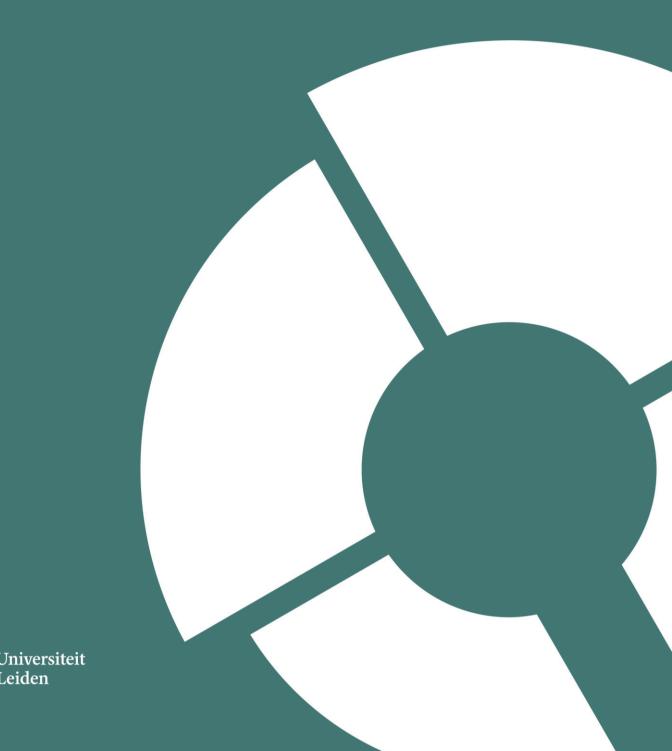# Identification and characterisation of Belgian Mental Health research published between 2018 and 2021

January 29th, 2024

CWTS
Meaningful metrics

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1. Introduction

This document describes the methodology developed to identify and characterize the scientific research published in Belgium within the field of Mental Health. We relied on scientific publications covered in the CWTS version of the Web of Science (WoS) as a proxy of the research efforts around specific mental health disorders and related topics.

The identified publications are also analysed from several perspectives in order to obtain a detailed description of this research and the research groups involved. This document describes the methodology related to the following aspects covered in the study:

- Collection of scientific publications and data sources
- Disciplinary perspectives
- Research areas and conditions (MQ classification)
- Target population
- Mental Health research involving animals
- Identification of research groups
- Interdisciplinary research
- Research specialisation

The data are available in the PowerBI dashboard.

2.   Collection of scientific publications and data sources

All the articles, reviews, letters and proceeding papers produced in the period 2018-2021 by researchers affiliated with at least one organization in Belgium were collected from two different bibliographic databases: PubMed and the Web of Science.

The search of Mental Health-related publications was guided by, but not limited to, the mental health areas and conditions considered by Woelbert et al (2019)[1]. The search strategy used in each of these databases is described in the following paragraphs.

1)   **PubMed**: We started off with the selection of a set of MeSH descriptors that best represent the various research areas and conditions considered by Woelbert et al (2019).

Besides the selected MeSH descriptors, we in some cases also considered the immediate generic MeSH descriptor. This was done when this most generic descriptor was at the same time the most specific assigned to a given publication. Sometimes these more generic descriptors are too generic, in which case they were discarded.

The list of selected MeSH terms is included in Annex I.

2)   Web of Science: this database was also used to retrieve publications related to Mental Health research. The main reason to complement the search

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[1] Woelbert, E.; Kirtley, A.; Balmer, N.; Dix, S. (2019) How much is spent on mental health research: developing a system for categorising grant funding in the UK. The Lancet Psychiatry, 6(5), 445-452. https://doi.org/10.1016/S2215-0366(19)30033-1.

done in PubMed was to ensure as much as possible the coverage of relevant publications that might not have been covered by PubMed (for instance, in the social sciences).

The search in WoS was performed on the fields title, abstract and keywords, based on a list of keywords including both the MeSH terms selected for the search in PubMed as well as all their synonyms as considered in the Medical Subject Headings (i.e. the entry terms). For example, one of the MeSH descriptors selected in PubMed is 'Mood Disorders', for which the Medical Subject Headings considers 'Affective Disorders' to denote a similar concept, so that both were considered when searching in WoS and treated as synonyms. However, a number of these keywords are often used in the scientific literature across different disciplines, in contexts other than Mental Health research. Hence, they are likely to introduce a high number of false positives in the dataset. For this reason, the following keywords were not used to perform the search in WoS:

- Ability.
- Achievement.
- Affect.
- Association.
- Awareness.
- Consensus.
- Efficiency.

