

**Aetiological understanding of fibromyalgia, irritable bowel syndrome, chronic fatigue syndrome and  
classificatory analogues: a systematic umbrella review**

Maria Kleinstäuber PhD

Andreas Schröder PhD

Sarah Daehler

Karen Johanne Pallesen PhD

Charlotte U. Rask, MD CU

Mathias Sanyer

Omer Van den Bergh PhD

Marie Weinreich Petersen PhD

Judith G. M. Rosmalen PhD

Published in:

Clinical Psychology in Europe: <https://doi.org/10.32872/cpe.11179>

## Online supplementary material

### Supplementary material guide

<b>Supplementary Material 1.</b> Results of the search of electronic literature database. ....	3
<b>Supplementary Material 2.</b> References of included reviews (k=452) .....	16
<b>Supplementary Material 3.</b> References of reviews excluded after fulltext review (k=526) .....	46
<b>Supplementary Material 4.</b> Characteristics of included systematic reviews without meta-analysis (k=123) and systematic reviews with meta-analyses (k=132).....	90
<b>Supplementary Material 5.</b> Characteristics of included narrative reviews (k=197) .....	111
<b>Supplementary Material 6A.</b> Specific biological factors investigated in diagnosis-specific systematic reviews (FMS, IBS, CFS/ME and SSD) or systematic reviews that investigated at least two of these diagnoses simultaneously (combinations of FSS/SSD).....	123
<b>Supplementary Material 6B.</b> Specific psychosocial factors investigated in diagnosis-specific systematic reviews (FMS, IBS, CFS/ME and SSD) or systematic reviews that investigated at least two of these diagnoses simultaneously (combinations of FSS/SSD).....	137
<b>Supplementary Material 7.</b> Characteristics of systematic reviews with meta-analysis with an overall rating ‘high’ of confidence in the results of the review according to AMSTAR-2 (k=25).....	145
<b>Supplementary Material 8.</b> PRISMA Checklist.....	159
<b>Supplementary Material 9.</b> Study selection process (PRISMA flow chart). ....	162
<b>Supplementary Material 10.</b> Frequency of systematic reviews per year of publication since 1990, divided into reviews of critically low, low, moderate and high quality, according to the Assessment of Multiple SysTemAtic Reviews (AMSTAR-2). The grey vertical lines indicate the median (Md) publication year within each quality stratum. ....	163

**Supplementary Material 1 (Continued).** Results of the search of electronic literature database.

**Search strategy: Illness Mechanisms in functional somatic syndromes: a systematic review of reviews.**

<b>Project titel/aspects</b>	Illness mechanisms in FSS
<b>Project leaders</b>	Andreas Schröder, Charlotte Rask
<b>Search specialist</b>	Helene Sognstrup, AU Library, Psychiatry, DK
<b>Latest update</b>	04.02.2016

<b>Background</b>	
<b>Search terms</b>	English: irritable bowel syndrome, fibromyalgia, chronic fatigue syndrome, somatoform disorder, somatic symptom disorder, medically unexplained symptoms including. diverse synonyms
<b>Inclusion- and exclusion criteria</b>	Language: English Year: 1990-2016 Publication types: systematic review, meta analysis

#### Information sources

<b>DATABASES</b>	<b>INTERFACE</b>	<b>RESULT</b>	<b>DATE FOR SEARCH</b>
<b>Medline</b>	PubMed	1110	27.01.2016
<b>Embase</b>	Embase.com	1358	28.01.2016
<b>PsycInfo</b>	OVID	250	03.02.2016
<b>Web of Science</b>	Thomsen Reuters	809	03.02.2016

#### Note:

- Search terms and in- and exclusion criteria are adapted to each of the databases
- Preliminary removal of duplicates is performed in Refworks. Found references are transferred to Covidence.
- Search strategy for each database is presented below- if possible the explicit number of references generated in each database is stated.

**PubMed: 27-01-2016**

((meta analys\* OR metaanalys\* OR systematic review\* OR "narrative review" OR "critical review" OR "overview of the literature"))

AND (((((((((((((((((((("medically unexplained" OR unexplained disease\* OR unexplained illness\* OR MUS OR MUPS OR unexplained symptom\* OR unexplained complaint\* OR "medically unexplained physical symptoms" OR "medically unexplained symptoms")) OR ("functional somatic syndrome" OR "functional somatic syndromes" OR "functional somatic symptom" OR "functional somatic symptoms" OR "functional syndrome" OR "functional syndromes" OR "functional disorder" OR "functional disorders" OR "functional disease" OR "functional diseases")) OR "Somatoform Disorders"[Mesh:noexp]) OR (somatoform disorder\* OR "Somatoform" OR "somatization" OR "somatisation" OR "Briquet's syndrome" OR somatisation disorder\* OR somatization disorder\* OR somatoform pain disorder\* OR "Somatic symptom disorder" OR "Somatic Symptom Disorders")) OR "Fibromyalgia"[Mesh]) OR ("Fibromyalgia" OR "fibromyalgias" OR "muscular rheumatism" OR "fibrositis" OR "fibrositides" OR "diffuse myofascial pain syndrome" OR "fibromyositis-fibromyalgia syndrome" OR primary fibromyalgia\*)) OR ("chronic widespread pain" OR chronic benign pain syndrome\* OR chronic benign pain disorder\*)) OR "Fatigue Syndrome, Chronic"[Mesh]) OR (CFS OR "Chronic Fatigue Syndrome" OR "Chronic Fatigue disorder\*" OR "myalgic encephalomyelitis")) OR "royal free disease") OR (post viral fatigue syndrome\* OR "chronic fatigue" OR "fatigue syndrome")) OR ("Chronic fatigue and immune dysfunction syndrome")) OR "Neurasthenia"[Mesh]) OR "Neurasthenia") OR "Irritable Bowel Syndrome"[Mesh]) OR ("IBS" OR "Irritable Bowel Syndrome" OR "Irritable Bowel Syndromes" OR "irritable colon")) OR ("recurrent abdominal pain" OR "functional abdominal pain" OR "functional gastrointestinal disorder" OR "functional gastrointestinal disorders")) OR "BDS") OR "bodily distress syndrome") OR "bodily distress syndromes") OR "central sensitivity syndrome"))

NOT (letter [pt] OR newspaper article [pt]) Filters: Publication date from 1990/01/01; English

**1110 references**

## Embase: 28-01-16

### Embase Session Results

No.	Query	Results
#18	#17 AND ('article'/it OR 'article in press'/it OR 'review'/it)	1,358
#17	#1 OR #2 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #13 OR #14 AND [english]/lim AND [1990-2016]/py AND ((cochrane review)/lim OR [systematic review]/lim OR [meta analysis]/lim)	1,773
#16	#1 OR #2 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #13 OR #14 AND [english]/lim AND [1990-2016]/py	84,415
#15	#1 OR #2 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #13 OR #14	107,674
#14	'bds' OR 'bodily distress syndrome' OR 'bodily distress syndromes' OR 'central sensitivity syndrome'	2,277
#13	'ibs' OR 'irritable bowel syndrome' OR 'irritable bowel syndromes' OR 'irritable colon' OR 'recurrent abdominal pain' OR 'functional abdominal pain' OR 'functional gastrointestinal disorder' OR 'functional gastrointestinal disorders'	27,744
#11	'irritable colon'/exp	18,410
#10	'neurasthenia'/exp	1,709
#9	cfs OR 'chronic fatigue syndrome'/exp OR 'chronic fatigue syndrome' OR 'chronic fatigue disorder' OR 'myalgic encephalomyelitis'/exp OR 'myalgic encephalomyelitis' OR 'royal free disease' OR 'post viral fatigue syndrome' OR 'chronic fatigue' OR 'fatigue syndrome'/exp OR 'fatigue syndrome' OR 'chronic fatigue and immune dysfunction syndrome' OR 'neurasthenia'/exp OR 'neurasthenia'	14,844
#8	'chronic fatigue syndrome'/exp	7,986
#7	'fibromyalgia'/exp OR 'fibromyalgia' OR 'fibromyalgias' OR 'muscular rheumatism' OR 'fibrositis'/exp OR 'fibrositis' OR 'fibrositides' OR 'diffuse myofascial pain syndrome' OR 'fibromyositis-fibromyalgia syndrome' OR 'primary fibromyalgia' OR 'chronic widespread pain' OR 'chronic benign pain syndrome' OR 'chronic benign pain disorder'	16,571
#6	'fibromyalgia'/exp	15,304
#5	'somatoform disorder'/de OR 'psychogenic pain'/exp OR 'somatization'/exp	11,400
#4	'somatoform disorder' OR 'somatoform' OR 'somatization'/exp OR 'somatization' OR 'somatisation' OR 'briquets syndrome' OR 'somatisation disorder' OR 'somatization disorder'/exp OR 'somatization disorder' OR 'somatoform pain disorder' OR 'somatic symptom disorder' OR 'somatic symptom disorders'	13,651
#2	'functional somatic syndrome' OR 'functional somatic syndromes' OR 'functional somatic symptom' OR 'functional somatic symptoms' OR 'functional syndrome' OR 'functional syndromes' OR 'functional disorder'/exp OR 'functional disorder' OR 'functional disorders' OR 'functional diseases' OR 'functional disease'/exp OR 'functional disease'	20,428
#1	'medically unexplained' OR 'unexplained disease' OR 'unexplained illness' OR mus OR mups OR 'unexplained symptom' OR 'unexplained symptoms' OR 'unexplained complaint' OR 'unexplained complaints' OR 'medically unexplained physical symptoms' OR 'medically unexplained symptoms'	18,898

1358 references

**PsycINFO: 03-02-16**Database(s): **PsycINFO** 1806 to January Week 4

2016 Search Strategy:

#	Searches	Results
1	("medically unexplained" or "unexplained disease" or "unexplained illness" or mus or mups or "unexplained symptom" or "unexplained symptoms" or "unexplained complaint" or "unexplained complaints" or "medically unexplained physical symptoms" or "medically unexplained symptoms").ab,hw,id,ti.	1841
2	("functional somatic syndrome" or "functional somatic syndromes" or "functional somatic symptom" or "functional somatic symptoms" or "functional syndrome" or "functional syndromes" or "functional disorder" or "functional disorders" or "functional disease" or "functional diseases").ab,hw,id,ti.	9988
3	("somatoform disorder" or "somatoform" or "somatization" or "somatisation" or "briquets syndrome" or "somatisation disorder" or "somatization disorder" or "somatoform pain disorder" or "somatic symptom disorder" or "somatic symptom disorders").ab,hw,id,ti.	13618
4	somatization/ or somatoform disorders/ or somatization disorder/ or somatoform pain disorder/	10068
5	("Fibromyalgia" or "fibromyalgias" or "muscular rheumatism" or "fibrositis" or "fibrositides" or "diffuse myofascial pain syndrome" or "fibromyositis-fibromyalgia syndrome" or "primary fibromyalgia" or "chronic widespread pain" or "chronic benign pain syndrome" or "chronic benign pain disorder").ab,hw,id,ti.	2658
6	exp fibromyalgia/	1498
7	exp chronic fatigue syndrome/	1660
8	exp neurasthenia/	303
9	("IBS" or "Irritable Bowel Syndrome" or "Irritable Bowel Syndromes" or "irritable colon" or "recurrent abdominal pain" or "functional abdominal pain" or "functional gastrointestinal disorder" or "functional gastrointestinal disorders").ab,hw,id,ti.	1892
10	(CFS or "Chronic Fatigue Syndrome" or "Chronic Fatigue disorder" or "myalgic encephalomyelitis" or "royal free disease" or "post viral fatigue syndrome" or "chronic fatigue" or "fatigue syndrome" or "Chronic fatigue and immune dysfunction syndrome" or "Neurasthenia").ab,hw,id,ti.	3633
11	exp irritable bowel syndrome/	940
12	("BDS" or "bodily distress syndrome" or "bodily distress syndromes" or "central sensitivity syndrome").ab,hw,id,ti.	283
13	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12	31795
14	limit 13 to (english language and ("0830 systematic review" or 1200 meta analysis) and yr="1990 - Current")	186
15	("meta analysis" or "metaanalysis" or "systematic review" or "systematic reviews").ab,hw,id,ti.	30425
16	13 and 15	254
17	14 or 16	283
18	limit 17 to (english and yr="1990 -Current")	250

**250 references**

## Web of Science: 03-02-2016

Search History: Web of Science™ Core Collection 

Set	Results	
		<input type="button" value="Save History / Create Alert"/> <input type="button" value="Open Saved History"/>
# 11	809	#9 AND #8 Refined by: DOCUMENT TYPES: ( REVIEW OR ARTICLE ) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1990-2016
# 10	929	#9 AND #8 Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1990-2016
# 9	132,328	TS=("systematic review" OR "meta analysis") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1990-2016
# 8	55,261	(#7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1) AND LANGUAGE: (English) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1990-2016
# 7	33	TOPIC: ("bodily distress syndrome" OR "bodily distress syndromes" OR "central sensitivity syndrome") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
# 6	18,458	TOPIC: ("Irritable Bowel Syndrome" OR "Irritable Bowel Syndromes" OR "irritable colon" OR "recurrent abdominal pain" OR "functional abdominal pain" OR "functional gastrointestinal disorder" OR "functional gastrointestinal disorders") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
# 5	8,848	TOPIC: ("Chronic Fatigue Syndrome" OR "Chronic Fatigue disorder" OR "myalgic encephalomyelitis" OR "royal free disease" OR "post viral fatigue syndrome" OR "chronic fatigue" OR "fatigue syndrome" OR "Chronic fatigue and immune dysfunction syndrome" OR "Neurasthenia") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
# 4	13,039	TOPIC: ("Fibromyalgia" OR "fibromyalgias" OR "muscular rheumatism" OR "fibrositis" OR "fibrositides" OR "diffuse myofascial pain syndrome" OR "fibromyositis-fibromyalgia syndrome" OR "primary fibromyalgia" OR "chronic widespread pain" OR "chronic benign pain syndrome" OR "chronic benign pain disorder") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
# 3	7,621	TOPIC: ("somatoform disorder" OR "somatoform disorders" OR "Somatoform" OR "somatization" OR "somatisation" OR "Briquet's syndrome" OR "somatisation disorder" OR "somatization disorder" OR "somatoform pain disorders" OR "somatoform pain disorder" OR "Somatic symptom disorder" OR "Somatic Symptom Disorders") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
# 2	3,238	TOPIC: ("functional somatic syndrome" OR "functional somatic syndromes" OR "functional somatic symptom" OR "functional somatic symptoms" OR "functional syndrome" OR "functional syndromes" OR "functional disorder" OR "functional disorders" OR "functional disease" OR "functional diseases") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
# 1	17,052	TS=("medically unexplained" OR "unexplained disease" OR "unexplained illness" OR "MUS" OR "MUPS" OR "unexplained symptom" OR "unexplained symptoms" OR "unexplained complaint" OR "unexplained complaints" OR "medically unexplained physical symptoms" OR "medically unexplained symptoms") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years

809 references

In total 3527 references are found in the four databases. After removal of duplicates there is 2230 references left.

## Update search February 2020

DATABASES	INTERFACE	HITS	SEARCH DATE
Medline	PubMed	716	03.02.2020
Embase	Embase.com	919	03.02.2020
PsycInfo	OVID	126	03.02.2020
Web of Science Core Collection	Clarivate	627	03.02.2020

## PubMed: 03.02.2020

((((((((((((((((((((((((((("medically unexplained" OR unexplained disease\* OR unexplained illness\* OR MUS OR MUPS OR unexplained symptom\* OR unexplained complaint\* OR "medically unexplained physical symptoms" OR "medically unexplained symptoms")) OR ("functional somatic syndrome" OR "functional somatic syndromes" OR "functional somatic symptom" OR "functional somatic symptoms" OR "functional syndrome" OR "functional syndromes" OR "functional disorder" OR "functional disorders" OR "functional disease" OR "functional diseases")) OR "Somatoform Disorders"[Mesh:noexp]) OR (somatoform disorder\* OR "Somatoform" OR "somatization" OR "somatisation" OR "Briquet's syndrome" OR somatisation disorder\* OR somatization disorder\* OR somatoform pain disorder\* OR "Somatic symptom disorder" OR "Somatic Symptom Disorders")) OR "Fibromyalgia"[Mesh]) OR ("Fibromyalgia" OR "fibromyalgias" OR "muscular rheumatism" OR "fibrositis" OR "fibrositides" OR "diffuse myofascial pain syndrome" OR "fibromyositis-fibromyalgia syndrome" OR primary fibromyalgia\*)) OR ("chronic widespread pain" OR chronic benign pain syndrome\* OR chronic benign pain disorder\*)) OR "Fatigue Syndrome, Chronic"[Mesh]) OR (CFS OR "Chronic Fatigue Syndrome" OR "Chronic Fatigue disorder\*" OR "myalgic encephalomyelitis")) OR "royal free disease") OR (post viral fatigue syndrome\* OR "chronic fatigue" OR "fatigue syndrome")) OR ("Chronic fatigue and immune dysfunction syndrome")) OR "Neurasthenia"[Mesh]) OR "Neurasthenia") OR "Irritable Bowel Syndrome"[Mesh]) OR ("IBS" OR "Irritable Bowel Syndrome" OR "Irritable Bowel Syndromes" OR "irritable colon")) OR ("recurrent abdominal pain" OR "functional abdominal pain" OR "functional gastrointestinal disorder" OR "functional gastrointestinal disorders")) OR "BDS") OR "bodily distress syndrome") OR "bodily distress syndromes") OR "central sensitivity syndrome")))))))) AND ("meta analysis" OR meta-analysis OR "meta analyses" OR meta-analyses OR systematic review OR "systematic reviews" OR "narrative review" OR "critical review" OR "overview of the literature") Filters: Publication date from 2017/01/01; English

## 716 references



## Embase Session Results

No.	Query	Results
#21	#20 AND ('article'/it OR 'article in press'/it OR 'review'/it)	919
#20	(#16 OR #18) AND [english]/lim AND [2017-2020]/py	1,267
#19	#16 OR #18	3,806
#18	#15 AND #17	351
#17	'narrative review' OR 'critical review' OR 'overview of the literature'	28,733
#16	(#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14) AND ([cochrane review]/lim OR [systematic review]/lim OR [meta analysis]/lim)	3,500
#15	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14	149,058
#14	'bds' OR 'bodily distress syndrome' OR 'bodily distress syndromes' OR 'central sensitivity syndrome'	4,417
#13	'ibs' OR 'irritable bowel syndrome' OR 'irritable bowel syndromes' OR 'irritable colon' OR 'recurrent abdominal pain' OR 'functional abdominal pain' OR 'functional gastrointestinal disorder' OR 'functional gastrointestinal disorders'	41,396
#12	'irritable colon'/exp	25,559
#11	'neurasthenia'/exp	1,811
#10	cfs OR 'chronic fatigue syndrome' OR 'chronic fatigue disorder*' OR 'myalgic encephalomyelitis'/exp OR 'myalgic encephalomyelitis' OR 'royal free disease' OR 'post viral fatigue syndrome*' OR 'chronic fatigue' OR 'fatigue syndrome'/exp OR 'fatigue syndrome' OR 'chronic fatigue and immune dysfunction syndrome' OR 'neurasthenia'/exp OR 'neurasthenia'	19,331
#9	'chronic fatigue syndrome'/exp	9,700
#8	'fibromyalgia' OR 'fibromyalgias' OR 'muscular rheumatism' OR 'fibrositis'/exp OR 'fibrositis' OR 'fibrositides' OR 'diffuse myofascial pain syndrome' OR 'fibromyositis-fibromyalgia syndrome' OR 'primary fibromyalgia*' OR 'chronic widespread pain' OR 'chronic benign pain syndrome*' OR 'chronic benign pain disorder*'	22,150
#7	'fibromyalgia'/exp	20,149
#6	'somatization'/exp	7,665
#5	'psychogenic pain'/exp	1,008
#4	'somatoform disorder'/de	5,939
#3	'somatoform disorder' OR 'somatoform' OR 'somatization'/exp OR 'somatization' OR 'somatisation' OR 'briquets syndrome' OR 'somatisation disorder*' OR 'somatization disorder'/exp OR 'somatization disorder' OR 'somatoform pain disorder*' OR 'somatic symptom disorder' OR 'somatic symptom disorders'	16,866
#2	'functional somatic syndrome' OR 'functional somatic syndromes' OR 'functional somatic symptom' OR 'functional somatic symptoms' OR 'functional syndrome' OR 'functional syndromes' OR 'functional disorder'/exp OR 'functional disorder*' OR 'functional disease*' OR 'functional disease'/exp	28,618
#1	'medically unexplained' OR 'unexplained disease*' OR 'unexplained illness*' OR 'mus' OR 'mups' OR 'unexplained symptom*' OR 'unexplained complaint*' OR 'medically unexplained physical symptoms'/exp OR 'medically unexplained physical symptoms' OR 'medically unexplained symptoms'/exp OR 'medically unexplained symptoms'	25,056

