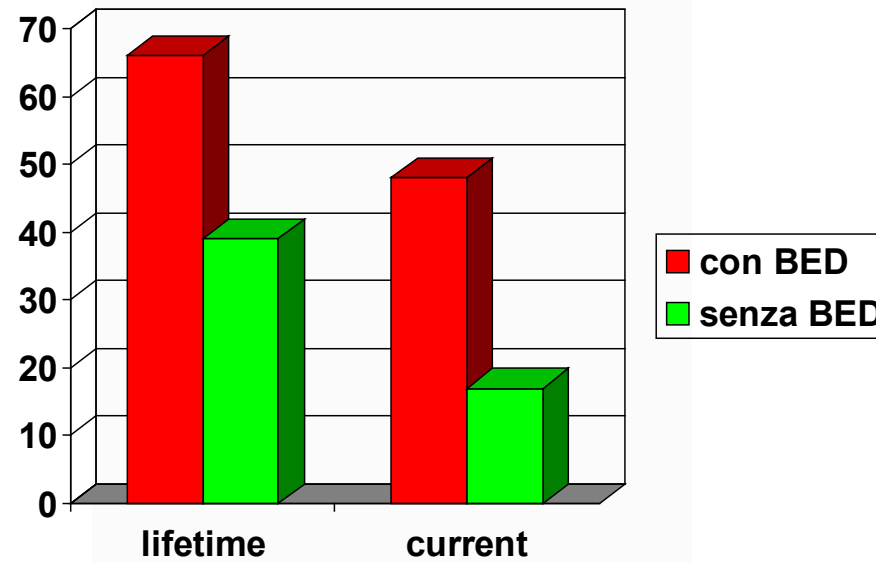
# Prevalence of Overweight and Obesity in People With Severe Mental Illness: Systematic Review and Meta-Analysis

**TABLE 2** | Pooled prevalence of overweight obesity and combined overweight and obesity according to SMI, geographical region, World Bank classification and year of publication.

	Overweight	Obesity	Combined prevalence of overweight and obesity
Number of studies	108	120	108
Overall pooled prevalence (95%CI)	31.2% (28.9-32.1)	25.9% (23.3-29.1)	60.1% (55.8-63.1)
Heterogeneity I <sup>2</sup>	97.1%	88.3%	98.1%
$\tau^2$	0.11	0.55	0.47
P	<0.01	<0.01	<0.01
<b>Type of SMI</b>			
Any SMI <sup>1</sup>	32.9% (31.2-34.7)	25.4% (20.1-31.7)	61.2% (56.3-65.7)
Bipolar disorder	31.1% (28.8-33.8)	27.5% (22.6-33.1)	60.7% (55.8-65.2)
Schizophrenia	29.8% (27.4-32.2)	25.5% (22.2-29.3)	58.6% (53.5-63.6)

## Psychopathology in Bariatric Surgery Candidates: A Review of Studies Using Structured Diagnostic Interviews

Sarah Malik, M.D.<sup>a,c</sup>, James E. Mitchell, M.D.<sup>a,b,\*</sup>, Scott Engel, Ph.D.<sup>a,b</sup>, Ross Crosby, Ph.D.<sup>a,b</sup>, and Steve Wonderlich, Ph.D.<sup>a,b</sup>