- Learning.
- Memory.
- Originality.
- Thinking.
- Uncertainty.
- Understanding.

Even when removing the abovementioned keywords, this kind of search is likely to lead to false positives given that a certain word might still be used in different contexts. In order to exclude as many publications as possible

retrieved in WoS but not related to Mental Health research, we only kept publications fulfilling the following two criteria simultaneously:

1.   They cite publications classified in the MeSH descriptors Mental Health and/or Mental disorders (case when left(c.tree_node,7) = 'F02.418' or left(c.tree_node,11) = 'N01.400.500' then 'Mental Health' when left(c.tree_node,3) = 'F03' then 'Mental disorders' end)

2.   The publications are classified in specific Subject Categories, as they are more likely to be related to Mental Health research (the list of Subject Categories is included in Annex II).

The downside of narrowing the search in WoS to a limited number of subject categories is that some relevant publications might not have been captured. Nevertheless, this stringent approach was preferred to avoid the noise generated by some keywords.

3.   Disciplinary perspectives

To provide an overview of the different fields contributing to the Mental Health research produced in Belgium, we used a classification scheme that groups various WoS Subject Categories into one of the following broad disciplinary areas:

- Basic Medical Sciences

- Healthcare, Rehabilitation & Nursing

- Medical Specialty

- Natural Sciences

- Neurosciences, Neurology & Imaging

- Psychiatry & Substance Abuse

- Psychology and cognitive sciences

- Public Health & Policy

- Social Sciences

The complete list of WoS Subject Categories that fall under these nine broad research domains is included in Annex III.

4. Research areas and conditions

The Mental Health research produced by researchers in Belgium was also classified into different areas and specific conditions. We followed the classification developed by MQ (hereafter MQ classification) - a UK charity funding mental health research - originally developed to facilitate collaborative reporting of funding levels within the UK and other countries[2].

The classification, as shown in Table 1, categorised specific Mental Health conditions into broader areas of research in this domain. We assigned publications to specific conditions based on the MeSH descriptors. In this way, an overview of the scientific production of Belgium is offered at two different levels: MQ broader areas, called transdiagnostic research, as well as condition-specific research.

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[2] Woelbert, E; Lundell-Smith, K; White, R; Kemmer, D (2021) Accounting for mental health research funding: developing a quantitative baseline of global investments. The Lancet Psychiatry, 8(3): 250-258.

Table 1. MQ classification (adapted from [2])

	Definition and rationale	**ICD-11 correspondence**
Transdiagnostic research		
General mental health	Research of general relevance to mental health, without being focused on any specific disorder (eg, mental health services, psychosocial risk factors, and general mental health promotion)	Not applicable
Basic psychology and neuroscience	Research in psychology and neuroscience that has a plausible link to cognition and behaviour but cannot be classified into one or few diagnosis-specific categories because it does not focus on or have exclusive relevance to few specific mental health conditions (includes research on perception, social cognition, attachment, memory, learning, motivation, executive functions, and emotions)	Not applicable
Condition-specific research		
Attention-deficit hyperactivity disorder	A separate category because it is one of the most frequently studied neurodevelopmental disorders	6A05: attention-deficit hyperactivity disorder
Anxiety disorders	Panic disorders, generalised anxiety, phobias, separation anxiety, and selective mutism	6B00–6B06: anxiety or fear-related disorders
Autism spectrum disorder	A separate category because it is one of the most frequently studied neurodevelopmental disorders	6A02: autism spectrum disorder
Bipolar disorders	Bipolar disorder type I, bipolar disorder type II, cyclothymic disorder, and mania	All 6A6 codes: bipolar or associated disorders
Conduct disorder and other disruptive behaviour disorders	Conduct disorder, conduct problems, oppositional defiant behaviour, and disruptive mood dysregulation disorder	All 06C0 codes: disruptive behaviour or dissocial disorders
Depression	Unipolar depression including perinatal depression, dysthymia and depressed mood, mood disorder, research on antidepressant medication	All 6A7 codes: depressive disorders; 6E20.0: post-partum depression
Eating disorders	Anorexia nervosa, bulimia nervosa, binge eating disorder, body dissatisfaction, pathological eating, and early childhood feeding disorders	All 6B8 codes: feeding or eating disorders
Obsessive-compulsive and related disorders	Obsessive-compulsive disorder, compulsive hoarding, trichotillomania, excoriation and body dysmorphic disorder, compulsive behaviour	All 6B2 codes (except 6B23): obsessive compulsive disorder or related disorders
Other mental health conditions	Conversion disorder, psychosomatic disorder, illness anxiety, dissociative states, gender incongruence, paraphilic disorders, pyromania, and kleptomania	..
Other neurodevelopmental disorders	Learning disability, intellectual disability, dyslexia, dyscalculia, stutter, language impairment, Tourette syndrome, and tic disorder	All 6A codes (except 6A2 ASD and 6A5 ADHD): neurodevelopmental disorders
Personality disorders	All personality disorders; it does not include secondary personality change	6D10 and 6D11: personality disorders and related traits
Post-traumatic stress and related disorders	Acute and post-traumatic stress disorder, including psychological trauma and adjustment disorder; also includes reactive attachment disorder	All 6B4 codes: disorders specifically associated with stress
Psychosis	Psychosis without specific mention of other conditions, and research on antipsychotics (eg, side-effects, prescribing)	Comparable to 6A23 (acute and transient psychotic disorder), 6A34 (delusional disorder), but not a perfect correspondence
Schizophrenia	Schizophrenia, schizoaffective, and schizotypal disorder	6A20, 6A21, 6A22: schizophrenia, schizoaffective disorder, and schizotypal disorder