919 references

#	Searches	Results
1	("medically unexplained" or "unexplained disease" or "unexplained illness" or mus or mups or "unexplained symptom" or "unexplained symptoms" or "unexplained complaint" or "unexplained complaints" or "medically unexplained physical symptoms" or "medically unexplained symptoms").ab,hw,id,ti.	2209
2	("functional somatic syndrome" or "functional somatic syndromes" or "functional somatic symptom" or "functional somatic symptoms" or "functional syndrome" or "functional syndromes" or "functional disorder" or "functional disorders" or "functional disease" or "functional diseases").ab,hw,id,ti.	10168
3	("somatoform disorder" or "somatoform" or "somatization" or "somatisation" or "briquets syndrome" or "somatisation disorder" or "somatization disorder" or "somatoform pain disorder" or "somatic symptom disorder" or "somatic symptom disorders").ab,hw,id,ti.	15277
4	somatization/ or somatoform disorders/ or somatization disorder/ or somatoform pain disorder/	11009
5	("Fibromyalgia" or "fibromyalgias" or "muscular rheumatism" or "fibrositis" or "fibrositides" or "diffuse myofascial pain syndrome" or "fibromyositis-fibromyalgia syndrome" or "primary fibromyalgia" or "chronic widespread pain" or "chronic benign pain syndrome" or "chronic benign pain disorder").ab,hw,id,ti.	3327
6	exp fibromyalgia/	1961
7	exp chronic fatigue syndrome/	1935
8	exp neurasthenia/	311
9	("IBS" or "Irritable Bowel Syndrome" or "Irritable Bowel Syndromes" or "irritable colon" or "recurrent abdominal pain" or "functional abdominal pain" or "functional gastrointestinal disorder" or "functional gastrointestinal disorders").ab,hw,id,ti.	2338
10	(CFS or "Chronic Fatigue Syndrome" or "Chronic Fatigue disorder" or "myalgic encephalomyelitis" or "royal free disease" or "post viral fatigue syndrome" or "chronic fatigue" or "fatigue syndrome" or "Chronic fatigue and immune dysfunction syndrome" or "Neurasthenia").ab,hw,id,ti.	4226
11	exp irritable bowel syndrome/	1144
12	("BDS" or "bodily distress syndrome" or "bodily distress syndromes" or "central sensitivity syndrome").ab,hw,id,ti.I a	426
13	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12	35439
14	limit 13 to ("0830 systematic review" or 1200 meta analysis or 1300 metasynthesis)	347
15	("meta analysis" or "metaanalysis" or "systematic review" or "systematic reviews" or "narrative review" or "critical review" or "overview of the literature").ab,hw,id,ti.	59775
16	13 and 15	545
17	14 or 16	588
18	limit 17 to (english language and yr="2017 -Current")	126

## Web of Science Core Collection: 03.02.2020

Set	Results	Save History / Create Alert	Open Saved History	Edit Sets	Combine Sets AND OR Combine	Delete Sets Select All Delete
# 16	627	#12 OR #10 Refined by: PUBLICATION YEARS: ( 2020 OR 2019 OR 2018 OR 2017 ) AND DOCUMENT TYPES: ( REVIEW OR ARTICLE OR EARLY ACCESS ) AND LANGUAGES: ( ENGLISH ) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020			<input type="checkbox"/>	<input type="checkbox"/>
# 15	627	#12 OR #10 Refined by: PUBLICATION YEARS: ( 2020 OR 2019 OR 2018 OR 2017 ) AND DOCUMENT TYPES: ( REVIEW OR ARTICLE OR EARLY ACCESS ) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020			<input type="checkbox"/>	<input type="checkbox"/>
# 14	682	#12 OR #10 Refined by: PUBLICATION YEARS: ( 2020 OR 2019 OR 2018 OR 2017 ) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020			<input type="checkbox"/>	<input type="checkbox"/>
# 13	1,899	#12 OR #10 Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 12	236	#11 AND #8 Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 11	34,567	TOPIC: ("narrative review" OR "critical review" OR "overview of the literature") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 10	1,680	#9 AND #8 Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 9	265,721	TS=("systematic review" OR "meta analysis") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 8	76,050	(#7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1) AND LANGUAGE: (English) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 7	102	TOPIC: ("bodily distress syndrome" OR "bodily distress syndromes" OR "central sensitivity syndrome") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 6	24,962	TOPIC: ("Irritable Bowel Syndrome" OR "Irritable Bowel Syndromes" OR "Irritable colon" OR "recurrent abdominal pain" OR "functional abdominal pain" OR "functional gastrointestinal disorder" OR "functional gastrointestinal disorders") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 5	10,810	TOPIC: ("Chronic Fatigue Syndrome" OR "Chronic Fatigue disorder" OR "myalgic encephalomyelitis" OR "royal free disease" OR "post viral fatigue syndrome" OR "chronic fatigue" OR "fatigue syndrome" OR "Chronic fatigue and immune dysfunction syndrome" OR "Neurasthenia") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 4	17,414	TOPIC: ("Fibromyalgia" OR "fibromyalgias" OR "muscular rheumatism" OR "fibrositis" OR "fibrositides" OR "diffuse myofascial pain syndrome" OR "fibromyositis-fibromyalgia syndrome" OR "primary fibromyalgia" OR "chronic widespread pain" OR "chronic benign pain syndrome" OR "chronic benign pain disorder") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 3	9,838	TOPIC: ("somatoform disorder" OR "somatoform disorders" OR "Somatoform" OR "somatization" OR "somatisation" OR "Briquet's syndrome" OR "somatisation disorder" OR "somatization disorder" OR "somatoform pain disorders" OR "somatoform pain disorder" OR "Somatic symptom disorder" OR "Somatic Symptom Disorders") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 2	4,398	TOPIC: ("functional somatic syndrome" OR "functional somatic syndromes" OR "functional somatic symptom" OR "functional somatic symptoms" OR "functional syndrome" OR "functional syndromes" OR "functional disorder" OR "functional disorders" OR "functional disease" OR "functional diseases") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	
# 1	20,205	TS=("medically unexplained" OR "unexplained disease" OR "unexplained illness" OR "MUS" OR "MUPS" OR "unexplained symptom" OR "unexplained symptoms" OR "unexplained complaint" OR "unexplained complaints" OR "medically unexplained physical symptoms" OR "medically unexplained symptoms") Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=1900-2020	Edit	<input type="checkbox"/>	<input type="checkbox"/>	

627 references

The February 2020 search resulted in 2388 references, after removal of duplicates 1381 references were left.

## Update search January 2022

DATABASES		INTERFACE	HITS	SEARCH DATE
Medline		PubMed	780	10.01.2022
Embase		Embase.com /Elsevier	1050	10.01.2022
PsycInfo		OVID	79	10.01.2022
Web of Science Core Collection		Clarivate	645	10.01.2022

## PubMed: 10.01.2022

"medically unexplained" OR "unexplained disease\*" OR "unexplained illness\*" OR "MUS" OR "MUPS" OR "unexplained symptom\*" OR "unexplained complaint\*" OR "medically unexplained physical symptom\*" OR "medically unexplained symptom\*" OR "functional somatic syndrome\*" OR "functional somatic symptom\*" OR "functional syndrome\*" OR "functional disorder\*" OR "functional disease\*" OR "Somatoform Disorders"[Mesh:noexp] OR "somatoform disorder\*" OR "Somatoform" OR "somatization" OR "somatisation" OR "Briquet's syndrome" OR "somatisation disorder\*" OR "somatization disorder\*" OR "somatoform pain disorder\*" OR "Somatic symptom disorder\*" OR "Fibromyalgia"[Mesh] OR "Fibromyalgia" OR "fibromyalgias" OR "muscular rheumatism" OR "fibrositis" OR "fibrositides" OR "diffuse myofascial pain syndrome" OR "fibromyositis-fibromyalgia syndrome" OR "primary fibromyalgia\*" OR "chronic widespread pain" OR "chronic benign pain syndrome\*" OR "chronic benign pain disorder\*" OR "Fatigue Syndrome, Chronic"[Mesh] OR "CFS" OR "Chronic Fatigue Syndrome" OR "Chronic Fatigue disorder\*" OR "myalgic encephalomyelitis" OR "royal free disease" OR "post viral fatigue syndrome\*" OR "chronic fatigue" OR "fatigue syndrome" OR "Chronic fatigue and immune dysfunction syndrome" OR "Neurasthenia"[Mesh] OR "Neurasthenia" OR "Irritable Bowel Syndrome"[Mesh] OR "IBS" OR "Irritable Bowel Syndrome\*" OR "irritable colon" OR "recurrent abdominal pain" OR "functional abdominal pain" OR "functional gastrointestinal disorder\*" OR "BDS" OR "bodily distress syndrome\*" OR "central sensitivity syndrome" AND ("meta analysis" OR meta-analysis OR "meta analyses" OR meta-analyses OR systematic review OR "systematic reviews" OR "narrative review" OR "critical review" OR "overview of the literature") Filters: English, from 2020/1/1 - 3000/12/12

**780 references**

## Embase: 10.01.2022

No.	Query	Results
#21	#20 AND ('article'/it OR 'article in press'/it OR 'review'/it)	1,050
#20	(#16 OR #18) AND [english]/lim AND [2020-2022]/py	1,284
#19	#16 OR #18	5,075
#18	#15 AND #17	497
#17	'narrative review' OR 'critical review' OR 'overview of the literature'	39,727
#16	(#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14) AND ([cochrane review]/lim OR [systematic review]/lim OR [meta analysis]/lim)	4,652
#15	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14	171,724
#14	'bds' OR 'bodily distress syndrome' OR 'bodily distress syndromes' OR 'central sensitivity syndrome'	5,731
#13	'ibs' OR 'irritable bowel syndrome' OR 'irritable bowel syndromes' OR 'irritable colon' OR 'recurrent abdominal pain' OR 'functional abdominal pain' OR 'functional gastrointestinal disorder' OR 'functional gastrointestinal disorders'	48,882
#12	'irritable colon'/exp	29,192
#11	'neurasthenia'/exp	1,858
#10	cfs OR 'chronic fatigue syndrome' OR 'chronic fatigue disorder*' OR 'myalgic encephalomyelitis'/exp OR 'myalgic encephalomyelitis' OR 'royal free disease' OR 'post viral fatigue syndrome*' OR 'chronic fatigue' OR 'fatigue syndrome'/exp OR 'fatigue syndrome' OR 'chronic fatigue and immune dysfunction syndrome' OR 'neurasthenia'/exp OR 'neurasthenia'	22,217
#9	'chronic fatigue syndrome'/exp	10,885
#8	'fibromyalgia' OR 'fibromyalgias' OR 'muscular rheumatism' OR 'fibrositis'/exp OR 'fibrositis' OR 'fibrositides' OR 'diffuse myofascial pain syndrome' OR 'fibromyositis-fibromyalgia syndrome' OR 'primary fibromyalgia*' OR 'chronic widespread pain' OR 'chronic benign pain syndrome*' OR 'chronic benign pain disorder*'	22,150
#7	'fibromyalgia'/exp	22,915
#6	'somatization'/exp	8,466
#5	'psychogenic pain'/exp	1,139
#4	'somatoform disorder'/de	6,491
#3	'somatoform disorder' OR 'somatoform' OR 'somatization'/exp OR 'somatization' OR 'somatisation' OR 'briquets syndrome' OR 'somatisation disorder*' OR 'somatization disorder'/exp OR 'somatization disorder' OR 'somatoform pain disorder*' OR 'somatic symptom disorder' OR 'somatic symptom disorders'	18,545
#2	'functional somatic syndrome' OR 'functional somatic syndromes' OR 'functional somatic symptom' OR 'functional somatic symptoms' OR 'functional syndrome' OR 'functional syndromes' OR 'functional disorder'/exp OR 'functional disorder*' OR 'functional disease*' OR 'functional disease'/exp	32,843
#1	'medically unexplained' OR 'unexplained disease*' OR 'unexplained illness*' OR mus OR mups OR 'unexplained symptom*' OR 'unexplained complaint*' OR 'medically unexplained physical symptoms'/exp OR 'medically unexplained physical symptoms' OR 'medically unexplained symptoms'/exp OR 'medically unexplained symptoms'	28,006

1050 references

#	Searches	Results
1	("medically unexplained" or "unexplained disease" or "unexplained illness" or mus or mups or "unexplained symptom" or "unexplained symptoms" or "unexplained complaint" or "unexplained complaints" or "medically unexplained physical symptoms" or "medically unexplained symptoms").ab,hw,id,ti. (2378)	2378
2	("functional somatic syndrome" or "functional somatic syndromes" or "functional somatic symptom" or "functional somatic symptoms" or "functional syndrome" or "functional syndromes" or "functional disorder" or "functional disorders" or "functional disease" or "functional diseases").ab,hw,id,ti.	10259
3	("somatoform disorder" or "somatoform" or "somatization" or "somatisation" or "briquets syndrome" or "somatization disorder" or "somatization disorder" or "somatoform pain disorder" or "somatic symptom disorder" or "somatic symptom disorders").ab,hw,id,ti.	16203
4	somatization/ or somatoform disorders/ or somatization disorder/ or somatoform pain disorder/	11672
5	("Fibromyalgia" or "fibromyalgias" or "muscular rheumatism" or "fibrositis" or "fibrositides" or "diffuse myofascial pain syndrome" or "fibromyositis-fibromyalgia syndrome" or "primary fibromyalgia" or "chronic widespread pain" or "chronic benign pain syndrome" or "chronic benign pain disorder").ab,hw,id,ti.	3650
6	exp fibromyalgia/	2191
7	exp chronic fatigue syndrome/	2054
8	exp neurasthenia/	320
9	("IBS" or "Irritable Bowel Syndrome" or "Irritable Bowel Syndromes" or "irritable colon" or "recurrent abdominal pain" or "functional abdominal pain" or "functional gastrointestinal disorder" or "functional gastrointestinal disorders").ab,hw,id,ti.	2549
10	(CFS or "Chronic Fatigue Syndrome" or "Chronic Fatigue disorder" or "myalgic encephalomyelitis" or "royal free disease" or "post viral fatigue syndrome" or "chronic fatigue" or "fatigue syndrome" or "Chronic fatigue and immune dysfunction syndrome" or "Neurasthenia").ab,hw,id,ti.	4506
11	exp irritable bowel syndrome/	1241
12	("BDS" or "bodily distress syndrome" or "bodily distress syndromes" or "central sensitivity syndrome").ab,hw,id,ti.	483
13	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12	37283
14	limit 13 to ("0830 systematic review" or 1200 meta analysis or 1300 metasynthesis)	446
15	("meta analysis" or "metaanalysis" or "systematic review" or "systematic reviews" or "narrative review" or "critical review" or "overview of the literature").ab,hw,id,ti.	74389
16	13 and 15	655
17	14 or 16	709
18	limit 17 to (english language and yr="2020 -Current")	79

## Web of Science Core Collection: 10.01.2022

Number	Query	Results
#15	#12 OR #10 and English (Languages)   Timespan: 2020-01-01 to 2022-01-10 (Publication Date)	645
#14	#12 OR #10   Timespan: 2020-01-01 to 2022-01-10 (Publication Date)	661
#13	#12 OR #10	2633
#12	#11 AND #8	357
#11	TS=( ("narrative review" OR "critical review" OR "overview of the literature"))	50292
#10	#9 AND #8	2304
#9	TS=(("systematic review" OR "meta analysis"))	368678
#8	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7	1,220
#7	TS=( ("bodily distress syndrome" OR "bodily distress syndromes" OR "central sensitivity syndrome"))	138
#6	TS=( ("Irritable Bowel Syndrome" OR "Irritable Bowel Syndromes" OR "irritable colon" OR "recurrent abdominal pain" OR "functional abdominal pain" OR "functional gastrointestinal disorder" OR "functional gastrointestinal disorders"))	27922
#5	TS=( ("Chronic Fatigue Syndrome" OR "Chronic Fatigue disorder" OR "myalgic encephalomyelitis" OR "royal free disease" OR "post viral fatigue syndrome" OR "chronic fatigue" OR "fatigue syndrome" OR "Chronic fatigue and immune dysfunction syndrome" OR "Neurasthenia"))	11756
#4	TS=( ("Fibromyalgia" OR "fibromyalgias" OR "muscular rheumatism" OR "fibrositis" OR "fibrositides" OR "diffuse myofascial pain syndrome" OR "fibromyositis-fibromyalgia syndrome" OR "primary fibromyalgia" OR "chronic widespread pain" OR "chronic benign pain syndrome" OR "chronic benign pain disorder"))	19583
#3	TS=( ("somatoform disorder" OR "somatoform disorders" OR "Somatoform" OR "somatization" OR "somatisation" OR "Briquet's syndrome" OR "somatisation disorder" OR "somatization disorder" OR "somatoform pain disorders" OR "somatoform pain disorder" OR "Somatic symptom disorder" OR "Somatic Symptom Disorders"))	11125
#2	TS=( ("functional somatic syndrome" OR "functional somatic syndromes" OR "functional somatic symptom" OR "functional somatic symptoms" OR "functional syndrome" OR "functional syndromes" OR "functional disorder" OR "functional disorders" OR "functional disease" OR "functional diseases"))	5128
#1	TS=(("medically unexplained" OR "unexplained disease" OR "unexplained illness" OR "MUS" OR "MUPS" OR "unexplained symptom" OR "unexplained symptoms" OR "unexplained complaint" OR "unexplained complaints" OR "medically unexplained physical symptoms" OR "medically unexplained symptoms"))	23055