## Mendelian randomization analyses identify bidirectional causal relationships of obesity with psychiatric disorders

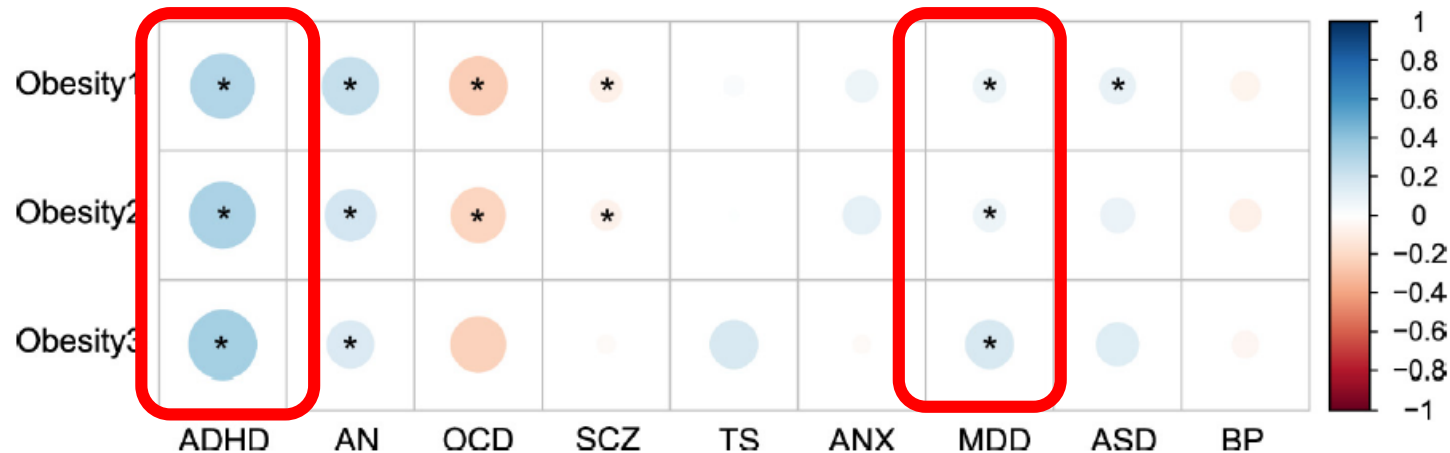
2023

Wenhui Chen<sup>a,1</sup>, Jia Feng<sup>b,1</sup>, Shuwen Jiang<sup>a,1</sup>, Jie Guo<sup>a</sup>, XiaoLin Zhang<sup>c</sup>, Xiaoguan Zhang<sup>d</sup>, Cunchuan Wang<sup>a</sup>, Yi Ma<sup>b,\*</sup>, Zhiyong Dong<sup>a,\*\*</sup>

## Shared genetics between classes of obesity and psychiatric disorders: A large-scale genome-wide cross-trait analysis

2022

Hui Ding<sup>a</sup>, Mengyuan Ouyang<sup>a</sup>, Jinyi Wang<sup>a</sup>, Minyao Xie<sup>a</sup>, Yanyuan Huang<sup>a</sup>, Fangzheng Yuan<sup>b</sup>, Yunhan Jia<sup>b</sup>, Xuedi Zhang<sup>a</sup>, Na Liu<sup>a,\*</sup>, Ning Zhang<sup>a,\*</sup>



# Association Between Depressive Symptoms in Childhood and Adolescence and Overweight in Later Life

## *Review of the Recent Literature*

Eryn T. Liem, MD; Pieter J. J. Sauer, MD, PhD; Albertine J. Oldehinkel, PhD, MSc; Ronald P. Stolk, MD, PhD

**Objective:** To present an overview of the association between depressive symptoms in childhood and adolescence and subsequent overweight in later life.

**Data Sources:** MEDLINE, EMBASE, and Web of Science for all indexed journals from January 1, 1997, to May 30, 2007.

**Study Selection:** Abstracts of 513 articles were reviewed manually. Studies were excluded if unrelated to depressive symptoms and overweight (n=460), if they were conducted in an adult population (n=10) or in a population of all age groups (n=2), or if they were performed in clinic-based populations of overweight participants. In total, 32 articles were reviewed including 21 cross-sectional and 11 longitudinal reports.

**Main Exposure:** Depressive symptoms in childhood and adolescence.

**Main Outcome Measure:** Overweight.

**Results:** Four cross-sectional studies that satisfied our quality criteria revealed an association between depressive symptoms and overweight in girls aged 8 to 15 years, reporting different effect sizes including a correlation coefficient of 0.14 and a regression coefficient of 0.27. Four longitudinal studies in accord with our quality criteria suggest that depressive symptoms in childhood or adolescence are associated with a 1.90- to 3.50-fold increased risk of subsequent overweight (95% confidence intervals varying from 1.02 to 5.80, respectively).