Substance misuse and dependence (including gambling and gaming)	Substance dependence, use disorder and addictive behaviours, including harmful use of alcohol (appendix); it does not include studies on control policies, smoking cessation programmes, education programmes, or studies focusing on physical harm or crime	All 6C4 and 6C5 codes: disorders due to substance use or addictive behaviours
Self-harm	Although overlapping, self-harm and suicide are separate categories because studies can focus on one or the other, DSM-5 distinguishes non-suicidal self-injury, and prevalence statistics might be available separately	Not part of mental disorders under ICD-11
Suicide	Although overlapping, self-harm and suicide are separate categories because studies can focus on one or the other, DSM-5 distinguishes non-suicidal self-injury, and prevalence statistics might be available separately	Not part of mental disorders under ICD-11

March 24th, 2014
CWTS B.V.
Centre for Science and
Technology Studies,
Leiden University

5.   Target population

Some of the publications produced in Belgium on Mental Health deal with a specific population. To characterize this research in terms of the study population, different age ranges have been considered: infants, children, adolescents, adults and elderly people.

For the publications originally retrieved from PubMed, the different target populations were identified using various MeSH descriptors (and all the specific descriptors below them in the MeSH tree):

- **Infant**: A child between 1 and 23 months of age (MeSH id: D007223).
- **Child** A person 2 to 12 years of age (MeSH id: D002648).
- **Adolescent**: A person 13 to 18 years of age (MeSH id: D000293).
- **Adult**: A person 19 to 64 years of age (MeSH id: D000328; excluding 'Aged'). The generic MeSH adult was not included as it also covers elderly.
- **Elderly**: A person 65 years of age or older (MeSH id: D000368).

For publications retrieved from WoS, a search in the title of the publication was performed using several keywords (including their plural forms) to tag the study population:

- **Infant**: infant or baby or neonate.
- **Child**: child or kid or youngster or boy or girl.
- **Adolescent**: adolescent or teenager or teenaged or youth or young person or juvenile.
- **Adult**: adult.
- **Elderly**: elderly or senior

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Again, the search in WoS based on the appearance of keywords in titles may lead in some cases to false positives.

6. Mental Health research involving animals

Some of the publications produced in Belgium in the realm of Mental Health involved the involvement of animals. To detect and tag these publications, we designed a specific strategy for PubMed consisting of the use of the MeSH Animals (MeSH id: D000818) and any of its specific MeSH descriptors, excluding Humans.

In WoS, a strategy based on keywords (and their plural forms) was used. Any publication for which its title includes one or more of the following words was considered as a study using animals:

- Animal, rat, mice, pig, ant, sheep, snail, dog , bee, bird, snake, cockroach, Macaca, primate, lizard, horse, rabbit or zebrafish.

The search in WoS based on keywords in titles may lead to some false positives. For instance, the use of animals in Mental Health research does not necessarily relate to pre-clinical research in the development of new drugs, as it could also refer for instance to therapies involving pets.