**645 references**

**The January 2022 search resulted in 2554 references, after removal of duplicates 1476 references were left.**

**Supplementary Material 2 (Continued).** References of included reviews (k=452)

- Aaron LA, Buchwald D. Chronic diffuse musculoskeletal pain, fibromyalgia and co-morbid unexplained clinical conditions. *Bailliere's Best Practice and Research in Clinical Rheumatology* 2003;17(4):563-574.
- Abbi B, Natelson BH. Is chronic fatigue syndrome the same illness as fibromyalgia: Evaluating the 'single syndrome' hypothesis. *QJM* 2013;106(1):3-9.
- Abedi SH, Fazlzadeh A, Mollalo A, et al. The neglected role of *Blastocystis* sp. and *Giardia lamblia* in development of irritable bowel syndrome: A systematic review and meta-analysis. *Microb Pathog* 2021: 105215.
- Abeles AM, Pillinger MH, Solitar BM, Abeles M. Narrative review: the pathophysiology of fibromyalgia. *Ann Intern Med* 2007;146(10):726-734.
- Ablin JN, Buskila D. Update on the genetics of the fibromyalgia syndrome. *Best Practice and Research: Clinical Rheumatology* 2015;29(1):20-28.
- Ablin JN, Buskila D. Predicting fibromyalgia, a narrative review: Are we better than fools and children? *European Journal of Pain* 2014;18(8):1060-1066.
- Adeyemo MA, Spiegel BMR, Chang L. Meta-analysis: Do irritable bowel syndrome symptoms vary between men and women? *Alimentary Pharmacology and Therapeutics* 2010;32(6):738-755.
- Afari N, Ahumada SM, Wright LJ, Mostoufi S, Golnari G, Reis V, et al. Psychological Trauma and Functional Somatic Syndromes: A Systematic Review and Meta-Analysis. *Psychosom Med* 2014;76(1):2-11.
- Agargun MY. Sleep-wake disturbances in fibromyalgia. *Sleep Hypnosis* 2002;4(3):93-105.
- Ahmed, S., Newton, P. D., Ojo, O., & Dibley, L. (2021). Experiences of ethnic minority patients who are living with a primary chronic bowel condition: a systematic scoping review with narrative synthesis. *BMC Gastroenterol*, 21(1), 322.  
<https://doi.org/10.1186/s12876-021-01857-8>
- Alaradi O, Barkin JS. Irritable bowel syndrome: Update on pathogenesis and management. *Medical principles and practice* 2002;11(1):2-17.
- Albusoda, A., Ruffle, J.K., Friis, K.A., Gysan, M.R., Drewes, A.M., Aziz, Q., and Farmer, A.D. (2018). Systematic review with meta-analysis: conditioned pain modulation in patients with the irritable bowel syndrome. *Aliment Pharmacol Ther* 48, 797-806.
- Alciati A, Sgiaravello P, Atzeni F, Sarzi-Puttini P. Psychiatric problems in fibromyalgia: clinical and neurobiological links between mood disorders and fibromyalgia. *Reumatismo* 2012;64(4):268-274.
- Algera, J., Colomier, E., and Simren, M. (2019). The Dietary Management of Patients with Irritable Bowel Syndrome: A Narrative Review of the Existing and Emerging Evidence. *Nutrients* 11.
- Almenar-Perez, E., Ovejero, T., Sanchez-Fito, T., Espejo, J.A., Nathanson, L., and Oltra, E. (2019). Epigenetic Components of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Uncover Potential Transposable Element Activation. *Clin Ther* 41, 675-698.
- Almutairi, B., Langley, C., Crawley, E., & Thai, N. J. (2020). Using structural and functional MRI as a neuroimaging technique to investigate chronic fatigue syndrome/myalgic encephalopathy: a systematic review. *Bmj Open*, 10(8), e031672.  
<https://doi.org/10.1136/bmjopen-2019-031672>



- Amiri, M., Esmaili, H., Hamad, A. H., Alavinia, M., Masani, K., & Kumbhare, D. (2021). Nociceptive Flexion Reflex Threshold in Chronic Pain Patients: A Needed Update for the Current Evidence. *Am J Phys Med Rehabil*, 100(8), 750-759. <https://doi.org/10.1097/phm.0000000000001626>
- Amiri, M., Rhudy, J., Masani, K., & Kumbhare, D. (2021). Fibromyalgia and Nociceptive Flexion Reflex (NFR) Threshold: A Systematic Review, Meta-Analysis, and Identification of a Possible Source of Heterogeneity. *J Pain Res*, 14, 1653-1665. <https://doi.org/10.2147/jpr.S306403>
- Anderson G, Berk M, Maes M. Biological phenotypes underpin the physio-somatic symptoms of somatization, depression, and chronic fatigue syndrome. *Acta Psychiatr Scand* 2014;129(2):83-97.
- Andrés-Rodríguez, L., Borràs, X., Feliu-Soler, A., Pérez-Aranda, A., Angarita-Osorio, N., Moreno-Peral, P., Montero-Marin, J., García-Campayo, J., Carvalho, A. F., Maes, M., & Luciano, J. V. (2020). Peripheral immune aberrations in fibromyalgia: A systematic review, meta-analysis and meta-regression. *Brain Behav Immun*, 87, 881-889. <https://doi.org/10.1016/j.bbi.2019.12.020>
- Anderson VR, Jason LA, Hlavaty LE, Porter N, Cudia J. A review and meta-synthesis of qualitative studies on Myalgic Encephalomyelitis/chronic fatigue syndrome. *Patient Education & Counseling* 2012;86(2):147-155.
- Areeshi MY, Haque S, Panda AK, Mandal RK. A serotonin transporter gene (SLC6A4) polymorphism is associated with reduced risk of irritable bowel syndrome in American and Asian population: a meta-analysis. *PloS one* 2013;8(9):e75567.
- Ariani, A., Bazzichi, L., Puttini, P. S., Salaffi, F., Manara, M., Prevete, I., Bortoluzzi, A., Carrara, G., Scire, C. A., Ughi, N., & Parisi, S. (2021). The Italian Society for Rheumatology clinical practice guidelines for the diagnosis and management of fibromyalgia Best practices based on current scientific evidence. *Reumatismo*, 73(2), 89-105. <https://doi.org/10.4081/reumatismo.2021.1362>
- Arnold LM, Gebke KB, Choy EHS. Fibromyalgia: Management strategies for primary care providers. *Int J Clin Pract* 2016;70(2):99-112.
- Aroke, E. N., & Powell-Roach, K. L. (2020). The Metabolomics of Chronic Pain Conditions: A Systematic Review. *Biol Res Nurs*, 22(4), 458-471. <https://doi.org/10.1177/1099800420941105>
- Asha, M. Z., & Khalil, S. F. H. (2020). Efficacy and Safety of Probiotics, Prebiotics and Synbiotics in the Treatment of Irritable Bowel Syndrome: A systematic review and meta-analysis. *Sultan Qaboos Univ Med J*, 20(1), e13-e24. <https://doi.org/10.18295/squmj.2020.20.01.003>
- Attademo, L., and Bernardini, F. (2018). Prevalence of personality disorders in patients with fibromyalgia: A brief review. *Primary Health Care Research and Development* 19, 523-528.
- Atzeni, F., Gerardi, M.C., Masala, I.F., Alciati, A., Batticciotto, A., and Sarzi-Puttini, P. (2017). An update on emerging drugs for fibromyalgia treatment. *Expert Opin Emerg Drugs* 22, 357-367.
- Ayoub, L.J., Barnett, A., Leboucher, A., Golosky, M., Mcandrews, M.P., Seminowicz, D.A., and Moayed, M. (2019). The medial temporal lobe in nociception: a meta-analytic and functional connectivity study. *Pain* 160, 1245-1260.

- Azami, M., Mojarad, M.R.A., Mansouri, A., and Tardeh, Z. (2017). The association between Borna disease virus and chronic fatigue syndrome: A systematic review and meta-analysis. *Iranian Journal of Psychiatry and Behavioral Sciences* 11.
- Baker DE. Rationale for using serotonergic agents to treat irritable bowel syndrome. *American Journal of Health-System Pharmacy* 2005;62(7):700-713.
- Band R, Wearden A, Barrowclough C. Patient Outcomes in Association With Significant Other Responses to Chronic Fatigue Syndrome: A Systematic Review of the Literature. *Clinical psychology : a publication of the Division of Clinical Psychology of the American Psychological Association* 2015;22(1):29-46.
- Barbara, G., Cremon, C., and Azpiroz, F. (2018). Probiotics in irritable bowel syndrome: Where are we? *Neurogastroenterol Motil* 30, e13513.
- Barbara, G., Grover, M., Bercik, P., Corsetti, M., Ghoshal, U.C., Ohman, L., and Rajilic-Stojanovic, M. (2019). Rome Foundation Working Team Report on Post-Infection Irritable Bowel Syndrome. *Gastroenterology* 156, 46-58.e47.
- Barboi, A., Gibbons, C.H., Axelrod, F., Benarroch, E.E., Biaggioni, I., Chapleau, M.W., Chelimsky, G., Chelimsky, T., Cheshire, W.P., Claydon, V.E., Freeman, R., Goldstein, D.S., Joyner, M.J., Kaufmann, H., Low, P.A., Norcliffe-Kaufmann, L., Robertson, D., Shibao, C.A., Singer, W., Snapper, H., Vernino, S., and Raj, S.R. (2020). Human papillomavirus (HPV) vaccine and autonomic disorders: a position statement from the American Autonomic Society. *Autonomic neuroscience : basic & clinical* 223, 102550.
- Barhorst EE, Andrae WE, Rayne TJ, Falvo MJ, Cook DB, Lindheimer JB. Elevated Perceived Exertion in People with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Fibromyalgia: A Meta-analysis. *Med Sci Sports Exerc* 2020; 52(12): 2615-27.
- Barhorst EE, Boruch AE, Cook DB, Lindheimer JB. Pain-related post-exertional malaise in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Fibromyalgia: A systematic review and three-level meta-analysis. *Pain Med* 2021.
- Bashashati, M., Moossavi, S., Cremon, C., Barbaro, M.R., Moraveji, S., Talmon, G., Rezaei, N., Hughes, P.A., Bian, Z.X., Choi, C.H., Lee, O.Y., Coeffier, M., Chang, L., Ohman, L., Schmulson, M.J., Mccallum, R.W., Simren, M., Sharkey, K.A., and Barbara, G. (2018). Colonic immune cells in irritable bowel syndrome: A systematic review and meta-analysis. *Neurogastroenterol Motil* 30.
- Bashashati, M., Moradi, M., and Sarosiek, I. (2017). Interleukin-6 in irritable bowel syndrome: A systematic review and meta-analysis of IL-6 (-G174C) and circulating IL-6 levels. *Cytokine* 99, 132-138.
- Bashashati M, Rezaei N, Bashashati H, Shafieyoun A, Daryani NE, Sharkey KA, et al. Cytokine gene polymorphisms are associated with irritable bowel syndrome: a systematic review and meta-analysis. *Neurogastroenterology & Motility* 2012;24(12):1102-e566.
- Bashashati M, Rezaei N, Shafieyoun A, McKernan DP, Chang L, Ohman L, et al. Cytokine imbalance in irritable bowel syndrome: a systematic review and meta-analysis. *Neurogastroenterology and Motility* 2014;26(7):1036-1048.
- Bazzichi L, Sernissi F, Consensi A, Giacomelli C, Sarzi-Puttini P. Fibromyalgia: a critical digest of the recent literature. *Clinical & Experimental Rheumatology* 2011;29(6):S1-11.

- Beckers, A.B., Weerts, Z.Z.R.M., Helyes, Z., Masclee, A.a.M., and Keszthelyi, D. (2017). Review article: transient receptor potential channels as possible therapeutic targets in irritable bowel syndrome. *Alimentary Pharmacology and Therapeutics* 46, 938-952.
- Begue, I., Adams, C., Stone, J., and Perez, D.L. (2019). Structural alterations in functional neurological disorder and related conditions: a software and hardware problem? *Neuroimage Clin* 22, 101798.
- Bergeron D, Obaid S, Fournier-Gosselin MP, Bouthillier A, Nguyen DK. Deep Brain Stimulation of the Posterior Insula in Chronic Pain: A Theoretical Framework. *Brain Sci* 2021; 11(5).
- Berryman C, Stanton TR, Bowering KJ, Tabor A, McFarlane A, Moseley GL. Do people with chronic pain have impaired executive function? A meta-analytical review. *Clin Psychol Rev* 2014;34(7):563-579.
- Berwick RJ, Siew S, Andersson DA, Marshall A, Goebel A. A Systematic Review Into the Influence of Temperature on Fibromyalgia Pain: Meteorological Studies and Quantitative Sensory Testing. *J Pain* 2021; 22(5): 473-86.
- Binder LM., Campbell KA. Medically unexplained symptoms and neuropsychological assessment. *Journal of clinical and experimental neuropsychology* 2004;26(3):369-92.
- Birrer RB. Irritable bowel syndrome. *Disease-a-month* : DM 2002;48(2):105-43.
- Bjurstrom MF, Irwin MR. Polysomnographic characteristics in nonmalignant chronic pain populations: A review of controlled studies. *Sleep Medicine Reviews* 2016;26:74-86.
- Blanco IE, De Serres FJ, Fern  dez-Bustillo E, Al Kassam D, Arbes   D, Rodr  guez C, et al.   1-Antitrypsin and fibromyalgia: New data in favour of the inflammatory hypothesis of fibromyalgia. *Med Hypotheses* 2005;64(4):759-769.
- Blanco I, De Serres F, Janciauskiene S, Arbes   D, Fern  ndez-Bustillo E, C  rcaba V, et al. Estimates of the prevalence and number of fibromyalgia syndrome patients and their alpha-1 antitrypsin phenotypic distribution in ten countries. *J Musculoskeletal Pain* 2007;15(4):9-23.
- Blundell S, Ray KK, Buckland M, White PD. Chronic fatigue syndrome and circulating cytokines: A systematic review. *Brain Behav Immun* 2015;50:186-195.
- Boeckle M, Schrimpf M, Liegl G, Pieh C. Neural correlates of somatoform disorders from a meta-analytic perspective on neuroimaging studies. *NeuroImage Clinical* 2016;11:606-613.
- Bonfiglio, F., Henstrom, M., Nag, A., Hadizadeh, F., Zheng, T., Cenit, M.C., Tigchelaar, E., Williams, F., Reznichenko, A., Ek, W.E., Rivera, N.V., Homuth, G., Aghdassi, A.A., Kacprowski, T., Mannikko, M., Karhunen, V., Bujanda, L., Rafter, J., Wijmenga, C., Ronkainen, J., Hysi, P., Zhernakova, A., and D'amato, M. (2018). A GWAS meta-analysis from 5 population-based cohorts implicates ion channel genes in the pathogenesis of irritable bowel syndrome. *Neurogastroenterol Motil* 30, e13358.
- Borman R. Serotonergic modulation and irritable bowel syndrome. *Emerging Drugs* 2001;6(1):57-68.
- Borsini A, Hepgul N, Mondelli V, Chalder T, Pariante C. Childhood stressors in the development of fatigue syndromes: A review of the past 20 years of research. *Psychol Med* 2014;44(9):1809-1823.

- Bourke JH, Langford RM, White PD. The common link between functional somatic syndromes may be central sensitisation. *J Psychosom Res* 2015;78(3):228-236.
- Bradesi S, Tillisch K, Mayer E. Emerging drugs for irritable bowel syndrome. *Expert Opinion on Emerging Drugs* 2006;11(2):293-313.
- Browning M, Fletcher P, Sharpe M. Can neuroimaging help us to understand and classify somatoform disorders? A systematic and critical review. *Psychosom Med* 2011;73(2):173-184.
- Bruta K, Vanshika, Bhasin K, Bhawana. The role of serotonin and diet in the prevalence of irritable bowel syndrome: a systematic review. *Translational Medicine Communications* 2021; 6(1).
- Burns, G., Carroll, G., Mathe, A., Horvat, J., Foster, P., Walker, M.M., Talley, N.J., and Keely, S. (2019). Evidence for Local and Systemic Immune Activation in Functional Dyspepsia and the Irritable Bowel Syndrome: A Systematic Review. *Am J Gastroenterol* 114, 429-436.
- Burton C. Beyond somatisation: A review of the understanding and treatment of medically unexplained physical symptoms (MUPS). *British Journal of General Practice* 2003;53(488):231-239.
- Buskila D, Press J. Neuroendocrine mechanisms in fibromyalgia-chronic fatigue. *Best Practice and Research in Clinical Rheumatology* 2001;15(5):747-758.
- Cagnie B, Coppieters I, Denecker S, Six J, Danneels L, Meeus M. Central sensitization in fibromyalgia? A systematic review on structural and functional brain MRI. *Semin Arthritis Rheum* 2014;44(1):68-75.
- Camilleri M. Serotonin in the gastrointestinal tract. *Current opinion in endocrinology, diabetes, and obesity* 2009;16(1):53-59.
- Camilleri M, Boeckxstaens G. Dietary and pharmacological treatment of abdominal pain in IBS. *Gut* 2017;66(5):966-974.
- Camilleri M, Heading RC, Thompson WG. Consensus report: Clinical perspectives, mechanisms, diagnosis and management of irritable bowel syndrome. *Alimentary Pharmacology and Therapeutics* 2002;16(8):1407-1430.
- Canakis, A., Haroon, M., and Weber, H.C. (2020). Irritable bowel syndrome and gut microbiota. *Curr Opin Endocrinol Diabetes Obes* 27, 28-35.
- Capannolo, A., Ciccone, F., and Latella, G. (2018). Mastocytic Enterocolitis and the Role of Mast Cells in Functional and Inflammatory Intestinal Disorders: A Systematic Review. *Dig Dis* 36, 409-416.
- Carco C, Young W, Gearry RB, Talley NJ, McNabb WC, Roy NC. Increasing Evidence That Irritable Bowel Syndrome and Functional Gastrointestinal Disorders Have a Microbial Pathogenesis. *Front Cell Infect Microbiol* 2020; 10: 468.
- Carrozzino, D., and Porcelli, P. (2018). Alexithymia in Gastroenterology and Hepatology: A Systematic Review. *Front Psychol* 9, 470.
- Casellas, F., Burgos, R., Marcos, A., Santos, J., Ciriza-De-Los-Ríos, C., García-Manzanares, Á., Polanco, I., Puy-Portillo, M., Villarino, A., Lema-Marqués, B., and Vázquez-Alfárez, M.C. (2018). Consensus document on exclusion diets in irritable bowel syndrome (IBS). *Revista Espanola de Enfermedades Digestivas* 110, 806-822.

- Cash BD, Chey WD. Irritable bowel syndrome: A systematic review. *Clinics in Family Practice* 2004;6(3):647-669.
- Chaves-Filho, A.J.M., Macedo, D.S., De Lucena, D.F., and Maes, M. (2019). Shared microglial mechanisms underpinning depression and chronic fatigue syndrome and their comorbidities. *Behavioural Brain Research* 372.
- Chen, B., Kim, J.J., Zhang, Y., Du, L., and Dai, N. (2018). Prevalence and predictors of small intestinal bacterial overgrowth in irritable bowel syndrome: a systematic review and meta-analysis. *J Gastroenterol* 53, 807-818.
- Chen G, Olver JS, Kanaan RA. Functional somatic syndromes and joint hypermobility: A systematic review and meta-analysis. *J Psychosom Res* 2021; 148: 110556.
- Chen LP., Murad MH., Paras ML., Colbenson KM., Sattler AL., Goranson EN., et al. Sexual abuse and lifetime diagnosis of psychiatric disorders: systematic review and meta-analysis. *Mayo Clin Proc* 2010;85(7):618-29.
- Chen X, Zhang J, Wang X. Hormones in pain modulation and their clinical implications for pain control: a critical review. *Hormones-International Journal of Endocrinology and Metabolism* 2016;15(3):313-320.
- Cheng Y-C, Huang Y-C, Huang W-L. Heart rate variability in patients with somatic symptom disorders and functional somatic syndromes: A systematic review and meta-analysis. *Neuroscience and Biobehavioral Reviews* 2020; 112: 336-44.
- Cheng W, Li J, Liu X. 5-Aminosalicylic acid for treatment of irritable bowel syndrome: A protocol for a systematic review and meta-analysis. *Medicine (Baltimore)* 2020; 99(9): e19351.
- Chey W.D., Cash B.D. Irritable bowel syndrome: Update on colonic neuromuscular dysfunction and treatment. *Curr Gastroenterol Rep* 2006;8(4):273-281.
- Chey WD., Kurlander J., Eswaran S. Irritable bowel syndrome: a clinical review. *JAMA* 2015;313(9):949-58.
- Chey, W.D., Shah, E.D., and Dupont, H.L. (2020). Mechanism of action and therapeutic benefit of rifaximin in patients with irritable bowel syndrome: a narrative review. *Therapeutic Advances in Gastroenterology* 13.
- Chiaffarino F, Cipriani S, Ricci E, et al. Endometriosis and irritable bowel syndrome: a systematic review and meta-analysis. *Arch Gynecol Obstet* 2021; 303(1): 17-25.
- Chitkara DK, van Tilburg, Miranda A. L., Blois-Martin N, Whitehead WE. Early Life Risk Factors That Contribute to Irritable Bowel Syndrome in Adults: A Systematic Review. *Am J Gastroenterol* 2008;103(3):765-774.
- Cirillo C, Vanden Berghe P, Tack J. Role of serotonin in gastrointestinal physiology and pathology. *Minerva Endocrinol* 2011;36(4):311-324.
- Clark LV, White PD. The role of deconditioning and therapeutic exercise in chronic fatigue syndrome (CFS). *Journal of Mental Health* 2005;14(3):237-252.
- Clauw DJ. Fibromyalgia: a clinical review. *JAMA : the journal of the American Medical Association* 2014;311(15):1547-1555.
- Cockshell SJ, Mathias JL. Cognitive functioning in chronic fatigue syndrome: a meta-analysis. *Psychol Med* 2010;40(8):1253-67.