**Conclusion:** These results support a positive association between depressive symptoms at age 6 to 19 years and overweight in later life, assessed after a period of 1 to 15 years.

*Arch Pediatr Adolesc Med.* 2008;162(10):981-988



# Meccanismi

- Reward
  - Dipendenza da cibo
- Dipendenza da comportamento
- Impulsività
- Emotional Eating
- Trauma
- Infiammazione?
- Microbiota?

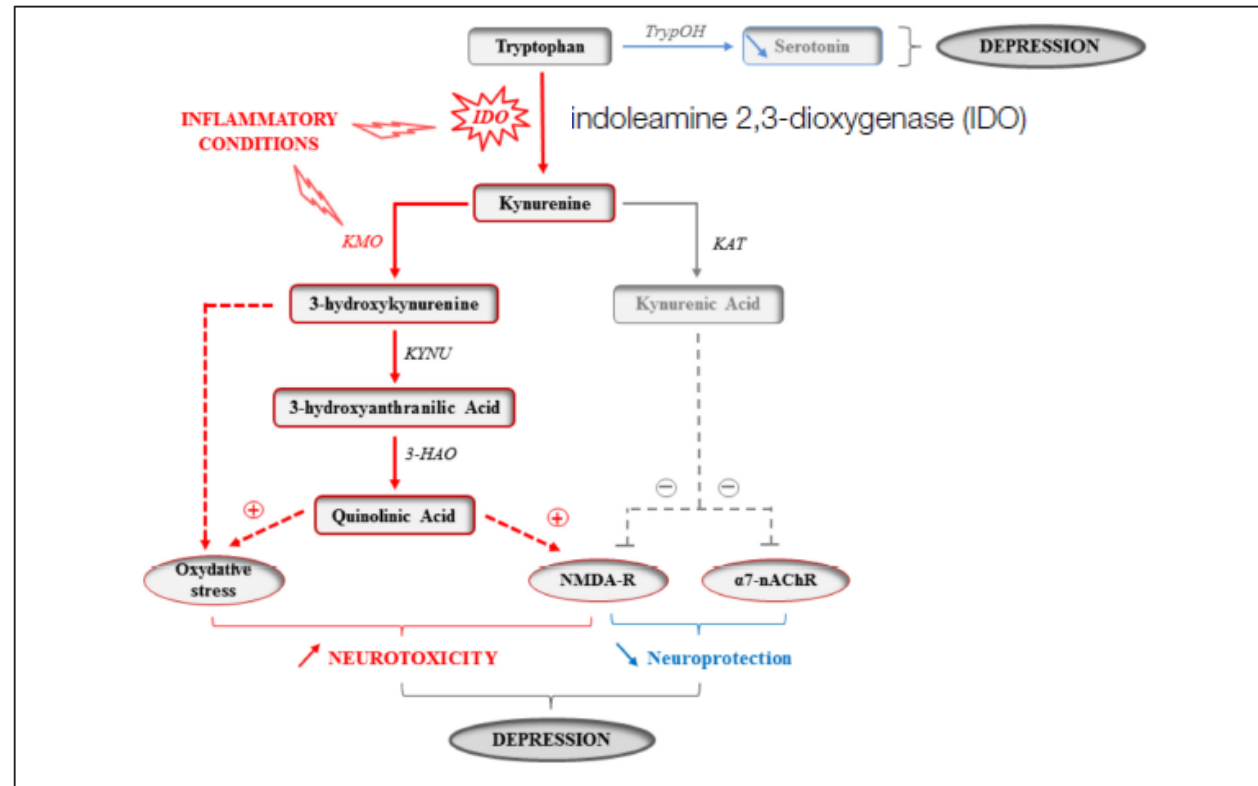
# Life adverse experiences in relation with obesity and binge eating disorder: A systematic review