7.   Identification of research groups

The research groups involved in the Mental Health research conducted in Belgium were identified based on the publications collected in WoS. The objective is to identify the main researchers working at Belgian organisations that perform research related to Mental Health. We assume that the publications produced by these researchers are likely to be representative of their close collaborators, and therefore representative of their proper research group. Thus, this exercise does not aim at identifying each individual member of the research group. The identified research groups do not necessarily correspond to existing research groups as considered by their organisations.

The identification of research groups relies on an algorithm developed at CWTS which assigns scientific publications to individual researchers. This algorithm deals with common problems associated with author names in bibliographic databases (i.e. more than one researcher with the exact same author name or multiple author name variants for a given researcher).

The process for the identification of research groups consisted of two steps:

- We first identified researchers who could potentially be the most representative of their research groups based on the number of publications produced. This was an iterative process starting with the assumption that the researcher with the highest number of publications in the dataset of Belgian Mental Health-related publications was already the first potential group leader identified. We then created a new list of researchers by number of publications produced in descending order (excluding the publications

produced by the researcher with the highest number of publications in the dataset). The researcher with the highest number of publications in this new list was added to the group of potential group leaders and their publications were removed in order to create a new list of researchers by number of publications produced in descending order. This process was repeated for all researchers who had at least three publications not covered by the publications produced by the already identified potential group leaders.

- Identification of members of the same research group: after gathering all researchers who could potentially be group leaders, we assigned researchers to research groups. This was done following strict criteria. For each pair of researchers, we identified the number of publications they had produced together and considered the total number of publications of each researcher individually.. We then applied the following formula:

$$\frac{100 \; x \; Common \; pubs}{Common \; pubs + Pubs \; A + Pubs \; B}$$

This formula provides the percentage of co-publications produced by a pair of researchers when taking into account the publication they produced without mutually collaborating. Pairs of researcher for whom the obtained value was at least 25% were considered to be part of the same research group.

The identification of research groups based on scientific publications is challenging for various reasons, not only because of the often incomplete information provided by the bibliographic databases or the various types of errors they include. Also, the algorithm that assigns publications to individual researchers does not always provide accurate results.

For the various research groups identified, the following information was retrieved:

- **Group_id**: identifier for a research group.

- **Organisation**: main organisation to which the researcher is affiliated (e.g. the name of a university). Many researchers indicate more than one affiliation in their publications (e.g. a university and a university hospital). In these cases, only one of the affiliations was kept.

- **Sub-organisation**: sub-unit within the main organization (e.g. faculty/department/lab etc. within the organization).

All the group-related details are extracted from the most recent publication collected for this study for a given research leader. This means that these details might not reflect later changes, for instance in affiliation.

Roughly 74% of publications covered in the study were assigned to at least one research group, while the other 26% remain unlinked to any of the identified research groups. Several factors might explain why publications were not assigned to research groups, including the fact that some researchers had published in areas covered in this study but these do not represent the main focus of their research. Furthermore, some foreign researchers active in Mental Health research might have been linked to a Belgian affiliation for a short period of time, for instance when visiting a Belgian research organisation.

Table 2 shows the number and percentage of publications not linked to research groups by MQ category.

Table 2. Publications not linked to research groups

MQ category	Total publications	Publications not linked to research groups	% Publications not linked to research groups
General Mental Health	1,574	342	21,7%
Basic psychology and neuroscience	3,960	1,054	26,6%
Attention-deficit hyperactivity disorder	102	20	19,6%
Anxiety disorders	129	17	13,2%
Autism spectrum disorder	225	47	20,9%
Bipolar disorders	9	1	11,1%
Conduct disorder and other disruptive behaviour disorders	17	0	0,0%
Depression	740	129	17,4%
Eating disorders	38	4	10,5%
Obsessive-compulsive and related disorders	36	6	16,7%
Other mental health conditions	336	85	25,3%
Other neurodevelopmental disorders	356	95	26,7%
Personality Disorders	135	15	11,1%
Post-traumatic stress and related disorders	426	95	22,3%
Psychosis	159	19	11,9%
Schizophrenia	167	42	25,1%
Substance misuse and dependence (including gambling and gaming)	243	56	23,0%
Self-harm	48	10	20,8%
Suicide	55	6	10,9%