- Collebrusco L, Lombardini R. What about OMT and nutrition for managing the irritable bowel syndrome? An overview and treatment plan. *Explore (New York, N Y)* 2014;10(5):309-318.
- Conversano, C., Marchi, L., Ciacchini, R., Carmassi, C., Contena, B., Bazzichi, L.M., and Gemignani, A. (2018). Personality Traits in Fibromyalgia (FM): Does FM Personality Exists? A Systematic Review. *Clin Pract Epidemiol Ment Health* 14, 263.
- Coppieters I, Meeus M, Kregel J, Caeyenberghs K, De Pauw R, Goubert D, et al. Relations Between Brain Alterations and Clinical Pain Measures in Chronic Musculoskeletal Pain: A Systematic Review. *The journal of pain : official journal of the American Pain Society* 2016;17(9):949-962.
- Corbitt, M., Eaton-Fitch, N., Staines, D., Cabanas, H., and Marshall-Gradisnik, S. (2019). A systematic review of cytokines in chronic fatigue syndrome/myalgic encephalomyelitis/systemic exertion intolerance disease (CFS/ME/SEID). *BMC Neurol* 19, 207.
- Coskun Benlidayi I. The effectiveness and safety of electrotherapy in the management of fibromyalgia. *Rheumatology International* 2020; 40(10): 1571-80.
- Costedio MM, Hyman N, Mawe GM. Serotonin and its role in colonic function and in gastrointestinal disorders. *Dis Colon Rectum* 2007;50(3):376-388.
- Creed, F. (2019). Review article: the incidence and risk factors for irritable bowel syndrome in population-based studies. *Aliment Pharmacol Ther* 50, 507-516.
- Creed F., Barsky A. A systematic review of the epidemiology of somatisation disorder and hypochondriasis. *J Psychosom Res* 2004;56(4):391-408.
- Cuatrecasas G, Alegre C, Casanueva FF. GH/IGF1 axis disturbances in the fibromyalgia syndrome: Is there a rationale for GH treatment? *Pituitary* 2014;17(3):277-283.
- Czogalla B, Schmitteckert S, Houghton LA, Sayuk GS, Camilleri M, Olivo-Diaz A, et al. A meta-analysis of immunogenetic Case-Control Association Studies in irritable bowel syndrome. *Neurogastroenterology and motility : the official journal of the European Gastrointestinal Motility Society* 2015;27(5):717-727.
- Dai C, Jiang M. The incidence and risk factors of post-infectious irritable bowel syndrome: a meta-analysis. *Hepatogastroenterology* 2012;59(113):67-72.
- Davenport, T.E., Lehnen, M., Stevens, S.R., Vanness, J.M., Stevens, J., and Snell, C.R. (2019). Chronotropic Intolerance: An Overlooked Determinant of Symptoms and Activity Limitation in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome? *Front Pediatr* 7, 82.
- Deary V, Chalder T, Sharpe M. The cognitive behavioural model of medically unexplained symptoms: a theoretical and empirical review. *Clin Psychol Rev* 2007;27(7):781-797.
- Dehghan M, Schmidt-Wilcke T, Pfleiderer B, Eickhoff SB, Petzke F, Harris RE, et al. Coordinate-based (ALE) meta-analysis of brain activation in patients with fibromyalgia. *Hum Brain Mapp* 2016;37(5):1749-1758.
- de Melo, G. A., Madruga, M., & Torro, N. Electroencephalographic Evaluation in Fibromyalgia: A Systematic Review. *Clinical EEG and Neuroscience*, 12. <https://doi.org/10.1177/1550059421997128>

- Dias, R.C.A., Kulak Junior, J., Ferreira Da Costa, E.H., and Nisihara, R.M. (2019). Fibromyalgia, sleep disturbance and menopause: Is there a relationship? A literature review. *International Journal of Rheumatic Diseases* 22, 1961-1971.
- Dibble JJ, McGrath SJ, Ponting CP. Genetic risk factors of ME/CFS: a critical review. *Hum Mol Genet* 2020; 29(R1): R117-r24.
- Di Lernia D, Serino S, Riva G. Pain in the body. Altered interoception in chronic pain conditions: A systematic review. *Neurosci Biobehav Rev* 2016;71:328-341.
- Diaz-Piedra C, Di Stasi LL, Baldwin CM, Bucla-Casal G, Catena A. Sleep disturbances of adult women suffering from fibromyalgia: a systematic review of observational studies. *Sleep medicine reviews* 2015;21:86-99.
- D'Onghia M, Ciaf J, Lisi L, et al. Fibromyalgia and obesity: A comprehensive systematic review and meta-analysis. *Seminars in Arthritis and Rheumatism* 2021; 51(2): 409-24.
- Douzenis A, Seretis D. Descriptive and predictive validity of somatic attributions in patients with somatoform disorders: a systematic review of quantitative research. *J Psychosom Res* 2013;75(3):199-210.
- Drossman DA. Functional Gastrointestinal Disorders: History, Pathophysiology, Clinical Features and Rome IV. *Gastroenterology* 2016.
- Duan, R., Zhu, S., Wang, B., and Duan, L. (2019). Alterations of Gut Microbiota in Patients With Irritable Bowel Syndrome Based on 16S rRNA-Targeted Sequencing: A Systematic Review. *Clin Transl Gastroenterol* 10, e00012.
- Duboc H, Coffin B, Siproudhis L. Disruption of Circadian Rhythms and Gut Motility: An Overview of Underlying Mechanisms and Associated Pathologies. *Journal of Clinical Gastroenterology* 2020; 54(5): 405-14.
- Du Preez, S., Corbitt, M., Cabanas, H., Eaton, N., Staines, D., and Marshall-Gradisnik, S. (2018). A systematic review of enteric dysbiosis in chronic fatigue syndrome/myalgic encephalomyelitis. *Syst Rev* 7, 241.
- Eaton-Fitch, N., Du Preez, S., Cabanas, H., Staines, D., and Marshall-Gradisnik, S. (2019). A systematic review of natural killer cells profile and cytotoxic function in myalgic encephalomyelitis/chronic fatigue syndrome. *Syst Rev* 8, 279.
- Edwards RR, Bingham CO, Bathon J, Haythornthwaite Ja. Catastrophizing and pain in arthritis, fibromyalgia, and other rheumatic diseases. *Arthritis Care and Research* 2006;55:325-332.
- Ellis, S.D., Kelly, S.T., Shurlock, J.H., and Hepburn, A.L.N. (2018). The role of vitamin D testing and replacement in fibromyalgia: a systematic literature review. *BMC Rheumatol* 2, 28.
- El-Serag HB, Pilgrim P, Schoenfeld P. Systematic review: Natural history of irritable bowel syndrome. *Alimentary Pharmacology and Therapeutics* 2004;19(8):861-870.
- Erdrich S, Hawrelak JA, Myers SP, Harnett JE. Determining the association between fibromyalgia, the gut microbiome and its biomarkers: A systematic review. *BMC Musculoskelet Disord* 2020; 21(1): 181.
- Eriksen, W. (2018). ME/CFS, case definition, and serological response to Epstein-Barr virus. A systematic literature review. *Fatigue: Biomedicine, Health and Behavior* 6, 220-234.

- Esan OB, Pearce M, van Hecke O, Roberts N, Collins DR, Violato M, et al. Factors Associated with Sequelae of Campylobacter and Non-typhoidal Salmonella Infections: A Systematic Review. *EBioMedicine* 2017;15:100-111.
- Farhadi A, Bruninga K, Fields J, Keshavarzian A. Irritable bowel syndrome: An update on therapeutic modalities. *Expert Opin Investig Drugs* 2001;10(7):1211-1222.
- Farmer AD, Aziz Q. Mechanisms of visceral pain in health and functional gastrointestinal disorders. *Scandinavian Journal of Pain* 2014;5(2):51-60.
- Farthing MJG. Treatment options in irritable bowel syndrome. *Best Practice and Research: Clinical Gastroenterology* 2004;18(4):773-786.
- Feinle-Bisset C, Azpiroz F. Dietary lipids and functional gastrointestinal disorders. *Am J Gastroenterol* 2013;108(5):737-747.
- Ferreira AI, Garrido M, Castro-Poças F. Irritable Bowel Syndrome: News from an Old Disorder. *GE Port J Gastroenterol* 2020; 27(4): 255-68.
- Filler K., Lyon D., Bennett J., McCain N., Elswick R., Lukkahatai N., et al. Association of mitochondrial dysfunction and fatigue: A review of the literature. *BBA Clinical* 2014;1:12-23.
- Finan PH, Garland EL. The Role of Positive Affect in Pain and Its Treatment. *Clin J Pain* 2015;31(2):177-187.
- Fisher, K., Hutcheon, D., and Ziegler, J. (2019). Elimination of Fermentable Carbohydrates to Reduce Gastrointestinal Symptoms in Pediatric Patients With Irritable Bowel Syndrome: A Narrative Review. *Nutr Clin Pract*.
- Ford AC, Spiegel BM, Talley NJ, Moayyedi P. Small intestinal bacterial overgrowth in irritable bowel syndrome: systematic review and meta-analysis. *Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association* 2009;7(12):1279-1286.
- Ford AC, Talley NJ. Mucosal inflammation as a potential etiological factor in irritable bowel syndrome: a systematic review. *J Gastroenterol* 2011;46(4):421-431.
- Franklin, J.D., Atkinson, G., Atkinson, J.M., and Batterham, A.M. (2019). Peak Oxygen Uptake in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: A Meta-Analysis. *Int J Sports Med* 40, 77-87.
- Fujimori S. Progress in elucidating the relationship between Helicobacter pylori infection and intestinal diseases. *World Journal of Gastroenterology* 2021; 27(47): 8040-6.
- Fukudo, S., Okumura, T., Inamori, M., Okuyama, Y., Kanazawa, M., Kamiya, T., Sato, K., Shiotani, A., Naito, Y., Fujikawa, Y., Hokari, R., Masaoka, T., Fujimoto, K., Kaneko, H., Torii, A., Matsueda, K., Miwa, H., Enomoto, N., Shimosegawa, T., & Koike, K. (2021). Evidence-based clinical practice guidelines for irritable bowel syndrome 2020. *Journal of Gastroenterology*, 56(3), 193-217. <https://doi.org/10.1007/s00535-020-01746-z>
- Gadour, E., Hassan, Z., & Gadour, R. (2021). A Comprehensive Review of Transaminitis and Irritable Bowel Syndrome. *Cureus*, 13(7), e16583. <https://doi.org/10.7759/cureus.16583>
- Gandhi, A., Shah, A., Jones, M. P., Koloski, N., Talley, N. J., Morrison, M., & Holtmann, G. (2021). Methane positive small intestinal bacterial overgrowth in inflammatory bowel



- disease and irritable bowel syndrome: A systematic review and meta-analysis. *Gut Microbes*, 13(1), 1933313. <https://doi.org/10.1080/19490976.2021.1933313>
- Gerdle, B., & Ghafouri, B. (2020). Proteomic studies of common chronic pain conditions - a systematic review and associated network analyses. *Expert Review of Proteomics*. <https://doi.org/10.1080/14789450.2020.1797499>
- Gazouli M, Wouters MM, Kapur-Pojiskic L, Bengtson MB, Friedman E, Nikcevic G, et al. Lessons learned--resolving the enigma of genetic factors in IBS. *Nature reviews Gastroenterology & hepatology* 2016;13(2):77-87.
- Geraghty KJ, Blease C. Cognitive behavioural therapy in the treatment of chronic fatigue syndrome: A narrative review on efficacy and informed consent. *Journal of health psychology* 2016.
- Gerwyn, M., and Maes, M. (2017). Mechanisms Explaining Muscle Fatigue and Muscle Pain in Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): a Review of Recent Findings. *Current Rheumatology Reports* 19.
- Ghoshal, U.C., Nehra, A., Mathur, A., and Rai, S. (2019). A meta-analysis on small intestinal bacterial overgrowth in patients with different subtypes of irritable bowel syndrome. *J Gastroenterol Hepatol*.
- Ghoshal UC, Nehra A, Mathur A, Rai S. A meta-analysis on small intestinal bacterial overgrowth in patients with different subtypes of irritable bowel syndrome. *J Gastroenterol Hepatol* 2020; 35(6): 922-31.
- Goebel A, Andersson D, Helyes Z, Clark JD, Dulake D, Svensson C. The autoimmune aetiology of unexplained chronic pain. *Autoimmun Rev* 2021; 21(3): 103015.
- Gotts ZM, Ellis JG, Newton JL, Deary V. The role of sleep in chronic fatigue syndrome: A narrative review. *Fatigue: Biomedicine, Health and Behavior* 2014;2(3):163-184.
- Grayston, R., Czanner, G., Elhadd, K., Goebel, A., Frank, B., Uceyler, N., Malik, R.A., and Alam, U. (2019). A systematic review and meta-analysis of the prevalence of small fiber pathology in fibromyalgia: Implications for a new paradigm in fibromyalgia etiopathogenesis. *Semin Arthritis Rheum* 48, 933-940.
- Guan, T., Li, T., Cai, W., Huang, D., Ouyang, P., Wang, Y., Chen, H., Wu, K., and Ma, X. (2017). HTR3A and HTR3E gene polymorphisms and diarrhea predominant irritable bowel syndrome risk: evidence from a meta-analysis. *Oncotarget* 8, 100459-100468.
- Guney, Z.E.O., Sattel, H., Witthoft, M., and Henningsen, P. (2019). Emotion regulation in patients with somatic symptom and related disorders: A systematic review. *PLoS ONE* 14.
- Griffith JP, Zarrouf FA. A systematic review of chronic fatigue syndrome: Don't assume it's depression. *Primary Care Companion to the Journal of Clinical Psychiatry* 2008;10(2):120-128.
- Grundy D., Al-Chaer ED., Aziz Q., Collins SM., Ke M., TachÃ© Y., et al. Fundamentals of neurogastroenterology: basic science. *Gastroenterology* 2006;130(5):1391-411.
- Guo J, Pei L, Chen L, et al. Bidirectional association between irritable bowel syndrome and restless legs syndrome: a systematic review and meta-analysis. *Sleep Med* 2021; 77: 104-11.
- Hackshaw K. Assessing our approach to diagnosing Fibromyalgia. *Expert Rev Mol Diagn* 2020; 20(12): 1171-81.

- Haddad HW, Mallepalli NR, Scheinuk JE, et al. The Role of Nutrient Supplementation in the Management of Chronic Pain in Fibromyalgia: A Narrative Review. *Pain Ther* 2021; 10(2): 827-48.
- Haddad HW, Mallepalli NR, Scheinuk JE, et al. The Role of Vitamin D in the Management of Chronic Pain in Fibromyalgia: A Narrative Review. *Health Psychology Research* 2021; 9(1): 12.
- Halvorson HA, Schlett CD, Riddle MS. Postinfectious irritable bowel syndrome--a meta-analysis. *Am J Gastroenterol* 2006;101(8):1894-9; quiz 1942.
- Hamilton NA, Atchley RA, Karlson CW, Taylor D, McCurdy D. The role of sleep and attention in the etiology and maintenance of fibromyalgia. *Cognitive Therapy and Research* 2012;36(1):81-93.
- Hanning N, Edwinston AL, Ceuleers H, et al. Intestinal barrier dysfunction in irritable bowel syndrome: a systematic review. *Therap Adv Gastroenterol* 2021; 14: 1756284821993586.
- Hartman TCO, Borghuis MS, Lucassen PLBJ, van de Laar F,A., Speckens AE, van Weel C. Medically unexplained symptoms, somatisation disorder and hypochondriasis: Course and prognosis. A systematic review. *J Psychosom Res* 2009;66(5):363-377.
- Harvie DS, Moseley GL, Hillier SL, Meulders A. Classical Conditioning Differences Associated With Chronic Pain: A Systematic Review. *The journal of pain : official journal of the American Pain Society* 2017.
- Hauser W, Kosseva M, Uceyler N, Klose P, Sommer C. Emotional, physical, and sexual abuse in fibromyalgia syndrome: A systematic review with Meta-Analysis. *Arthritis Care and Research* 2011;63(6):808-820.
- Hemati K, Amini Kadijani A, Sayehmiri F, et al. Melatonin in the treatment of fibromyalgia symptoms: A systematic review. *Complement Ther Clin Pract* 2020; 38: 101072.
- Hempel S, Chambers D, Bagnall AM, Forbes C. Risk factors for chronic fatigue syndrome/myalgic encephalomyelitis: a systematic scoping review of multiple predictor studies. *Psychol Med* 2008;38(7):915-926.
- Henningsen P, Zipfel S, Herzog W. Management of functional somatic syndromes. *Lancet* 2007;369(9565):946-955.
- Henningsen, P., Zipfel, S., Sattel, H., and Creed, F. (2018). Management of Functional Somatic Syndromes and Bodily Distress. *Psychother Psychosom* 87, 12-31.
- Holden S, Maksoud R, Eaton-Fitch N, Cabanas H, Staines D, Marshall-Gradisnik S. A systematic review of mitochondrial abnormalities in myalgic encephalomyelitis/chronic fatigue syndrome/systemic exertion intolerance disease. *J Transl Med* 2020; 18(1): 290.
- [Holden S, Maksoud R, Eaton-Fitch N, Cabanas H, Staines D, Marshall-Gradisnik S. Correction to: A systematic review of mitochondrial abnormalities in myalgic encephalomyelitis/chronic fatigue syndrome/systemic exertion intolerance disease. *J Transl Med* 2020; 18(1): 407]
- Hsiao MY, Hung CY, Chang KV, Han DS, Wang TG. Is Serum Hypovitaminosis D Associated with Chronic Widespread Pain Including Fibromyalgia? A Meta-analysis of Observational Studies. *Pain physician* 2015;18(5):E877-87.