GIOVANNI LUCA PALMISANO<sup>1\*</sup>, MARCO INNAMORATI<sup>2</sup> and JOHAN VANDERLINDEN<sup>3</sup>

*Background and aims:* Several studies report a positive association between adverse life experiences and adult obesity. Despite the high comorbidity between binge eating disorder (BED) and obesity, few authors have studied the link between trauma and BED. In this review the association between exposure to adverse life experiences and a risk for the development of obesity and BED in adulthood is explored. *Methods:* Based on a scientific literature review in Medline, PubMed and PsycInfo databases, the results of 70 studies ( $N=306,583$  participants) were evaluated including 53 studies on relationship between adverse life experiences and obesity, 7 studies on post-traumatic stress disorder (PTSD) symptoms in relation to obesity, and 10 studies on the association between adverse life experiences and BED. In addition, mediating factors between the association of adverse life experiences, obesity and BED were examined. *Results:* The majority of studies (87%) report that adverse life experiences are a risk factor for developing obesity and BED. More precisely a positive association between traumatic experiences and obesity and PTSD and obesity were found, respectively, in 85% and 86% of studies. Finally, the great majority of studies (90%) between trauma and the development of BED in adulthood strongly support this association. Meanwhile, different factors mediating between the trauma and obesity link were identified. *Discussion and conclusions:* Although research data show a strong association between life adverse experiences and the development of obesity and BED, more research is needed to explain this association.

# Brain Kynurenine and BH4 Pathways: Relevance to the Pathophysiology and Treatment of Inflammation-Driven Depressive Symptoms

Sylvie Vancassel<sup>1,2</sup>, Lucile Capuron<sup>1,2</sup> and Nathalie Castanon<sup>1,2\*</sup>





**La diagnosi di un disturbo mentale e/o di un disturbo dell'alimentazione è fondamentale**

# Pharmacotherapeutic strategies for treating binge eating disorder. Evidence from clinical trials and implications for clinical practice

Giovanni Amodeo<sup>a</sup>, Alessandro Cuomo<sup>a</sup>, Simone Bolognesi<sup>a</sup>, Arianna Goracci<sup>a</sup>, Maria A Trusso<sup>a</sup>, Armando Piccinni<sup>b</sup>, Stephen M Neal<sup>c</sup>, Irene Baldini<sup>a</sup>, Eugenio Federico<sup>a</sup>, Costanza Taddeucci<sup>a</sup> and Andrea Fagiolini<sup>a</sup>

Table 2. Therapeutic options for BED and their mechanism of action.

Medication	Recommended dosage	Mechanism of action
LDX	30–70 mg/die	Inhibitor of NET and DAT Antagonist of alpha-1B adrenergic receptor
Atomoxetine	40–100 mg/die	Antagonist of NMDA receptor Inhibitor of pre-synaptic DAT
Imipramine	25–200 mg/die	Inhibitor of SERT and NET
Fluvoxamine	50–300 mg/die	Selective Inhibitor of SERT
Fluoxetine	20–60 mg/die	
Sertraline	25–200 mg/die	
Escitalopram	10–20 mg/die	
Citalopram	10–40 mg/die	
Venlafaxine	37,5–375 mg/die	Selective inhibitor of NET and SERT
Duloxetine	30–120 mg/die	
Bupropion	150–300 mg/die	Selective inhibitor of NET, DAT, and SERT Antagonist of alpha-3 acetylcholine receptor
Topiramate	25–500 mg/die	Agonist of GABA alpha-1 receptor Positive allosteric modulator of GABA <sub>A</sub> receptor Inhibitor of sodium channel protein type 1 subunit alpha Antagonist of AMPA receptor and kainate 1 receptor of glutamate Inhibitor of carbonic anhydrase 2 and 4
Lamotrigine	25–400 mg/die	Inhibitor of voltage-dependent R-type calcium channel subunit alpha-1E Inhibitor of sodium channel protein type 2 subunit alpha Inhibitor of 5-HT <sub>2A</sub> e 5-HT <sub>3A</sub>
Zonisamide	50–500 mg/die	Inhibitor of sodium channel proteins Inhibitor of voltage-dependent T-type calcium channel
Badofen	30–80 mg/die	Agonist of GABA <sub>B</sub> receptor
ALSK-33	-	Antagonist of the μ-opioid receptor
Acamprosate	1332–1998 mg/die	Positive modulator of GABA-A receptor Antagonist of NMDA receptor
Naltrexone	50–150 mg/die	Antagonist of δ, μ, and κ opioid receptor
Sibutramine	10–15 mg/die	Inhibitor of SERT, NET, and DAT
Orlistat	60–180 mg/die	Inhibitor of pancreatic triacylglycerol lipase, gastric triacylglycerol lipase and fatty acid synthase
Liraglutide	0,6–1,8 mg/die	Agonist of GLP-1 receptor
D-fenfluramine	15 mg/die	Inhibitor of SERT Agonist of 5-HT <sub>2c</sub>