8.   Interdisciplinary research

For the various research groups identified, we estimated the degree of interdisciplinarity in their research (IDR). We used the Shannon index (sometimes called the Shannon-Wiener Index) to try to capture the diversity of disciplines embedded in the research produced by the research group. The formula of the Shannon index is as follows:

$$H = -\sum_{i=1}^{N} P_i \ln\left(1/P_i\right)$$

Where N is the number of publications produced by a given research group and Pi is the proportion of publications produced in the scientific discipline i. We used the WoS Subject Categories to represent the scientific disciplines. The higher the IDR value, the higher the number of disciplines embedded in the research output of the group. An IDR equal to 0 would indicate that all the publications of the research group are produced within a single discipline.

The table below show an example of the calculation of the indicator for two research groups A and B with a similar number of publications, 13 and 12 respectively[3]. The group with publications in a higher number of different disciplines and with a relatively more even distribution of its publications across these disciplines will score higher in this indicator.

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[3] A given publication can be classified in several fields simultaneously, if so one full publication is counted for each field.

Table 3. Example of the calculation of the Shannon index

Group A: 13 publications	# Pubs	% Pubs	LN(Pubs)	% Pubs * LN(Pubs)
Behavioural Sciences	2	0.09	-2.40	-0.22
Neurosciences	2	0.09	-2.40	-0.22
Pharmacology & Pharmacy	2	0.09	-2.40	-0.22
Psychiatry	12	0.55	-0.61	-0.33
Psychology	2	0.09	-2.40	-0.22
Psychology, Clinical	1	0.05	-3.09	-0.14
Psychology, Multidisciplinary	3	0.14	-1.99	-0.27
			IDR	**2.61**
Group B: 12 publications	# Pubs	% Pubs	LN(Pubs)	% Pubs * LN(Pubs)
Emergency Medicine	1	0.08	-2.48	-0.21
Psychiatry	11	0.92	-0.09	-0.08
			IDR	**0.29**

9.   Research specialisation

In order to assess whether and the extent to which Belgium is specialised in specific topics or areas in the Mental Health research domain, we compared the Belgian activity profile across Mental Health topics against two other profiles. First we take the profile of the EU27 and also the profile considering all the publications worldwide. The analysis of the specialisation is based on the broad areas in Mental Health research represented in the MQ classification (see Table 1).

The specialisation is obtained by applying the Bassala Index, formulated as follows:

$$\text{Bassala Index} = \frac{BE_i}{BE} \Big/ \frac{C_i}{C}$$

Where BE_i is the number of Belgian publications in the Mental Health topic i and BE is the total number of Belgian publications in Mental health, while C_i is the number of publications of the comparator (either the EU27 or worldwide publications) in the Mental Health topic $_i$ and C is the total number of publications of the comparator in Mental Health. Here the topics are represented by the MeSH1.

We divide two percentages, the percentage of Belgian publications in a given Mental Health topic by the percentage of publications of the comparator in the same Mental Health topic. A Bassala Index value of 1 or close to 1 means that both Belgium and the comparator devote a relatively similar effort to the topic (taking scientific publications as a very rough proxy of research effort). A Bassala index value of more than 1 indicates that Belgium is more specialised in that topic, while values below 1 would indicate that Belgium is less specialised than the comparator.

Annex I Selected MeSH and MQ classification

Table 4. Selected MeSH within the various MQ categories and the number of Belgian publications

MQ category	MeSH descriptor	# Publications
Anxiety disorders	Anxiety Disorders	126
Anxiety disorders	Mutism	3
Attention-deficit hyperactivity disorder	Attention Deficit Disorder with Hyperactivity	102
Autism spectrum disorder	Autism Spectrum Disorder	225
Basic psychology and neuroscience	Affect	139
Basic psychology and neuroscience	Anger	35
Basic psychology and neuroscience	Anticipation, Psychological	48
Basic psychology and neuroscience	Anxiety	391
Basic psychology and neuroscience	Apathy	14
Basic psychology and neuroscience	Behavioural Medicine	1
Basic psychology and neuroscience	Behavioural Research	9
Basic psychology and neuroscience	Bereavement	18
Basic psychology and neuroscience	Boredom	6
Basic psychology and neuroscience	Cognition	836
Basic psychology and neuroscience	Courage	2
Basic psychology and neuroscience	Disgust	4
Basic psychology and neuroscience	Emotional Regulation	74
Basic psychology and neuroscience	Euphoria	1
Basic psychology and neuroscience	Executive Function	167
Basic psychology and neuroscience	Fear	209
Basic psychology and neuroscience	Forgiveness	6
Basic psychology and neuroscience	Frustration	30
Basic psychology and neuroscience	Genetics, Behavioural	3
Basic psychology and neuroscience	Guilt	18
Basic psychology and neuroscience	Happiness	35