- Hughes A, Hirsch C, Chalder T, Moss-Morris R. Attentional and interpretive bias towards illness-related information in chronic fatigue syndrome: A systematic review. *British journal of health psychology* 2016;21(4):741-763.
- Hulens, M., Rasschaert, R., Vansant, G., Stalmans, I., Bruyninckx, F., and Dankaerts, W. (2018). The link between idiopathic intracranial hypertension, fibromyalgia, and chronic fatigue syndrome: Exploration of a shared pathophysiology. *Journal of Pain Research* 11, 3129-3140.
- Huth TK, Eaton-Fitch N, Staines D, Marshall-Gradisnik S. A systematic review of metabolomic dysregulation in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis/Systemic Exertion Intolerance Disease (CFS/ME/SEID). *J Transl Med* 2020; 18(1): 198
- Ilosen C, Möller A, Sundfeldt K, Bernhardsson S. Symptoms within somatization after sexual abuse among women: A scoping review. *Acta Obstetricia et Gynecologica Scandinavica* 2021; 100(4): 758-67.
- Imamura M, Cassius DA, Fregni F. Fibromyalgia: From treatment to rehabilitation. *European Journal of Pain Supplements* 2009;3:117-122.
- Imperatore, N., Tortora, R., Morisco, F., and Caporaso, N. (2017). Gut microbiota and functional diseases of the gastrointestinal tract. *Minerva Gastroenterol Dietol* 63, 355-372.
- Jackson ML, Bruck D. Sleep Abnormalities in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: A Review. *Journal of Clinical Sleep Medicine* 2012;8(6):719-728.
- Janssen HA, Muris JW, Knotterus JA. The clinical course and prognostic determinants of the irritable bowel syndrome: a literature review. *Scand J Gastroenterol* 1998;33(6):561-567.
- Jensen KB, Regenbogen C, Ohse MC, Frasnelli J, Freiherr J, Lundstrom JN. Brain activations during pain: a neuroimaging meta-analysis of patients with pain and healthy controls. *Pain* 2016;157(6):1279-1286.
- Jia, Z., Wang, L., Yu, B., Li, Q., and Dong, X. (2019). Association between polymorphisms in the serotonin transporter gene-linked polymorphic region and risk for irritable bowel syndrome in China: evidence based on a meta-analysis. *J Int Med Res* 47, 2810-2818.
- Jiang, D., Huang, D., Cai, W., Li, T., Wang, Y., Chen, H., Guan, T., and Ma, X. (2018). G protein beta 3(GNbeta3) C825T polymorphism and irritable bowel syndrome susceptibility: an updated meta-analysis based on eleven case-control studies. *Oncotarget* 9, 2770-2781.
- Johanson JF. Options for patients with irritable bowel syndrome: Contrasting traditional and novel serotonergic therapies. *Neurogastroenterology and Motility* 2004;16(6):701-711.
- Johnson AC, Farmer AD, Ness TJ, Greenwood-Van Meerveld B. Critical evaluation of animal models of visceral pain for therapeutics development: A focus on irritable bowel syndrome. *Neurogastroenterol Motil* 2020; 32(4): e13776.
- Jones GT. Psychosocial Vulnerability and Early Life Adversity as Risk Factors for Central Sensitivity Syndromes. *Current rheumatology reviews* 2016;12(2):140-153.
- Jones MP, Crowell MD, Olden KW, Creed F. Functional gastrointestinal disorders: an update for the psychiatrist. *Psychosomatics* 2007;48(2):93-102.

- Joustra ML, Minovic I, Janssens KAM, Bakker SJL, Rosmalen JGM. Vitamin and mineral status in chronic fatigue syndrome and fibromyalgia syndrome: A systematic review and meta-analysis. *PloS one* 2017;12(4):e0176631.
- Kalcev G, Testa G, Manconi M, et al. Hypericum scruglii Bacch., Brullo & Salmeri, a Potential Natural Remedy for Fibromyalgia: A Narrative Review. *Biointerface Research in Applied Chemistry* 2021; 11(3): 9928-38.
- Kaleycheva N, Cullen AE, Evans R, Harris T, Nicholson T, Chalder T. The role of lifetime stressors in adult fibromyalgia: systematic review and meta-analysis of case-control studies. *Psychol Med* 2021; 51(2): 177-93.
- Kamp EJ, Kane JS, Ford AC. Irritable Bowel Syndrome and Microscopic Colitis: A Systematic Review and Meta-analysis. *Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association* 2015.
- Karvelas D, Vasudevan SV. Fibromyalgia syndrome. *Pain Management* 2011;1(6):557-570.
- Kerr, J.I., and Burri, A. (2017). Genetic and epigenetic epidemiology of chronic widespread pain. *Journal of Pain Research* 10, 2021-2029.
- Keskindag B, Karaaziz M. The association between pain and sleep in fibromyalgia. *Saudi Med J* 2017;38(5):465-475.
- Keszthelyi D, Troost FJ, Masclee AA. Irritable bowel syndrome: methods, mechanisms, and pathophysiology. Methods to assess visceral hypersensitivity in irritable bowel syndrome. *American journal of physiology Gastrointestinal and liver physiology* 2012;303(2):G141-54.
- Keszthelyi D, Troost FJ, Simren M, Ludidi S, Kruimel JW, Conchillo JM, et al. Revisiting concepts of visceral nociception in irritable bowel syndrome. *Eur J Pain* 2012;16(10):1444-1454.
- Klem F, Wadhwa A, Prokop LJ, Sundt WJ, Farrugia G, Camilleri M, et al. Prevalence, Risk Factors, and Outcomes of Irritable Bowel Syndrome After Infectious Enteritis: A Systematic Review and Meta-analysis. *Gastroenterology* 2017;152(5):1042-1054.e1.
- Knoop H, Prins JB, Moss-Morris R, Bleijenberg G. The central role of cognitive processes in the perpetuation of chronic fatigue syndrome. *J Psychosom Res* 2010;68(5):489-494.
- Koloski N, Holtmann G, Talley NJ. Is there a causal link between psychological disorders and functional gastrointestinal disorders? *Expert Review of Gastroenterology and Hepatology* 2020; 14(11): 1047-59.
- Koumbi L, Giouleme O, Vassilopoulou E. Non-Celiac Gluten Sensitivity and Irritable Bowel Disease: Looking for the Culprits. *Current Developments in Nutrition* 2020; 4(12).
- Koutouratsas, T., Kalli, T., Karamanolis, G., and Gazouli, M. (2019). Contribution of ghrelin to functional gastrointestinal disorders' pathogenesis. *World Journal of Gastroenterology* 25, 539-551.
- Krammer, L., Sowa, A.S., and Lorentz, A. (2019). Mast Cells in Irritable Bowel Syndrome: A Systematic Review. *J Gastrointest Liver Dis* 28, 463-472.
- Kranzler JD, Gendreau JF, Rao SG. The psychopharmacology of fibromyalgia: a drug development perspective. *Psychopharmacol Bull* 2002;36(1):165-213.
- Kravitz HM, Katz RS. Fibrofog and fibromyalgia: a narrative review and implications for clinical practice. *Rheumatol Int* 2015;35(7):1115-1125.

- Kregel J, Coppieters I, DePauw R, Malfliet A, Danneels L, Nijs J, et al. Does Conservative Treatment Change the Brain in Patients with Chronic Musculoskeletal Pain A Systematic Review. *Pain Physician* 2017;20(3):139-154.
- Krivzov J, Baert F, Meganck R, Cornelis S. Interpersonal dynamics and therapeutic relationship in patients with functional somatic syndromes: A metasynthesis of case studies. *Journal of counseling psychology* 2021; 68(5): 593-607.
- Kumar, S., Shukla, R., Ranjan, P., and Kumar, A. (2017). Interleukin-10: A Compelling Therapeutic Target in Patients With Irritable Bowel Syndrome. *Clinical therapeutics* 39, 632-643.
- Kumbhare, D., Ahmed, S., and Watter, S. (2018). A narrative review on the difficulties associated with fibromyalgia diagnosis. *Ther Adv Musculoskelet Dis* 10, 13-26.
- Kumbhare D, Hassan S, Diep D, et al. Potential role of blood biomarkers in patients with fibromyalgia: a systematic review with meta-analysis. *Pain* 2021.
- Kurlyandchik I, Tiralongo E, Schloss J. Safety and Efficacy of Medicinal Cannabis in the Treatment of Fibromyalgia: A Systematic Review. *J Altern Complement Med* 2021; 27(3): 198-213.
- Kwong KCL, Yeoh SC, Balasubramaniam R. Is oral dysaesthesia a somatic symptom disorder? *Journal of oral pathology & medicine : official publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology* 2020.
- Lacourt, T.E., Vichaya, E.G., Chiu, G.S., Dantzer, R., and Heijnen, C.J. (2018). The High Costs of Low-Grade Inflammation: Persistent Fatigue as a Consequence of Reduced Cellular-Energy Availability and Non-adaptive Energy Expenditure. *Front Behav Neurosci* 12, 78.
- Lam, N.C., Yeung, H.Y., Li, W.K., Lo, H.Y., Yuen, C.F., Chang, R.C., and Ho, Y.S. (2019). Cognitive impairment in Irritable Bowel Syndrome (IBS): A systematic review. *Brain Res* 1719, 274-284.
- Larrimore, C., Ramnot, A., Jaghab, A., Sarduy, S., Guerrero, G., Troccoli, P., Hilton, K., and Bested, A. (2019). Understanding Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and the Emerging Osteopathic Approach: A Narrative Review. *J Am Osteopath Assoc* 119, 446-455.
- Larsson B, Bjork J, Borsbo B, Gerdle B. A systematic review of risk factors associated with transitioning from regional musculoskeletal pain to chronic widespread pain. *European Journal of Pain* 2012;16(8):1084-1093.
- Lawson K. Potential drug therapies for the treatment of fibromyalgia. *Expert Opin Investig Drugs* 2016;25(9):1071-1081.
- Lee YH, Kim JH, Song GG. Association between the COMT Val158Met polymorphism and fibromyalgia susceptibility and fibromyalgia impact questionnaire score: a meta-analysis. *Rheumatol Int* 2015;35(1):159-166.
- Lee YH, Choi SJ, Ji JD, Song GG. Candidate gene studies of fibromyalgia: a systematic review and meta-analysis. *Rheumatol Int* 2012;32(2):417-426.
- Lenhart, A., and Chey, W.D. (2017). A Systematic Review of the Effects of Polyols on Gastrointestinal Health and Irritable Bowel Syndrome. *Adv Nutr* 8, 587-596.

- Lenoir D, Willaert W, Coppieters I, et al. Electroencephalography During Nociceptive Stimulation in Chronic Pain Patients: A Systematic Review. *Pain Med* 2020; 21(12): 3413-27.
- Levine D, Horesh D. Suicidality in Fibromyalgia: A Systematic Review of the Literature. *Front Psychiatry* 2020; 11: 535368.
- Lewis GN, Rice DA, McNair PJ. Conditioned pain modulation in populations with chronic pain: a systematic review and meta-analysis. *Journal of Pain* 2012;13(10):936-945.
- Li C, Shuai Y, Zhou X, Chen H. Association between Helicobacter pylori infection and irritable bowel syndrome: A systematic review and meta-analysis. *Medicine (Baltimore)* 2020; 99(50): e22975.
- Lin C, Lee SH, Weng HH. Gray Matter Atrophy within the Default Mode Network of Fibromyalgia: A Meta-Analysis of Voxel-Based Morphometry Studies. *BioMed research international* 2016;2016:7296125.
- Liu HN, Wu H, Chen YZ, Chen YJ, Shen XZ, Liu TT. Altered molecular signature of intestinal microbiota in irritable bowel syndrome patients compared with healthy controls: A systematic review and meta-analysis. *Digestive and liver disease : official journal of the Italian Society of Gastroenterology and the Italian Association for the Study of the Liver* 2017;49(4):331-337.
- Liu Q, Wang EM, Yan XJ, Chen SL. Autonomic functioning in irritable bowel syndrome measured by heart rate variability: a meta-analysis. *Journal of digestive diseases* 2013;14(12):638-646.
- Liu, Y., Li, W., Yang, H., Zhang, X., Wang, W., Jia, S., Xiang, B., Wang, Y., Miao, L., Zhang, H., Wang, L., Wang, Y., Song, J., Sun, Y., Chai, L., & Tian, X. (2021). Leveraging 16S rRNA Microbiome Sequencing Data to Identify Bacterial Signatures for Irritable Bowel Syndrome. *Frontiers in Cellular and Infection Microbiology*, 11. <https://doi.org/10.3389/fcimb.2021.645951>
- Livshits G, Kalinkovich A. Specialized, pro-resolving mediators as potential therapeutic agents for alleviating fibromyalgia symptomatology. *Pain Med* 2021.
- Lovell RM, Ford AC. Effect of gender on prevalence of irritable bowel syndrome in the community: systematic review and meta-analysis. *Am J Gastroenterol* 2012a;107(7):991-1000.
- Lovell RM, Ford AC. Global prevalence of and risk factors for irritable bowel syndrome: a meta-analysis. *Clinical Gastroenterology & Hepatology* 2012b;10(7):712-721.e4.
- Low EXS, Al Mandhari MNK, Herndon CC, Loo EXL, Tham EH, Siah KTH. Parental, perinatal, and childhood risk factors for development of irritable bowel syndrome: A systematic review. *Journal of Neurogastroenterology and Motility* 2020; 26(4): 437-46.
- Loy BD, O'Connor PJ, Dishman RK. Effect of Acute Exercise on Fatigue in People with ME/CFS/SEID: A Meta-analysis. *Med Sci Sports Exerc* 2016;48(10):2003-2012.
- Lukkahatai N, Saligan LN. Association of catastrophizing and fatigue: a systematic review. *J Psychosom Res* 2013;74(2):100-109.
- Luo M, Zhuang X, Tian Z, Xiong L. Alterations in short-chain fatty acids and serotonin in irritable bowel syndrome: a systematic review and meta-analysis. *BMC Gastroenterol* 2021; 21(1): 14.

- Lyall M, Peakman M, Wessely S. A systematic review and critical evaluation of the immunology of chronic fatigue syndrome. *J Psychosom Res* 2003;55(2):79-90.
- Macina C, Bendel R, Walter M, Wrege JS. Somatization and Somatic Symptom Disorder and its overlap with dimensionally measured personality pathology: A systematic review. *J Psychosom Res* 2021; 151: 110646.
- Mai F. Somatization disorder: A practical review. *Canadian Journal of Psychiatry* 2004;49(10):652-662.
- Makrani, A.H., Afshari, M., Ghajar, M., Forooghi, Z., and Moosazadeh, M. (2017). Vitamin D and fibromyalgia: a meta-analysis. *Korean J Pain* 30, 250-257.
- Maksoud R, Balinas C, Holden S, Cabanas H, Staines D, Marshall-Gradisnik S. A systematic review of nutraceutical interventions for mitochondrial dysfunctions in myalgic encephalomyelitis/chronic fatigue syndrome. *J Transl Med* 2021; 19(1): 81.
- Maksoud R, Eaton-Fitch N, Matula M, Cabanas H, Staines D, Marshall-Gradisnik S. Systematic Review of Sleep Characteristics in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. *Healthcare (Basel)* 2021; 9(5).
- Malfliet A, Coppieters I, Van Wilgen P, Kregel J, De Pauw R, Dolphens M, et al. Brain changes associated with cognitive and emotional factors in chronic pain: A systematic review. *European Journal of Pain* 2017;21(5):769-786.
- Mansueto P, Seidita A, D'alcamo A, Carroccio A. Role of FODMAPs in Patients With Irritable Bowel Syndrome. *Nutrition in Clinical Practice* 2015;30(5):665-682.
- Maquet D, Demoulin C, Crielaard JM. Chronic fatigue syndrome: a systematic review. *Ann Readapt Med Phys* 2006;49(6):418-427.
- Marcuzzi, A., Chakiath, R.J., Siddall, P.J., Kellow, J.E., Hush, J.M., Jones, M.P., Costa, D.S.J., and Wrigley, P.J. (2019). Conditioned Pain Modulation (CPM) is Reduced in Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis of CPM and the Role of Psychological Factors. *J Clin Gastroenterol* 53, 399-408.
- Mari A, Baker FA, Mahamid M, Sbeit W, Khoury T. The evolving role of gut microbiota in the management of irritable bowel syndrome: An overview of the current knowledge. *Journal of Clinical Medicine* 2020; 9(3).
- Marino FE. If only I were paramecium too! A case for the complex, intelligent system of anticipatory regulation in fatigue. *Fatigue: Biomedicine, Health and Behavior* 2014;2(4):185-201.
- Marshall JK. Post-infectious irritable bowel syndrome following water contamination. *Kidney international Supplement* 2009;(112):S42-3. doi(112):S42-3.
- Martinez-Calderon, J., Jensen, M.P., Morales-Asencio, J.M., and Luque-Suarez, A. (2019). Pain Catastrophizing and Function In Individuals With Chronic Musculoskeletal Pain A Systematic Review and Meta-Analysis. *Clinical Journal of Pain* 35, 279-293.
- Martinez-Calderon, J., Zamora-Campos, C., Navarro-Ledesma, S., and Luque-Suarez, A. (2018). The Role of Self-Efficacy on the Prognosis of Chronic Musculoskeletal Pain: A Systematic Review. *Journal of Pain* 19, 10-34.
- Martinez-Martinez LA, Mora T, Vargas A, Fuentes-Iniestra M, Martinez-Lavin M. Sympathetic nervous system dysfunction in fibromyalgia, chronic fatigue syndrome, irritable bowel syndrome, and interstitial cystitis: a review of case-control studies. *JCR: Journal of Clinical Rheumatology* 2014;20(3):146-150.

- Martínez-Lavín, M. (2018). Fibromyalgia and small fiber neuropathy: the plot thickens! *Clinical Rheumatology* 37, 3167-3171.
- Martins, Y.A., Cardinali, C., Ravanelli, M.I., and Brunaldi, K. (2020). Is hypovitaminosis D associated with fibromyalgia? A systematic review. *Nutr Rev* 78, 115-133.
- Martin-Vinas J, Quigley EM. Immune response in irritable bowel syndrome: A systematic review of systemic and mucosal inflammatory mediators. *Journal of digestive diseases* 2016;17(9):572-581.
- Masquelier E, D'Haeyere J. Physical activity in the treatment of fibromyalgia. *Joint Bone Spine* 2021; 88(5): 105202.
- Matisz CE, Gruber AJ. Neuroinflammatory remodeling of the anterior cingulate cortex as a key driver of mood disorders in gastrointestinal disease and disorders. *Neurosci Biobehav Rev* 2021; 133: 104497.
- Matricon J, Meleine M, Gelot A, Piche T, Dapoigny M, Muller E, et al. Review article: Associations between immune activation, intestinal permeability and the irritable bowel syndrome. *Alimentary Pharmacology and Therapeutics* 2012;36(11-12):1009-1031.
- Mayer EA, Tillisch K, Bradesi S. Review article: Modulation of the brain-gut axis as a therapeutic approach in gastrointestinal disease. *Alimentary Pharmacology and Therapeutics* 2006;24(6):919-933.
- Mazurak N, Sereyuk N, Sauer H, Teufel M, Enck P. Heart rate variability in the irritable bowel syndrome: a review of the literature. *Neurogastroenterology and motility : the official journal of the European Gastrointestinal Motility Society* 2012;24(3):206-216.
- McAndrew, L.M., Crede, M., Maestro, K., Slotkin, S., Kimber, J., and Phillips, L.A. (2019). Using the common-sense model to understand health outcomes for medically unexplained symptoms: a meta-analysis. *Health Psychol Rev* 13, 427-446.
- McKenzie YA, Bowyer RK, Leach H, Gulia P, Horobin J, O'Sullivan NA, et al. British Dietetic Association systematic review and evidence-based practice guidelines for the dietary management of irritable bowel syndrome in adults (2016 update). *Journal of human nutrition and dietetics : the official journal of the British Dietetic Association* 2016;29(5):549-575.
- Meeus M, Nijs J, Meirleir KD. Chronic musculoskeletal pain in patients with the chronic fatigue syndrome: a systematic review. *European Journal of Pain* 2007;11(4):377-386.
- Meeus M, Goubert D, De Backer F, Struyf F, Hermans L, Coppieters I, et al. Heart rate variability in patients with fibromyalgia and patients with chronic fatigue syndrome: A systematic review. *Seminars in Arthritis & Rheumatism* 2013;43(2):279-287.
- Mendonca BTVd, Silva GG, Busatto LM, Dias NM. Executive functions in fibromyalgia: A systematic review. *Psychology & Neuroscience* 2021; 14(4): 413-37.
- Menzies V, Kelly DL, Yang GS, Starkweather A, Lyon DE. A systematic review of the association between fatigue and cognition in chronic noncommunicable diseases. *Chronic Illn* 2021; 17(2): 129-50.
- Mertz H.R. Irritable Bowel Syndrome. *N Engl J Med* 2003;349(22):2136-2146.
- Michalak A, Mosińska P, Fichna J. Polyunsaturated fatty acids and their derivatives: Therapeutic value for inflammatory, functional gastrointestinal disorders, and colorectal cancer. *Frontiers in Pharmacology* 2016;7.