# Rates of abstinence following psychological or behavioral treatments for binge-eating disorder: Meta-analysis

Analysis	Intention-to-treat			Completer		
	$N_{\text{conditions}}$	Event rate % (95% CI)	$I^2$	$N_{\text{conditions}}$	Event rate % (95% CI)	$I^2$
Total posttreatment	65	45.1 (40.7, 49.5)	76%	33	50.9 (43.9, 57.8)	78%
Adjusted for publication bias		50.0 (45.1, 54.8)			52.7 (45.6, 59.7)	
<i>Sensitivity analyses</i>						
Estimate only based on 28 symptom-free criteria	41	46.9 (41.5, 52.4)	78%	20	54.0 (45.3, 62.5)	81%
Only trials with 30 participants per condition	38	44.5 (39.1, 50.0)	80%	17	51.5 (42.8, 60.2)	81%
Only trials with 45 participants per condition	22	45.0 (37.5, 52.8)	85%	18	53.2 (44.4, 61.8)	81%
Rate of abstinence for wait-list control patients	18	10.0 (7.6, 13.7)	0%	8	14.8 (9.7, 22.0)	12%
<i>Treatment type</i>						
Cognitive-behavioral therapy	41	46.5 (41.1, 52.0)	74%	21	52.4 (44.0, 60.7)	76%
Clinician-led	29	48.4 (42.4, 54.5)	68%	16	58.2 (49.5, 66.5)	69%
Guided self-help	12	42.5 (32.5, 53.2)	81%	5	36.8 (27.5, 47.2)	24%
Behavioral weight loss	6	41.0 (26.3, 57.5)	81%	3	36.1 (18.0, 59.4)	73%
CBT + behavioral weight loss	5	51.1 (43.0, 59.0)	0%	3	58.3 (45.9, 69.7)	0%
Interpersonal psychotherapy	3	63.1 (49.2, 75.1)	63%	1	73.8 (63.1, 82.2)	0%
Behavior therapy	3	25.7 (11.7, 47.5)	66%	1	20.6 (10.1, 37.3)	0%
Dialectical behavior therapy	2	56.3 (24.9, 83.4)	63%	1	88.9 (64.8, 97.2)	0%
Non-specific supportive therapy	2	32.0 (22.4, 44.3)	0%	1	38.2 (23.7, 55.3)	0%
Mindfulness-based intervention	1	18.0 (9.6, 31.1)	0%	1	25.0 (13.6, 41.5)	0%
Psychodynamic interpersonal psychotherapy	1	45.8 (32.4, 59.9)	0%	1	59.5 (43.2, 73.9)	0%
Combined psychotherapy	1	27.8 (17.5, 41.1)	0%	0	-	-

Note.  $N_{\text{conditions}}$  = number of conditions; CBT = cognitive-behavioral therapy.

# Stigma e professione medica



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**Grazie per  
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