MQ category	MeSH descriptor	# Publications
Basic psychology and neuroscience	Hate	2
Basic psychology and neuroscience	Hope	16
Basic psychology and neuroscience	Hostility	7
Basic psychology and neuroscience	Intention	95
Basic psychology and neuroscience	Jealousy	5
Basic psychology and neuroscience	Learning	362
Basic psychology and neuroscience	Loneliness	50
Basic psychology and neuroscience	Love	8
Basic psychology and neuroscience	Mentalization	35
Basic psychology and neuroscience	Mindfulness	54
Basic psychology and neuroscience	Perception	962
Basic psychology and neuroscience	Pleasure	39
Basic psychology and neuroscience	Procrastination	5
Basic psychology and neuroscience	Psychiatry	92
Basic psychology and neuroscience	Psycholinguistics	35
Basic psychology and neuroscience	Psychological Distress	51
Basic psychology and neuroscience	Psychology	209
Basic psychology and neuroscience	Psychopathology	67
Basic psychology and neuroscience	Psychophysics	13
Basic psychology and neuroscience	Psychophysiology	13
Basic psychology and neuroscience	Sadness	14
Basic psychology and neuroscience	Sexology	17
Basic psychology and neuroscience	Social Sciences	25
Basic psychology and neuroscience	Sociobiology	2
Basic psychology and neuroscience	Spatial Navigation	12
Basic psychology and neuroscience	Theory of Mind	33
Basic psychology and neuroscience	Thinking	777
Basic psychology and	Volition	8

MQ category	MeSH descriptor	# Publications
neuroscience		
Bipolar disorders	Bipolar and Related Disorders	6
Bipolar disorders	Cyclothymic Disorder	1
Bipolar disorders	Mania	2
Conduct disorder and other disruptive behaviour disorders	Conduct Disorder	14
Conduct disorder and other disruptive behaviour disorders	Disruptive, Impulse Control, and Conduct Disorders	3
Depression	Antidepressive Agents	86
Depression	Depression	465
Depression	Depressive Disorder	329
Eating disorders	Feeding and Eating Disorders	38
General Mental Health	Behaviour Control	3
General Mental Health	Counselling	69
General Mental Health	Criminal Psychology	1
General Mental Health	Ergonomics	29
General Mental Health	Mental Health	283
General Mental Health	Mental Health Services	77
General Mental Health	Personality Assessment	18
General Mental Health	Psychiatric Somatic Therapies	5
General Mental Health	Psychological Techniques	292
General Mental Health	Psychological Tests	627
General Mental Health	Psychology, Military	2
General Mental Health	Psychotherapy	245
General Mental Health	Schizophrenic Psychology	35
Obsessive-compulsive and related disorders	Body Dysmorphic Disorders	2
Obsessive-compulsive and related disorders	Compulsive Behaviour	7
Obsessive-compulsive and related disorders	Obsessive-Compulsive Disorder	27
Other mental health conditions	Child Behaviour Disorders	10
Other mental health conditions	Dissociative Disorders	11
Other mental health conditions	Elimination Disorders	3
Other mental health conditions	Fire setting Behaviour	2
Other mental health conditions	Neurocognitive Disorders	200
Other mental health conditions	Paraphilic Disorders	5
Other mental health conditions	Sexual Dysfunctions, Psychological	33
Other mental health conditions	Sleep Wake Disorders	66
Other mental health conditions	Somatoform Disorders	11

MQ category	MeSH descriptor	# Publications
Other neurodevelopmental disorders	Communication Disorders	42
Other neurodevelopmental disorders	Neurodevelopmental Disorders	322
Personality Disorders	Personality Disorders	135
Post-traumatic stress and related disorders	Psychological Well-Being	9
Post-traumatic stress and related disorders	Reactive Attachment Disorder	5
Post-traumatic stress and related disorders	Stress, Psychological	337
Post-traumatic stress and related disorders	Trauma and Stressor Related Disorders	79
Psychosis	Schizophrenia Spectrum and Other Psychotic Disorders	159
Schizophrenia	Schizophrenia Spectrum and Other Psychotic Disorders	167
Self-harm	Self-Injurious Behaviour	48
Substance misuse and dependence (including gambling and gaming)	Behaviour, Addictive	52
Substance misuse and dependence (including gambling and gaming)	Gambling	25
Substance misuse and dependence (including gambling and gaming)	Substance-related disorders	186
Suicide	Suicide	55