- Mir SJ, Bashir S. Irritable bowel syndrome - Current concepts. *JK Practitioner* 2003;10(4):319-322.
- Mohr S, Fritz N, Hammer C, et al. The alternative serotonin transporter promoter P2 impacts gene function in females with irritable bowel syndrome. *Journal of Cellular and Molecular Medicine* 2021; 25(16): 8047-61.
- Moldofsky H. The assessment and significance of the sleep/waking brain in patients with chronic widespread musculoskeletal pain and fatigue syndromes. *J Musculoskeletal Pain* 2008;16(1-2):37-48.
- Monzón-Nomdedeu MB, Morten KJ, Oltra E. Induced pluripotent stem cells as suitable sensors for fibromyalgia and myalgic encephalomyelitis/chronic fatigue syndrome. *World J Stem Cells* 2021; 13(8): 1134-50.
- Morris G, Anderson G, Galecki P, Berk M, Maes M. A narrative review on the similarities and dissimilarities between myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) and sickness behavior. *BMC medicine* 2013;11:64-7015.
- Morris, G., Anderson, G., and Maes, M. Hypothalamic-Pituitary-Adrenal Hypofunction in Myalgic Encephalomyelitis (ME)/Chronic Fatigue Syndrome (CFS) as a Consequence of Activated Immune-Inflammatory and Oxidative and Nitrosative Pathways. *Mol Neurobiol* 2017;54, 6806-6819.
- Morris G, Berk M, Galecki P, Walder K, Maes M. The Neuro-Immune Pathophysiology of Central and Peripheral Fatigue in Systemic Immune-Inflammatory and Neuro-Immune Diseases. *Mol Neurobiol* 2016;53(2):1195-1219.
- Morris, G., Berk, M., Klein, H., Walder, K., Galecki, P., and Maes, M. Nitrosative Stress, Hypernitrosylation, and Autoimmune Responses to Nitrosylated Proteins: New Pathways in Neuroprogressive Disorders Including Depression and Chronic Fatigue Syndrome. *Molecular Neurobiology* 2017;54, 4271-4291.
- Morris G, Walder K, Puri BK, Berk M, Maes M. The Deleterious Effects of Oxidative and Nitrosative Stress on Palmitoylation, Membrane Lipid Rafts and Lipid-Based Cellular Signalling: New Drug Targets in Neuroimmune Disorders. *Mol Neurobiol* 2016;53(7):4638-4658.
- Mozhgani SH, Rajabi F, Qurbani M, et al. Human Herpesvirus 6 Infection and Risk of Chronic Fatigue Syndrome: A Systematic Review and Meta-Analysis. *Intervirolgy* 2021.
- Nahman-Averbuch H, Nir R-, Sprecher E, Yarnitsky D. Psychological factors and conditioned pain modulation: A meta-analysis. *Clin J Pain* 2016;32(6):541-554.
- Naylor B, Boag S, Gustin SM. New evidence for a pain personality? A critical review of the last 120 years of pain and personality. *Scandinavian Journal of Pain* 2017;17:58-67.
- Nee J, Lembo A. Review Article: Current and future treatment approaches for IBS with diarrhoea (IBS-D) and IBS mixed pattern (IBS-M). *Alimentary Pharmacology and Therapeutics* 2021; 54(S1): S63-S74.
- Nelkowska, D.D. (2020). Treating irritable bowel syndrome through an interdisciplinary approach. *Annals of Gastroenterology* 33, 1-8.
- Nelson, M.J., Bahl, J.S., Buckley, J.D., Thomson, R.L., and Davison, K. (2019). Evidence of altered cardiac autonomic regulation in myalgic encephalomyelitis/chronic fatigue syndrome: A systematic review and meta-analysis. *Medicine (Baltimore)* 98, e17600.

- Nelson T, Zhang LX, Guo H, Nacul L, Song X. Brainstem Abnormalities in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Scoping Review and Evaluation of Magnetic Resonance Imaging Findings. *Frontiers in Neurology* 2021; 12.
- Nezu AM, Nezu CM, Lombardo ER. Cognitive-behavior therapy for medically unexplained symptoms: A critical review of the treatment literature. *Behavior Therapy* 2001;32(3):537-583.
- Ng, Q.X., Foo, N.X., Loke, W., Koh, Y.Q., Seah, V.J.M., Soh, A.Y.S., and Yeo, W.S. (2019a). Is there an association between *Helicobacter pylori* infection and irritable bowel syndrome? A meta-analysis. *World J Gastroenterol* 25, 5702-5710.
- Ng, Q.X., Soh, A.Y.S., Loke, W., Venkatanarayanan, N., Lim, D.Y., and Yeo, W.S. (2019b). Systematic review with meta-analysis: The association between post-traumatic stress disorder and irritable bowel syndrome. *J Gastroenterol Hepatol* 34, 68-73.
- Niec AM, Frankum B, Talley NJ. Are adverse food reactions linked to irritable bowel syndrome? *Am J Gastroenterol* 1998;93(11):2184-2190.
- Nijs J, Crombez G, Meeus M, Knoop H, Damme SV, Cauwenbergh V, et al. Pain in patients with chronic fatigue syndrome: time for specific pain treatment? *Pain physician* 2012;15(5):E677-86.
- Nijs J, Fremont M. Intracellular immune dysfunction in myalgic encephalomyelitis/chronic fatigue syndrome: state of the art and therapeutic implications. *Expert opinion on therapeutic targets* 2008;12(3):281-289.
- Nijs J, Meeus M, Van Oosterwijck J, Ickmans K, Moorkens G, Hans G, et al. In the mind or in the brain? Scientific evidence for central sensitisation in chronic fatigue syndrome. *Eur J Clin Invest* 2012;42(2):203-212.
- Nijs J, Aelbrecht S, Meeus M, Van Oosterwijck J, Zinzen E, Clarys P. Tired of being inactive: a systematic literature review of physical activity, physiological exercise capacity and muscle strength in patients with chronic fatigue syndrome. *Disability & Rehabilitation* 2011;33(17):1493-1500.
- Noddin L, Callahan M, Lacy BE. Irritable bowel syndrome and functional dyspepsia: Different diseases or a single disorder with different manifestations? *MedGenMed Medscape General Medicine* 2005;7(3).
- Noghani ,M. T., Rezaeizadeh H, Fazljoo SM, Keshavarz M. Gastrointestinal Headache; a Narrative Review. *Emergency (Tehran, Iran)* 2016;4(4):171-183.
- Noor N, Urits I, Degueure A, et al. A comprehensive update of the current understanding of chronic fatigue syndrome. *Anesthesiology and Pain Medicine* 2021; 11(3).
- Nourrisson C, Scanzi J, Pereira B, NkoudMongo C, Wawrzyniak I, Cian A, et al. Blastocystis is associated with decrease of fecal microbiota protective bacteria: comparative analysis between patients with irritable bowel syndrome and control subjects. *PloS one* 2014;9(11):e111868.
- Nouvenne, A., Ticinesi, A., Tana, C., Prati, B., Catania, P., Miraglia, C., De' Angelis, G.L., Di Mario, F., and Meschi, T. (2018). Digestive disorders and Intestinal microbiota. *Acta Biomed* 89, 47-51.
- Novo, R., Gonzalez, B., Peres, R., and Aguiar, P. (2017). A meta-analysis of studies with the Minnesota Multiphasic Personality Inventory in fibromyalgia patients. *Personality and Individual Differences* 116, 96-108.

- Núñez-Fuentes D, Obrero-Gaitán E, Zagalaz-Anula N, et al. Alteration of postural balance in patients with fibromyalgia syndrome—a systematic review and meta-analysis. *Diagnostics* 2021; 11(1).
- O'Brien, A.T., Deitos, A., Trinanes Pego, Y., Fregni, F., and Carrillo-De-La-Pena, M.T. (2018). Defective Endogenous Pain Modulation in Fibromyalgia: A Meta-Analysis of Temporal Summation and Conditioned Pain Modulation Paradigms. *J Pain* 19, 819-836.
- O'Brien, S.J. (2017). The consequences of campylobacter infection. *Current Opinion in Gastroenterology* 33, 14-20.
- O'Mahony, L. F., Srivastava, A., Mehta, P., & Ciurtin, C. (2021). Is fibromyalgia associated with a unique cytokine profile? A systematic review and meta-analysis. *Rheumatology (Oxford)*, 60(6), 2602-2614. <https://doi.org/10.1093/rheumatology/keab146>
- Ohlsson, B. (2017). The role of smoking and alcohol behaviour in management of functional gastrointestinal disorders. *Best Pract Res Clin Gastroenterol* 31, 545-552.
- Ohlsson B. Gonadotropin-Releasing Hormone and Its Physiological and Pathophysiological Roles in Relation to the Structure and Function of the Gastrointestinal Tract. *European Surgical Research* 2016;57(1-2):22-33.
- O'Neal AJ, Hanson MR. The Enterovirus Theory of Disease Etiology in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: A Critical Review. *Front Med (Lausanne)* 2021; 8: 688486.
- Ortiz-Lucas M, Saz-Peiro P, Sebastian-Domingo JJ. Irritable bowel syndrome immune hypothesis. Part two: the role of cytokines. *Revista espanola de enfermedades digestivas : organo oficial de la Sociedad Espanola de Patologia Digestiva* 2010;102(12):711-717.
- Ortiz-Rubio A, Torres-Sánchez I, Cabrera-Martos I, et al. Respiratory disturbances in fibromyalgia: A systematic review and meta-analysis of case control studies. *Expert Rev Respir Med* 2021; 15(9): 1217-27.
- Ostojic SM. Exercise-induced mitochondrial dysfunction: a myth or reality? *Clinical science (London, England : 1979)* 2016;130(16):1407-1416.
- Outlaw WM, Koch KL. Dyspepsia and its overlap with irritable bowel syndrome. *Curr Gastroenterol Rep* 2006;8(4):266-272.
- Pae CU, Masand PS, Ajwani N, Lee C, Patkar AA. Irritable bowel syndrome in psychiatric perspectives: A comprehensive review. *Int J Clin Pract* 2007;61(10):1708-1718.
- Pagliai G, Giangrandi I, Dinu M, Sofi F, Colombini B. Nutritional Interventions in the Management of Fibromyalgia Syndrome. *Nutrients* 2020; 12(9).
- Paine, P. (2021). Review article: current and future treatment approaches for pain in IBS. *Alimentary Pharmacology and Therapeutics*, 54(S1), S75-S88. <https://doi.org/10.1111/apt.16550>
- Pandey, S., Kashif, S., Youssef, M., Sarwal, S., Zraik, H., Singh, R., & Rutkofsky, I. H. (2020). Endocannabinoid system in irritable bowel syndrome and cannabis as a therapy. *Complement Ther Med*, 48, 102242. <https://doi.org/10.1016/j.ctim.2019.102242>
- Pan ZG, Xiao C, Su DX. No association of G-protein beta polypeptide 3 polymorphism with irritable bowel syndrome: evidence from a meta-analysis. *World journal of gastroenterology* 2014;20(20):6345-6352.

- Papadopoulos AS, Cleare AJ. Hypothalamic-pituitary-adrenal axis dysfunction in chronic fatigue syndrome. *Nature reviews Endocrinology* 2011;8(1):22-32.
- Paras ML, Murad MH, Chen LP, Goranson EN, Sattler AL, Colbenson KM, et al. Sexual abuse and lifetime diagnosis of somatic disorders: A systematic review and meta-analysis. *JAMA - Journal of the American Medical Association* 2009;302(5):550-561.
- Park S, Kwon JS, Park YB, Park JW. Is thyroid autoimmunity a predisposing factor for fibromyalgia? A systematic review and meta-analysis. *Clin Exp Rheumatol* 2021.
- Park MI, Camilleri M. Is there a role of food allergy in irritable bowel syndrome and functional dyspepsia? A systematic review. *Neurogastroenterology and Motility* 2006;18(8):595-607.
- Pastrak, M., Abd-Elseyed, A., Ma, F., Vrooman, B., & Visnjevac, O. (2021). Systematic Review of the Use of Intravenous Ketamine for Fibromyalgia. *Ochsner J*, 21(4), 387-394. <https://doi.org/10.31486/toj.21.0038>
- Penfold S, St Denis E, Mazhar MN. The association between borderline personality disorder, fibromyalgia and chronic fatigue syndrome: systematic review. *BJPsych open* 2016;2(4):275-279.
- Pittayanon, R., Lau, J.T., Yuan, Y., Leontiadis, G.I., Tse, F., Surette, M., and Moayyedi, P. (2019). Gut Microbiota in Patients With Irritable Bowel Syndrome-A Systematic Review. *Gastroenterology* 157, 97-108.
- Poenaru S, Abdallah SJ, Corrales-Medina V, Cowan J. COVID-19 and post-infectious myalgic encephalomyelitis/chronic fatigue syndrome: a narrative review. *Ther Adv Infect Dis* 2021; 8: 20499361211009385.
- Pogreba-Brown, K., Austhof, E., Armstrong, A., Schaefer, K., Villa Zapata, L., McClelland, D.J., Batz, M.B., Kuecken, M., Riddle, M., Porter, C.K., and Bazaco, M.C. (2019). Chronic Gastrointestinal and Joint-Related Sequelae Associated with Common Foodborne Illnesses: A Scoping Review. *Foodborne pathogens and disease*.
- Polli A, Godderis L, Ghosh M, Ickmans K, Nijs J. Epigenetic and miRNA Expression Changes in People with Pain: A Systematic Review. *J Pain* 2020; 21(7-8): 763-80.
- Pongratz DE, Spath M. Morphologic aspects of muscle pain syndromes: A critical review. *Phys Med Rehabil Clin N Am* 1997;8(1):55-68.
- Powell DJ, Liossi C, Moss-Morris R, Schlotz W. Unstimulated cortisol secretory activity in everyday life and its relationship with fatigue and chronic fatigue syndrome: a systematic review and subset meta-analysis. 2013;38(11):2405-22.
- Prins JB, Van DM, Bleijenberg G. Chronic fatigue syndrome. *Lancet* 2006;367(9507):346-355.
- Pyke, T.L., Osmotherly, P.G., and Baines, S. (2017). Measuring Glutamate Levels in the Brains of Fibromyalgia Patients and a Potential Role for Glutamate in the Pathophysiology of Fibromyalgia Symptoms: A Systematic Review. *Clin J Pain* 33, 944-954.
- Qin SY, Jiang HX, Lu DH, Zhou Y. Association of interleukin-10 polymorphisms with risk of irritable bowel syndrome: a meta-analysis. *World journal of gastroenterology* 2013;19(48):9472-9480.

- Raanes EFW, Stiles TC. Associations Between Psychological and Immunological Variables in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: A Systematic Review. *Front Psychiatry* 2021; 12: 716320.
- Ranjith G. Epidemiology of chronic fatigue syndrome. *Occupational Medicine (Oxford)* 2005;55(1):13-9.
- Rao SG, Gendreau JF, Kranzler JD. Understanding the fibromyalgia syndrome. *Psychopharmacol Bull* 2007;40(4):24-67.
- Raphael KG, Chandler HK, Ciccone DS. Is childhood abuse a risk factor for chronic pain in adulthood? *Curr Pain Headache Rep* 2004;8(2):99-110.
- Rathbone M, Parkinson W, Rehman Y, Jiang S, Bhandari M, Kumbhare D. Magnitude and variability of effect sizes for the associations between chronic pain and cognitive test performances: a meta-analysis. *British journal of pain* 2016;10(3):141-155.
- Rekatsina, M., Paladini, A., Piroli, A., Zis, P., Pergolizzi, J.V., and Varrassi, G. Pathophysiologic Approach to Pain Therapy for Complex Pain Entities: A Narrative Review. *Pain and Therapy*.
- Rezaei F, Hemmati A, Rahmani K, Komasi S. A systematic review of personality temperament models related to somatoform disorder with main focus on meta-analysis of Cloninger's theory components. *Indian J Psychiatry* 2020; 62(5): 462-9.
- Rezende, R.M., Natali, A.J., and Franceschini, S.D.C. (2019). The hidden hunger and fibromyalgia: A systematic review. *Revista Chilena De Nutricion* 46, 160-167.
- Riedl A, Schmidtmann M, Stengel A, Goebel M, Wisser AS, Klapp BF, et al. Somatic comorbidities of irritable bowel syndrome: a systematic analysis. *J Psychosom Res* 2008;64(6):573-582.
- Řiháček T, Čevelíček M. Common therapeutic strategies in psychological treatments for medically unexplained somatic symptoms. *Psychotherapy research : journal of the Society for Psychotherapy Research* 2020; 30(4): 532-45.
- Rimbaut S, Van Gutte C, Van Brabander L, Vanden Bossche L. Chronic fatigue syndrome - an update. *Acta Clin Belg* 2016:1-8.
- Robles, A., Perez Ingles, D., Myneedu, K., Deoker, A., Sarosiek, I., Zuckerman, M.J., Schmulson, M.J., and Bashashati, M. (2019). Mast cells are increased in the small intestinal mucosa of patients with irritable bowel syndrome: A systematic review and meta-analysis. *Neurogastroenterol Motil* 31, e13718.
- Rodiño-Janeiro, B.K., Vicario, M., Alonso-Cotner, C., Pascua-García, R., and Santos, J. (2018). A Review of Microbiota and Irritable Bowel Syndrome: Future in Therapies. *Advances in Therapy* 35, 289-310.
- Roerink ME, van dS, Dinarello CA, Knoop H, van dM. Interleukin-1 as a mediator of fatigue in disease: a narrative review. *Journal of neuroinflammation* 2017;14(1):16-017.
- Romans S, Cohen M. Unexplained and underpowered: the relationship between psychosomatic disorders and interpersonal abuse -- a critical review. *Harv Rev Psychiatry* 2008;16(1):35-54.
- Rossetti MG, Delvecchio G, Calati R, Perlini C, Bellani M, Brambilla P. Structural neuroimaging of somatoform disorders: A systematic review. *Neurosci Biobehav Rev* 2021; 122: 66-78.