Because a given publication might carry more than one MeSH descriptor within the same MQ category, obtaining the number of publications by MQ category from the previous table might lead to duplicate counts. Table 5 contains the number of unique publications within each MQ category.

Table 5. Number of Belgian publications by MQ category

MQ Category	# Publications
Anxiety disorders	129
Attention-deficit hyperactivity disorder	102
Autism spectrum disorder	225
Basic psychology and neuroscience	3,960
Bipolar disorders	9
Conduct disorder and other disruptive behaviour disorders	17
Depression	740
Eating disorders	38

General mental health	1,574
Obsessive-compulsive and related disorders	36
Other mental health conditions	336
Other neurodevelopmental disorders	356
Personality disorders	135
Post-traumatic stress and related disorders	426
Psychosis	159
Schizophrenia	167
Self-harm	48
Substance misuse and dependence (including gambling and gaming)	243
Suicide	55

Annex II Subject Categories considered for the search in WoS

Table 6. Subject categories considered for the search in WoS

MQ Category	# Publications
Anxiety disorders	129
Attention-deficit hyperactivity disorder	102
Autism spectrum disorder	225
Basic psychology and neuroscience	3,960
Bipolar disorders	9
Conduct disorder and other disruptive behaviour disorders	17
Depression	740
Eating disorders	38
General mental health	1,574
Obsessive-compulsive and related disorders	36
Other mental health conditions	336
Other neurodevelopmental disorders	356
Personality disorders	135
Post-traumatic stress and related disorders	426
Psychosis	159
Schizophrenia	167
Self-harm	48
Substance misuse and dependence (including gambling and gaming)	243
Suicide	55

Annex III WoS Subject Categories within broad areas of research

Category	WoS Subject Category
Basic Medical Sciences	Anatomy & Morphology
Basic Medical Sciences	Biochemical Research Methods
Basic Medical Sciences	Biochemistry & Molecular Biology
Basic Medical Sciences	Biophysics
Basic Medical Sciences	Biotechnology & Applied Microbiology
Basic Medical Sciences	Cell & Tissue Engineering
Basic Medical Sciences	Cell Biology
Basic Medical Sciences	Chemistry, Medicinal
Basic Medical Sciences	Endocrinology & Metabolism
Basic Medical Sciences	Genetics & Heredity
Basic Medical Sciences	Immunology
Basic Medical Sciences	Medicine, Research & Experimental
Basic Medical Sciences	Microbiology
Basic Medical Sciences	Nutrition & Dietetics
Basic Medical Sciences	Pathology
Basic Medical Sciences	Pharmacology & Pharmacy
Basic Medical Sciences	Physiology
Basic Medical Sciences	Toxicology
Healthcare, Rehabilitation & Nursing	Ergonomics
Healthcare, Rehabilitation & Nursing	Geriatrics & Gerontology
Healthcare, Rehabilitation & Nursing	Gerontology
Healthcare, Rehabilitation & Nursing	Health Care Sciences & Services
Healthcare, Rehabilitation & Nursing	Medical Informatics
Healthcare, Rehabilitation & Nursing	Nursing
Healthcare, Rehabilitation & Nursing	Primary Health Care
Healthcare, Rehabilitation & Nursing	Rehabilitation
Medical Specialty	Andrology
Medical Specialty	Anaesthesiology
Medical Specialty	Cardiac & Cardiovascular Systems
Medical Specialty	Critical Care Medicine
Medical Specialty	Dentistry, Oral Surgery & Medicine
Medical Specialty	Dermatology
Medical Specialty	Emergency Medicine
Medical Specialty	Gastroenterology & Hepatology
Medical Specialty	Haematology
Medical Specialty	Infectious Diseases
Medical Specialty	Integrative & Complementary Medicine
Medical Specialty	Medical Laboratory Technology
Medical Specialty	Medicine, General & Internal
Medical Specialty	Obstetrics & Gynaecology
Medical Specialty	Oncology
Medical Specialty	Ophthalmology
Medical Specialty	Orthopaedics
Medical Specialty	Otorhinolaryngology
Medical Specialty	Paediatrics
Medical Specialty	Peripheral Vascular Disease
Medical Specialty	Reproductive Biology
Medical Specialty	Respiratory System