- Rostami, A., Riahi, S.M., Haghighi, A., Saber, V., Armon, B., and Seyyedtabaei, S.J. (2017). The role of *Blastocystis* sp. and *Dientamoeba fragilis* in irritable bowel syndrome: a systematic review and meta-analysis. *Parasitol Res* 116, 2361-2371.
- Roudsari, N.M., Lashgari, N.A., Momtaz, S., Farzaei, M.H., Marques, A.M., and Abdolghaffari, A.H. (2019). Natural polyphenols for the prevention of irritable bowel syndrome: molecular mechanisms and targets; a comprehensive review. *DARU, Journal of Pharmaceutical Sciences* 27, 755-780.
- Rutherford G, Manning P, Newton JL. Understanding Muscle Dysfunction in Chronic Fatigue Syndrome. *Journal of aging research* 2016;2016:2497348.
- Sadeghi, A., Biglari, M., and Nasser Moghaddam, S. (2019). Post-infectious Irritable Bowel Syndrome: A Narrative Review. *Middle East J Dig Dis* 11, 69-75.
- Sadowski A, Dunlap C, Lacombe A, Hanes D. Alterations in Heart Rate Variability Associated With Irritable Bowel Syndrome or Inflammatory Bowel Disease: A Systematic Review and Meta-Analysis. *Clin Transl Gastroenterol* 2020; 12(1): e00275.
- Safadi, J. M., Quinton, A. M. G., Lennox, B. R., Burnet, P. W. J., & Minichino, A. (2021) Gut dysbiosis in severe mental illness and chronic fatigue: a novel trans-diagnostic construct? A systematic review and meta-analysis. *Molecular psychiatry*, 13. <https://doi.org/10.1038/s41380-021-01032-1>
- Saha S, Sehgal K, Singh S, Grover M, Pardi D, Khanna S. Postinfection Irritable Bowel Syndrome Following *Clostridioides difficile* Infection: A Systematic-review and Meta-analysis. *J Clin Gastroenterol* 2021.
- Saidi, K., Sharma, S., and Ohlsson, B. (2020). A systematic review and meta-analysis of the associations between endometriosis and irritable bowel syndrome. *Eur J Obstet Gynecol Reprod Biol* 246, 99-105.
- Salari P, Abdollahi M. Systematic review of modulators of benzodiazepine receptors in irritable bowel syndrome: is there hope? *World journal of gastroenterology* 2011;17(38):4251-4257.
- Sancassiani, F., Machado, S., Ruggiero, V., Cacace, E., Carmassi, C., Gesi, C., Dell'osso, L., and Carta, M.G. (2017). The management of fibromyalgia from a psychosomatic perspective: an overview. *Int Rev Psychiatry* 29, 473-488.
- Sarzi-Puttini P, Giorgi V, Marotto D, Atzeni F. Fibromyalgia: an update on clinical characteristics, aetiopathogenesis and treatment. *Nat Rev Rheumatol* 2020; 16(11): 645-60.
- Schaper SJ, Stengel A. Emotional stress responsivity of patients with IBS - a systematic review. *J Psychosom Res* 2021; 153: 110694.
- Schierhout, G., McGregor, S., Gessain, A., Einsiedel, L., Martinello, M., and Kaldor, J. (2020). Association between HTLV-1 infection and adverse health outcomes: a systematic review and meta-analysis of epidemiological studies. *Lancet Infect Dis* 20, 133-143.
- Schmaling, K.B., and Fales, J.L. (2018). The association between borderline personality disorder and somatoform disorders: A systematic review and meta-analysis. *Clinical Psychology: Science and Practice* 25, 1-17.

- Schulte IE, Petermann F. Familial risk factors for the development of somatoform symptoms and disorders in children and adolescents: a systematic review. *Child Psychiatry & Human Development* 2011;42(5):569-83.
- Schwille-Kiuntke J., Mazurak N., Enck P. Systematic review with meta-analysis: post-infectious irritable bowel syndrome after travellers' diarrhoea. *Aliment Pharmacol Ther* 2015;41(11):1029-37.
- Schwille-Kiuntke J, Frick JS, Zanger P, Enck P. Post-infectious irritable bowel syndrome--a review of the literature. *Z Gastroenterol* 2011;49(8):997-1003.
- Shah ED, Basseri RJ, Chong K, Pimentel M. Abnormal breath testing in IBS: a meta-analysis. *Dig Dis Sci* 2010;55(9):2441-2449.
- Shah, A., Talley, N.J., Jones, M., Kendall, B.J., Koloski, N., Walker, M.M., Morrison, M., and Holtmann, G.J. (2020). Small Intestinal Bacterial Overgrowth in Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis of Case-Control Studies. *Am J Gastroenterol*.
- Shan ZY, Barnden LR, Kwiatak RA, Bhuta S, Hermens DF, Lagopoulos J. Neuroimaging characteristics of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): a systematic review. *J Transl Med* 2020; 18(1): 335.
- Shaver JL. Fibromyalgia syndrome in women. *Nurs Clin North Am* 2004;39(1):195-204.
- Shaver, J.L., and Iacovides, S. (2018). Sleep in Women with Chronic Pain and Autoimmune Conditions: A Narrative Review. *Sleep Med Clin* 13, 375-394.
- Shi H, Yuan C, Dai Z, Ma H, Sheng L. Gray matter abnormalities associated with fibromyalgia: A meta-analysis of voxel-based morphometric studies. *Semin Arthritis Rheum* 2016;46(3):330-337.
- Sibelli A, Chalder T, Everitt H, Workman P, Windgassen S, Moss-Morris R. A systematic review with meta-analysis of the role of anxiety and depression in irritable bowel syndrome onset. *Psychol Med* 2016;46(15):3065-3080.
- Simpson CA, Mu A, Haslam N, Schwartz OS, Simmons JG. Feeling down? A systematic review of the gut microbiota in anxiety/depression and irritable bowel syndrome. *J Affect Disord* 2020; 266: 429-46.
- Simren M, Barbara G, Flint HJ, Spiegel BM, Spiller RC, Vanner S, et al. Intestinal microbiota in functional bowel disorders: a Rome foundation report. *Gut* 2013;62(1):159-76.
- Singh, R., Salem, A., Nanavati, J., and Mullin, G.E. (2018). The Role of Diet in the Treatment of Irritable Bowel Syndrome: A Systematic Review. *Gastroenterol Clin North Am* 47, 107-137.
- Sirri L, Grandi S, Tossani E. Smoking in Irritable Bowel Syndrome: A Systematic Review. *J Dual Diagn* 2017;13(3):184-200. doi: 10.1080/15504263.2017.1322226
- Slyepchenko, A., Maes, M., Jacka, F.N., Köhler, C.A., Barichello, T., McIntyre, R.S., Berk, M., Grande, I., Foster, J.A., Vieta, E., and Carvalho, A.F. (2017). Gut Microbiota, Bacterial Translocation, and Interactions with Diet: Pathophysiological Links between Major Depressive Disorder and Non-Communicable Medical Comorbidities. *Psychotherapy and Psychosomatics* 86, 31-46.
- Slattery SA., Niaz O., Aziz Q., Ford AC., Farmer AD. Systematic review with meta-analysis: the prevalence of bile acid malabsorption in the irritable bowel syndrome with diarrhoea. *Aliment Pharmacol Ther* 2015;42(1):3-11.

- Slyepchenko A, Maes M, Jacka FN, Kähler CA, Barichello T, McIntyre RS, et al. Gut Microbiota, Bacterial Translocation, and Interactions with Diet: Pathophysiological Links between Major Depressive Disorder and Non-Communicable Medical Comorbidities. *Psychother Psychosom* 2016;86(1):31-46.
- Smith HS, Audette JF. Fibromyalgia syndrome. *Progress in Anesthesiology* 2002;16(14):219-230.
- Smith HS, Barkin RL. Fibromyalgia syndrome: a discussion of the syndrome and pharmacotherapy. *Disease-A-Month* 2011;57(5):248-285.
- Smith SC, Wagner MS. Clinical endocannabinoid deficiency (CECD) revisited: can this concept explain the therapeutic benefits of cannabis in migraine, fibromyalgia, irritable bowel syndrome and other treatment-resistant conditions? *Neuroendocrinol Lett* 2014;35(3):198-201.
- Spiller R. Serotonergic agents and the irritable bowel syndrome: what goes wrong? *Current opinion in pharmacology* 2008;8(6):709-714.
- Spiller RC. Postinfectious irritable bowel syndrome. *Gastroenterology* 2003;124(6):1662-1671.
- Spiller RC. Irritable bowel syndrome: Bacteria and inflammation - Clinical relevance now. *Current Treatment Options in Gastroenterology* 2007;10(4):312-321.
- Spinelli A. Irritable bowel syndrome. *Clinical Drug Investigation* 2007;27(1):15-33.
- Staud R, Rodriguez ME. Mechanisms of disease: Pain in fibromyalgia syndrome. *Nature Clinical Practice Rheumatology* 2006;2(2):90-98.
- Strassheim, V., Ballantine, R., Hackett, K.L., Frith, J., and Newton, J.L. (2017). Understanding severely affected chronic fatigue syndrome (CFS): the gravity of the situation. *Physical Therapy Reviews* 22, 197-201.
- Strawbridge, R., Sartor, M.L., Scott, F., and Cleare, A.J. (2019). Inflammatory proteins are altered in chronic fatigue syndrome-A systematic review and meta-analysis. *Neurosci Biobehav Rev* 107, 69-83.
- Sun, Q., Jia, Q., Song, L., and Duan, L. (2019). Alterations in fecal short-chain fatty acids in patients with irritable bowel syndrome: A systematic review and meta-analysis. *Medicine (Baltimore)* 98, e14513.
- Sun JR, Kong CF, Qu XK, Deng C, Lou YN, Jia LQ. Efficacy and safety of probiotics in irritable bowel syndrome: A systematic review and meta-analysis. *Saudi J Gastroenterol* 2020; 26(2): 66-77.
- Svendsen, A.T., Bytzer, P., and Engsbro, A.L. (2019). Systematic review with meta-analyses: does the pathogen matter in post-infectious irritable bowel syndrome? *Scand J Gastroenterol* 54, 546-562.
- Tak LM, Cleare AJ, Ormel J, Manoharan A, Kok IC, Wessely S, et al. Meta-analysis and meta-regression of hypothalamic-pituitary-adrenal axis activity in functional somatic disorders. *Biol Psychol* 2011;87(2):183-194.
- Tak LM, Riese H, de Bock GH, Manoharan A, Kok IC, Rosmalen JG. As good as it gets? A meta-analysis and systematic review of methodological quality of heart rate variability studies in functional somatic disorders. *Biol Psychol* 2009;82(2):101-110.
- Tak LM, Rosmalen JGM. Dysfunction of stress responsive systems as a risk factor for functional somatic syndromes. *J Psychosom Res* 2010;68(5):461-468.



- Talley NJ, Powell N, Walker MM, et al. Role of smoking in functional dyspepsia and irritable bowel syndrome: three random population-based studies. *Alimentary Pharmacology & Therapeutics* 2021; 54(1): 32-42.
- Tammimäki A, Mannisto PT. Catechol-O-methyltransferase gene polymorphism and chronic human pain: a systematic review and meta-analysis. *Pharmacogenetics and Genomics* 2012;22(9):673-691.
- Tang HY, Jiang AJ, Wang XY, et al. Uncovering the pathophysiology of irritable bowel syndrome by exploring the gut-brain axis: a narrative review. *Ann Transl Med* 2021; 9(14): 1187.
- Teckchandani S, Gowda GAN, Raftery D, Curatolo M. Metabolomics in chronic pain research. *European Journal of Pain* 2021; 25(2): 313-26.
- Teodoro, T., Edwards, M.J., and Isaacs, J.D. (2018). A unifying theory for cognitive abnormalities in functional neurological disorders, fibromyalgia and chronic fatigue syndrome: systematic review. *J Neurol Neurosurg Psychiatry* 89, 1308-1319.
- Thabane M, Kottachchi DT, Marshall JK. Systematic review and meta-analysis: The incidence and prognosis of post-infectious irritable bowel syndrome. *Aliment Pharmacol Ther* 2007;26(4):535-544.
- Tiersky LA, Johnson SK, Lange G, Natelson BH, DeLuca J. Neuropsychology of chronic fatigue syndrome: a critical review. *Journal of clinical and experimental neuropsychology* 1997;19(4):560-586.
- Tillisch K, Mayer EA, Labus JS. Quantitative meta-analysis identifies brain regions activated during rectal distension in irritable bowel syndrome. *Gastroenterology* 2011;140(1):91-100.
- Toljan, K., and Vrooman, B. (2017). Psychoneuroimmunological approach to gastrointestinal related pain. *Scand J Pain* 17, 431-443.
- Tozlu M, Cash B, Younes M, Ertan A. Dilemma in post-IBD patients with IBS-D symptoms: A 2020 overview. *Expert Rev Gastroenterol Hepatol* 2021; 15(1): 5-8.
- Tracy LM, Ioannou L, Baker KS, Gibson SJ, Georgiou-Karistianis N, Giummarra MJ. Meta-analytic evidence for decreased heart rate variability in chronic pain implicating parasympathetic nervous system dysregulation. *Pain* 2016;157(1):7-29.
- Transth EL, Dale HF, Lied GA. Comparison of gut microbiota profile in celiac disease, non-celiac gluten sensitivity and irritable bowel syndrome: A systematic review. *Turk J Gastroenterol* 2020; 31(11): 735-45.
- Tu Q, Heitkemper MM, Jarrett ME, Buchanan DT. Sleep disturbances in irritable bowel syndrome: a systematic review. *Neurogastroenterology and motility : the official journal of the European Gastrointestinal Motility Society* 2017;29(3):10.1111/nmo.12946. Epub 2016 Sep 28.
- Ubeda-D'Ocasar E, Diaz-Benito VJ, Gallego-Sendarrubias GM, Valera-Calero JA, Vicario-Merino A, Hervás-Pérez JP. Pain and Cortisol in Patients with Fibromyalgia: Systematic Review and Meta-Analysis. *Diagnostics* 2020; 10(11): 14.
- Uceyler N, Hauser W, Sommer C. Systematic review with meta-analysis: cytokines in fibromyalgia syndrome. *BMC Musculoskeletal Disorders* 2011;12:245.

- Van Cauwenbergh D, Nijs J, Kos D, Van Weijnen L, Struyf F, Meeus M. Malfunctioning of the autonomic nervous system in patients with chronic fatigue syndrome: a systematic literature review. *Eur J Clin Invest* 2014;44(5):516-526.
- Van Elzakker, M.B., Brumfield, S.A., and Lara Mejia, P.S. (2019). Neuroinflammation and cytokines in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): A critical review of research methods. *Frontiers in Neurology* 10.
- Van Kerkhoven LA, Laheij RJ, Jansen JB. Meta-analysis: a functional polymorphism in the gene encoding for activity of the serotonin transporter protein is not associated with the irritable bowel syndrome. *Aliment Pharmacol Ther* 2007;26(7):979-986.
- van Ravenzwaaij J, Olde Hartman T, van Ravesteijn H, Eveleigh R, van Rijswijk E, Lucassen P. Explanatory models of medically unexplained symptoms: a qualitative analysis of the literature. *Mental health in family medicine* 2010;7(4):223-231.
- Van West D, Maes M. Neuroendocrine and immune aspects of fibromyalgia. *BioDrugs* 2001;15(8):521-531.
- Varju, P., Gede, N., Szakacs, Z., Hegyi, P., Cazacu, I.M., Pecs, D., Fabian, A., Szepes, Z., Vincze, A., Tenk, J., Balasko, M., Rumbus, Z., Garami, A., Csupor, D., and Czimmer, J. (2019). Lactose intolerance but not lactose maldigestion is more frequent in patients with irritable bowel syndrome than in healthy controls: A meta-analysis. *Neurogastroenterol Motil* 31, e13527.
- Vasant DH, Paine PA, Black CJ, et al. British Society of Gastroenterology guidelines on the management of irritable bowel syndrome. *Gut* 2021; 70(7): 1214-40.
- Vincent A, Benzo RP, Whipple MO, McAllister SJ, Erwin PJ, Saligan LN. Beyond pain in fibromyalgia: insights into the symptom of fatigue. *Arthritis Research & Therapy* 2013;15(6):221.
- Vreijling SR, Troudart Y, Brosschot JF. Reduced Heart Rate Variability in Patients With Medically Unexplained Physical Symptoms: A Meta-Analysis of HF-HRV and RMSSD. *Psychosom Med* 2021; 83(1): 2-15.
- Wallace PG. Epidemiology: A critical review. *Br Med Bull* 1991;47(4):942-951.
- Wallis A, Ball M, McKechnie S, Butt H, Lewis DP, Bruck D. Examining clinical similarities between myalgic encephalomyelitis/chronic fatigue syndrome and D-lactic acidosis: a systematic review. *Journal of translational medicine* 2017;15(1):129-017.
- Wang C, Yin Y, Wang L, Guo X, Liu L, Qi X. Association between *Helicobacter pylori* infection and irritable bowel syndrome: a systematic review and meta-analysis. *Postgrad Med J* 2021.
- Wang, L., Alamm, N., Singh, R., Nanavati, J., Song, Y., Chaudhary, R., and Mullin, G.E. (2019). Gut Microbial Dysbiosis in the Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis of Case-Control Studies. *J Acad Nutr Diet*.
- Wang L, Alamm N, Singh R, et al. Gut Microbial Dysbiosis in the Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis of Case-Control Studies. *J Acad Nutr Diet* 2020; 120(4): 565-86.
- Wang, T., Xu, C., Pan, K., and Xiong, H. (2017). Association between C-reactive protein and chronic fatigue syndrome: A meta-analysis. *International Journal of Clinical and Experimental Medicine* 10, 15151-15159.