Medical Specialty	Rheumatology
Medical Specialty	Sport Sciences
Medical Specialty	Surgery
Medical Specialty	Transplantation
Medical Specialty	Tropical Medicine
Medical Specialty	Urology & Nephrology
Natural Sciences	Acoustics
Natural Sciences	Biology
Natural Sciences	Chemistry, Analytical
Natural Sciences	Chemistry, Applied
Natural Sciences	Chemistry, Inorganic & Nuclear
Natural Sciences	Chemistry, Multidisciplinary
Natural Sciences	Chemistry, Organic
Natural Sciences	Chemistry, Physical
Natural Sciences	Computer Science, Artificial Intelligence
Natural Sciences	Computer Science, Cybernetics
Natural Sciences	Computer Science, Information Systems
Natural Sciences	Computer Science, Interdisciplinary Applications
Natural Sciences	Computer Science, Software Engineering
Natural Sciences	Computer Science, Theory & Methods
Natural Sciences	Developmental Biology
Natural Sciences	Evolutionary Biology
Natural Sciences	Geosciences, Multidisciplinary
Natural Sciences	Logic
Natural Sciences	Mathematical & Computational Biology
Natural Sciences	Mathematics
Natural Sciences	Mathematics, Applied
Natural Sciences	Mathematics, Interdisciplinary Applications
Natural Sciences	Optics
Natural Sciences	Physics, Applied
Natural Sciences	Physics, Mathematical
Natural Sciences	Physics, Multidisciplinary
Natural Sciences	Statistics & Probability
Natural Sciences	Virology
Natural Sciences	Water Resources
Neurosciences, Neurology & Imaging	Behavioural Sciences
Neurosciences, Neurology & Imaging	Clinical Neurology
Neurosciences, Neurology & Imaging	Engineering, Biomedical
Neurosciences, Neurology & Imaging	Neuroimaging
Neurosciences, Neurology & Imaging	Neurosciences
Neurosciences, Neurology & Imaging	Radiology, Nuclear Medicine & Medical Imaging
Psychiatry & Substance Abuse	Psychiatry
Psychiatry & Substance Abuse	Substance Abuse
Psychology and cognitive sciences	Psychology
Psychology and cognitive sciences	Psychology, Applied
Psychology and cognitive sciences	Psychology, Biological
Psychology and cognitive sciences	Psychology, Clinical
Psychology and cognitive sciences	Psychology, Developmental
Psychology and cognitive sciences	Psychology, Educational
Psychology and cognitive sciences	Psychology, Experimental
Psychology and cognitive sciences	Psychology, Mathematical
Psychology and cognitive sciences	Psychology, Multidisciplinary
Psychology and cognitive sciences	Psychology, Psychoanalysis
Psychology and cognitive sciences	Psychology, Social

Public Health & Policy	Health Policy & Services
Public Health & Policy	Public, Environmental & Occupational Health
Social Sciences	Anthropology
Social Sciences	Area Studies
Social Sciences	Business
Social Sciences	Communication
Social Sciences	Criminology & Penology
Social Sciences	Cultural Studies
Social Sciences	Demography
Social Sciences	Economics
Social Sciences	Education & Educational Research
Social Sciences	Education, Scientific Disciplines
Social Sciences	Education, Special
Social Sciences	Environmental Studies
Social Sciences	Ethnic Studies
Social Sciences	Family Studies
Social Sciences	Geography
Social Sciences	Hospitality, Leisure, Sport & Tourism
Social Sciences	Industrial Relations & Labor
Social Sciences	Information Science & Library Science
Social Sciences	International Relations
Social Sciences	Law
Social Sciences	Management
Social Sciences	Operations Research & Management Science
Social Sciences	Political Science
Social Sciences	Public Administration
Social Sciences	Social Issues
Social Sciences	Social Sciences, Interdisciplinary
Social Sciences	Social Sciences, Mathematical Methods
Social Sciences	Social Work
Social Sciences	Sociology
Social Sciences	Transportation
Social Sciences	Urban Studies
Social Sciences	Women's Studies