- Wang T, Yin J, Miller AH, Xiao C. A systematic review of the association between fatigue and genetic polymorphisms. *Brain Behav Immun* 2017;62:230-244.
- Wedlake L, A'Hern R, Russell D, Thomas K, Walters JR, Andreyev HJ. Systematic review: the prevalence of idiopathic bile acid malabsorption as diagnosed by SeHCAT scanning in patients with diarrhoea-predominant irritable bowel syndrome. *Aliment Pharmacol Ther* 2009;30(7):707-717.
- Weltens, N., Iven, J., Van Oudenhove, L., and Kano, M. (2018). The gut-brain axis in health neuroscience: implications for functional gastrointestinal disorders and appetite regulation. *Ann N Y Acad Sci* 1428, 129-150.
- Whelan K. Probiotics and prebiotics in the management of irritable bowel syndrome: a review of recent clinical trials and systematic reviews. *Curr Opin Clin Nutr Metab Care* 2011;14(6):581-587.
- Whelan K, Quigley EMM. Probiotics in the management of irritable bowel syndrome and inflammatory bowel disease. *Curr Opin Gastroenterol* 2013;29(2):184-189.
- Whitehead WE., Palsson O., Jones KR. Systematic review of the comorbidity of irritable bowel syndrome with other disorders: what are the causes and implications? *Gastroenterology* 2002;122(4):1140-56.
- Whitehead WE, Palsson OS. Is rectal pain sensitivity a biological marker for irritable bowel syndrome: psychological influences on pain perception. *Gastroenterology* 1998;115(5):1263-1271.
- Whitehead WE, Palsson OS, Simren M. Biomarkers to distinguish functional constipation from irritable bowel syndrome with constipation. *Neurogastroenterology and motility : the official journal of the European Gastrointestinal Motility Society* 2016;28(6):783-792.
- Williams DA, Gracely RH. Biology and therapy of fibromyalgia. Functional magnetic resonance imaging findings in fibromyalgia. *Arthritis research & therapy* 2006;8(6):224.
- Williams, C.E., Williams, E.A., and Corfe, B.M. (2018). Vitamin D status in irritable bowel syndrome and the impact of supplementation on symptoms: what do we know and what do we need to know? *Eur J Clin Nutr* 72, 1358-1363.
- Windgassen S, Moss-Morris R, Chilcot J, Sibelli A, Goldsmith K, Chalder T. The journey between brain and gut: A systematic review of psychological mechanisms of treatment effect in irritable bowel syndrome. *British journal of health psychology* 2017.
- Withöft M, Hiller W. Psychological approaches to origins and treatments of somatoform disorders. *Annual Review of Clinical Psychology* 2010;6:257-283.
- Wongtrakul W, Charoenngam N, Ungprasert P. Increased prevalence of irritable bowel syndrome in migraine patients: a systematic review and meta-analysis. *European Journal of Gastroenterology & Hepatology* 2021.
- Wood JD. Taming the irritable bowel. *Curr Pharm Des* 2013;19(1):142-156.
- Wong, K.M.F., Yuen, S.S.Y., and Mak, A.D.P. (2019). Neurocognitive Characteristics of Individuals with Irritable Bowel Syndrome. *East Asian Arch Psychiatry* 29, 48-56.
- Wouters MM. New insight in the pathogenesis of functional gastrointestinal disorders: association between genetics and colonic transit. *Neurogastroenterology and motility : the official journal of the European Gastrointestinal Motility Society* 2011;23(10):893-

- Wu YL, Chang LY, Lee HC, Fang SC, Tsai PS. Sleep disturbances in fibromyalgia: A meta-analysis of case-control studies. *J Psychosom Res* 2017;96:89-97.
- Wu, Z., Malihi, Z., Stewart, A.W., Lawes, C.M., and Scragg, R. (2018). The association between vitamin D concentration and pain: a systematic review and meta-analysis. *Public Health Nutr* 21, 2022-2037.
- Xiao QY, Fang XC, Li XQ, Fei GJ. Ethnic differences in genetic polymorphism associated with irritable bowel syndrome. *World J Gastroenterol* 2020; 26(17): 2049-63.
- Xiong Y, Liu L, Zhou X, Wen Y, Wang R. Anti-Helicobacter pylori treatment can effectively improve the clinical remission rates of irritable bowel syndrome: a controlled clinical trial meta-analysis. *Clinics (Sao Paulo)* 2020; 75: e1857.
- [Xiong Y, Liu L, Zhou X, Wen Y, Wang R. Erratum for: Anti-Helicobacter pylori treatment can effectively improve the clinical remission rates of irritable bowel syndrome: a controlled clinical trial meta-analysis. *Clinics (Sao Paulo)* 2022; 76: e1857err.]
- Yamano, E., Watanabe, Y., & Kataoka, Y. (2021). Insights into metabolite diagnostic biomarkers for myalgic encephalomyelitis/chronic fatigue syndrome. *International Journal of Molecular Sciences*, 22(7). <https://doi.org/10.3390/ijms22073423>
- Yang, P. L., Heitkemper, M. M., & Kamp, K. J. (2021). Irritable bowel syndrome in midlife women: a narrative review. *Womens Midlife Health*, 7(1), 4. <https://doi.org/10.1186/s40695-021-00064-5>
- Yang, T., Yang, Y., Wang, D., Li, C., Qu, Y., Guo, J., Shi, T., Bo, W., Sun, Z., and Asakawa, T. (2019). The clinical value of cytokines in chronic fatigue syndrome. *Journal of Translational Medicine* 17.
- Yavne, Y., Amital, D., Watad, A., Tiosano, S., and Amital, H. (2018). A systematic review of precipitating physical and psychological traumatic events in the development of fibromyalgia. *Semin Arthritis Rheum* 48, 121-133.
- Yunus MB. Fibromyalgia and overlapping disorders: the unifying concept of central sensitivity syndromes. *Seminars in Arthritis & Rheumatism* 2007;36(6):339-356.
- Yuta A, Ryota I, Hiroshi S. Reduced N-acetylaspartate in the hippocampus in patients with fibromyalgia: A meta-analysis. *Psychiatry Research: Neuroimaging* 2013;213(3):242-248.
- Zamuner, A.R., Andrade, C.P., Arca, E.A., and Avila, M.A. (2019). Impact of water therapy on pain management in patients with fibromyalgia: current perspectives. *J Pain Res* 12, 1971-2007.
- Zhang H, Li F, Li WW, Sary C, Clark JD, Xu S, et al. The inflammasome as a target for pain therapy. *Br J Anaesth* 2016;117(6):693-707.
- Zhang, J.J., Ma, H., Zhu, J.Z., Lu, C., Yu, C.H., and Li, Y.M. (2019). The Role of Dietary Energy and Macronutrients Intake in Prevalence of Irritable Bowel Syndromes. *BioMed Research International* 2019.
- Zhang L, Zhu J, Chen Y, Zhao J. Meta-analysis reveals a lack of association between a common catechol-O-methyltransferase (COMT) polymorphism val(1)(5)(8)met and fibromyalgia. *International journal of clinical and experimental pathology* 2014;7(12):8489-8497.

- Zhang ZF, Duan ZJ, Wang LX, Yang D, Zhao G, Zhang L. The serotonin transporter gene polymorphism (5-HTTLPR) and irritable bowel syndrome: a meta-analysis of 25 studies. *BMC gastroenterology* 2014;14:23-230X.
- Zhou, Q., Wesselmann, U., Walker, L., Lee, L., Zeltzer, L., and Verne, G.N. (2018). AAPT Diagnostic Criteria for Chronic Abdominal, Pelvic, and Urogenital Pain: Irritable Bowel Syndrome. *J Pain* 19, 257-263.
- Zhou XL, Xu W, Tang XX, Luo LS, Tu JF, Zhang CJ, et al. Fecal lactoferrin in discriminating inflammatory bowel disease from irritable bowel syndrome: a diagnostic meta-analysis. *BMC gastroenterology* 2014;14:121-230X.
- Zhu JZ, Yan TL, Yu CH, Wan XY, Wang YM, Li YM. Is national socioeconomic status related to prevalence of irritable bowel syndrome? *J Gastroenterol Hepatol* 2014;29(8):1595-1602.
- Zhu, S., Wang, B., Jia, Q., and Duan, L. (2019). Candidate single nucleotide polymorphisms of irritable bowel syndrome: a systemic review and meta-analysis. *BMC Gastroenterol* 19, 165.
- Zhu, Y., Zheng, G., and Hu, Z. (2018). Association between SERT insertion/deletion polymorphism and the risk of irritable bowel syndrome: A meta-analysis based on 7039 subjects. *Gene* 679, 133-137.
- Zhuang X, Xiong L, Li L, Li M, Chen M. Alterations of gut microbiota in patients with irritable bowel syndrome: A systematic review and meta-analysis. *J Gastroenterol Hepatol* 2017;32(1):28-38.
- Zielińska, A., Sałaga, M., Włodarczyk, M., and Fichna, J. (2018). Chronic abdominal pain in irritable bowel syndrome—current and future therapies. *Expert Review of Clinical Pharmacology* 11, 729-739.
- Zigich S, Heuberger R. The relationship of food intolerance and irritable bowel syndrome in adults. *Gastroenterol Nurs* 2013;36(4):275-82.

**Supplementary Material 3 (Continued).** References of reviews excluded after fulltext review (k=526)

Reference	Reason of exclusion
Aamland A, Malterud K, Werner EL. Phenomena associated with sick leave among primary care patients with medically unexplained physical symptoms: A systematic review. <i>Scandinavian Journal of Primary Health Care</i> 2012; 30(3): 147-55.	Other FSS/pediatric condition
Abbass AA, Nowoweiski SJ, Bernier D, Tarzwell R, Beutel ME. Review of psychodynamic psychotherapy neuroimaging studies. <i>Psychotherapy and Psychosomatics</i> 2014; 83(3): 142-7.	Not focused on aetiology
Abbass A, Lumley MA, Town J, et al. Short-term psychodynamic psychotherapy for functional somatic disorders: A systematic review and meta-analysis of within-treatment effects. <i>J Psychosom Res</i> 2021; 145: 110473.	Not focused on aetiology
Abbass A, Town J, Holmes H, et al. "Short-term psychodynamic psychotherapy for functional somatic disorders: A meta-analysis of randomized controlled trials": Erratum. <i>Psychotherapy and Psychosomatics</i> 2020; 89(6): 408.	Not focused on aetiology
Abboud M, Rizk R, AlAnouti F, Papandreou D, Haidar S, Mahboub N. The Health Effects of Vitamin D and Probiotic Co-Supplementation: A Systematic Review of Randomized Controlled Trials. <i>Nutrients</i> 2020; 13(1).	Not focused on aetiology
Adachi T, Yamada K, Fujino H, Enomoto K, Shibata M. Associations between anger and chronic primary pain: a systematic review and meta-analysis. <i>Scandinavian Journal of Pain</i> : 13.	Other functional syndrome
Afolalu EF, Ramlee F, Tang NKY. Effects of sleep changes on pain-related health outcomes in the general population: A systematic review of longitudinal studies with exploratory meta-analysis. <i>Sleep Medicine Reviews</i> 2018;39:82-97. doi: 10.1016/j.smrv.2017.08.001	Other FSS/pediatric condition
Ahlawat SK, Cuddihy MT, Locke GR. Gender-related differences in dyspepsia: A qualitative systematic review. <i>Gender Medicine</i> 2006; 3(1): 31-42.	Other FSS/pediatric condition
Albert U, Carmassi C, Cosci F, et al. Role and clinical implications of atypical antipsychotics in anxiety disorders, obsessive-compulsive disorder, trauma-related, and somatic symptom disorders: A systematized review. <i>International Clinical Psychopharmacology</i> 2016; 31(5): 249-58.	Not focused on aetiology
Alciati A, Atzeni F, Masala IF, et al. Controlled-release pregabalin in the treatment of fibromyalgia. <i>Expert Rev Neurother</i> 2018;18(8):617-23. doi: 10.1080/14737175.2018.1508344	Not focused on aetiology
Algar-Ramírez M, Ubéda-D'Ocasar E, Hervás-Pérez JP. Efficacy of manual lymph drainage and myofascial therapy in patients with fibromyalgia : A systematic review. <i>Schmerz</i> 2021; 35(5): 349-59.	Not focused on aetiology

Reference	Reason of exclusion
Almquist E, Törnblom H, Simrén M. Practical management of irritable bowel syndrome: A clinical review. <i>Minerva Gastroenterologica e Dietologica</i> 2016; 62(1): 30-48.	Not focused on aetiology
Alonso-Cotoner C, Abril-Gil M, Albert-Bayo M, et al. The Role of Purported Mucoprotectants in Dealing with Irritable Bowel Syndrome, Functional Diarrhea, and Other Chronic Diarrheal Disorders in Adults. <i>Advances in Therapy</i> 2021; 38(5): 2054-76.	Not focused on aetiology
Alsman, E. T., Hamaideh, S. H., Bani Hani, M. A., & Atiyeh, H. M. (2020). Alexithymia, fibromyalgia, and psychological distress among adolescents: Literature review. <i>International Journal of Adolescent Medicine and Health</i> , 32(3). <a href="https://doi.org/10.1515/ijamh-2017-0081">https://doi.org/10.1515/ijamh-2017-0081</a>	Age of study population
Altobelli E, Del Negro V, Angeletti PM, et al. Low-FODMAP Diet Improves Irritable Bowel Syndrome Symptoms: A Meta-Analysis. <i>Nutrients</i> 2017;9(9) doi: 10.3390/nu9090940	Not focused on aetiology
Aman MM, Jason Yong R, Kaye AD, et al. Evidence-Based Non-Pharmacological Therapies for Fibromyalgia. <i>Curr Pain Headache Rep</i> 2018;22(5):33. doi: 10.1007/s11916-018-0688-2	Not focused on aetiology
American Academy of Pediatrics Subcommittee on Chronic Abdominal Pain, Pain North American Society for Pediatric Gastroenterology Hepatology and Nutrition. Chronic abdominal pain in children. <i>Pediatrics</i> 2005; 115(3): e370-81.	Age of study population
Ames HJ. Meta-analysis: A neuropsychological study of alteration in attention and concentration as a result of chronic fatigue syndrome. <i>Dissertation Abstracts International: Section B: The Sciences and Engineering</i> 1999; 60(4-B): 1838.	Not focused on aetiology
Andrade A, Dominski FH, Sieczkowska SM. What we already know about the effects of exercise in patients with fibromyalgia: An umbrella review. <i>Semin Arthritis Rheum</i> 2020; 50(6): 1465-80.	Not focused on aetiology
Andrade A, Vilarino GT, Sieczkowska SM, et al. Acute effects of physical exercises on the inflammatory markers of patients with fibromyalgia syndrome: A systematic review. <i>J Neuroimmunol</i> 2018;316:40-49. doi: 10.1016/j.jneuroim.2017.12.007	Not focused on aetiology
Andresen V, Camilleri M. Irritable bowel syndrome: Recent and novel therapeutic approaches. <i>Drugs</i> 2006; 66(8): 1073-88.	Not focused on aetiology
Andrews NE, Strong J, Meredith PJ. Activity pacing, avoidance, endurance, and associations with patient functioning in chronic pain: A systematic review and meta-analysis. <i>Archives of Physical Medicine and Rehabilitation</i> 2012; 93(11): 2109-21.	Other FSS/pediatric condition

Reference	Reason of exclusion
Angel Garcia D, Martinez Nicolas I, Saturno Hernandez PJ. "Clinical approach to fibromyalgia: Synthesis of evidence-based recommendations, a systematic review". <i>Reumatologia Clinica</i> 2016; 12(2): 65-71.	Not focused on aetiology
Angioni D, Giudici KV, Martinez MM, Rolland Y, Vellas B, Barreto PD. Neuroimaging markers of chronic fatigue in older people: a narrative review. <i>Aging Clinical and Experimental Research</i> 2021; 33(6): 1487-92.	Other functional syndrome
Apkarian AV, Bushnell MC, Treede RD, Zubieta JK. Human brain mechanisms of pain perception and regulation in health and disease. <i>European Journal of Pain</i> 2005; 9(4): 463-84.	Other FSS/pediatric condition
Arat S, De Cock D, Moons P, et al. Modifiable correlates of illness perceptions in adults with chronic somatic conditions: A systematic review. <i>Research in Nursing &amp; Health</i> 2018;41(2):173-84.	Other FSS/pediatric condition
Ardestani SK, Karkhaneh M, Stein E, et al. Systematic Review of Mind-Body Interventions to Treat Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. <i>Medicina-Lithuania</i> 2021; 57(7): 43.	Not focused on aetiology
Argentieri MA, Nagarajan S, Seddighzadeh B, et al. Epigenetic Pathways in Human Disease: The Impact of DNA Methylation on Stress-Related Pathogenesis and Current Challenges in Biomarker Development. <i>EBioMedicine</i> 2017;18:327-50. doi: 10.1016/j.ebiom.2017.03.044	Other FSS/pediatric condition
Arneth BM. Gut-brain axis biochemical signalling from the gastrointestinal tract to the central nervous system: gut dysbiosis and altered brain function. <i>Postgraduate Medical Journal</i> 2018;94(1114):446-52. doi: 10.1136/postgradmedj-2017-135424	Other FSS/pediatric condition
Arnold LM, Clauw DJ. Challenges of implementing fibromyalgia treatment guidelines in current clinical practice. <i>Postgraduate Medicine</i> 2017; 129(7): 709-14.	Not focused on aetiology
Arnold LM. Biology and therapy of fibromyalgia. New therapies in fibromyalgia. <i>Arthritis Research and Therapy</i> 2006; 8(4): 212.	Not focused on aetiology
Artus M, Campbell P, Mallen CD, Dunn KM, van der Windt DA. Generic prognostic factors for musculoskeletal pain in primary care: a systematic review. <i>BMJ Open</i> 2017; 7(1): e012901-2016.	Other FSS/pediatric condition
Ascough C, King H, Serafimova T, et al. Interventions to treat pain in paediatric CFS/ME: a systematic review. <i>BMJ Paediatr Open</i> 2020; 4(1): e000617.	Other functional condition
Atefi M, Darand M, Entezari MH, Jamialahmadi T, Bagherniya M, Sahebkar A. A Systematic Review of the Clinical Use of Curcumin for the Management of Gastrointestinal Diseases. <i>Adv Exp Med Biol</i> 2021; 1291: 295-326.	Not focused on aetiology
Aziz I, Hadjivassiliou M, Sanders DS. Does gluten sensitivity in the absence of coeliac disease exist? <i>BMJ</i> 2012; 345: e7907.	Other FSS/pediatric condition



Reference	Reason of exclusion
Aziz I, Sanders DS. The Irritable Bowel Syndrome-Celiac Disease Connection. <i>Gastrointestinal Endoscopy Clinics of North America</i> 2012; 22(4): 623-37.	Not focused on aetiology
Bahrami HR, Hamed S, Salari R, Noras M. Herbal Medicines for the Management of Irritable Bowel Syndrome: A Systematic Review. <i>Electronic physician</i> 2016; 8(8): 2719-25.	Not focused on aetiology
Bair MJ, Sanderson TR. Coanalgesics for chronic pain therapy: A narrative review. <i>Postgraduate medicine</i> 2011; 123(6): 140-50.	Not focused on aetiology
Bandelow B. Generalized anxiety disorder and pain. <i>Modern Trends in Pharmacopsychiatry</i> 2015; 30((Bandelow B., bbandel@gwdg.de) Department of Psychiatry and Psychotherapy, University of Göttingen, Göttingen, Germany): 153-65.	Not focused on aetiology
Barah F, Whiteside S, Batista S, Morris J. Neurological aspects of human parvovirus B19 infection: A systematic review. <i>Reviews in Medical Virology</i> 2014; 24(3): 154-68.	Not focused on aetiology
Barboi A, Gibbons CH, Axelrod F, et al. Human papillomavirus (HPV) vaccine and autonomic disorders: a position statement from the American Autonomic Society. <i>Clinical Autonomic Research</i> 2019 doi: 10.1007/s10286-019-00608-w	Other FSS/pediatric condition
Barker LC, Stewart DE, Vigod SN. Intimate Partner Sexual Violence: An Often Overlooked Problem. <i>J Womens Health (Larchmt)</i> 2019;28(3):363-74. doi: 10.1089/jwh.2017.6811	Other FSS/pediatric condition
Barry S, Dinan TG. Functional dyspepsia: Are psychosocial factors of relevance? <i>World Journal of Gastroenterology</i> 2006; 12(17): 2701-7.	Other FSS/pediatric condition
Bass C, Tyrer P. The somatoform conundrum: A question of nosological valves. <i>General Hospital Psychiatry</i> 2000; 22(1): 49-50.	No review
Baumeister H, Harter M. Prevalence of mental disorders based on general population surveys. <i>Social psychiatry and psychiatric epidemiology</i> 2007; 42(7): 537-46.	Not focused on aetiology
Belavy DL, Van Oosterwijk J, Clarkson M, et al. Pain sensitivity is reduced by exercise training: Evidence from a systematic review and meta-analysis. <i>Neuroscience and Biobehavioral Reviews</i> 2021; 120: 100-8.	Other functional syndrome
Bennett G, Talley NJ. Irritable bowel syndrome in the elderly. <i>Bailliere's Best Practice and Research in Clinical Gastroenterology</i> 2002; 16(1): 63-76.	Not focused on aetiology
Berezowski L, Ludwig L, Martin A, Löwe B, Shedden-Mora MC. Early Psychological Interventions for Somatic Symptom Disorder and Functional Somatic Syndromes: A Systematic Review and Meta-Analysis. <i>Psychosom Med</i> 2021.	Duplicate

Reference	Reason of exclusion
Berryman C, Stanton TR, Jane Bowering K, Tabor A, McFarlane A, Lorimer Moseley G. Evidence for working memory deficits in chronic pain: A systematic review and meta-analysis. <i>Pain</i> 2013; 154(8): 1181-96.	Other FSS/pediatric condition
Bialkowska J, Juranek J, Wojtkiewicz J. Behavioral Medicine Methods in Treatment of Somatic Conditions. <i>BioMed Research International</i> 2020; 2020: 12.	Other functional syndrome
Bidonde J, Boden C, Busch AJ, Goes SM, Kim S, Knight E. Dance for adults with fibromyalgia-What do we know about It? Protocol for a scoping review. <i>JMIR Research Protocols</i> 2017; 6(2): e25.	No review
Bielefeldt K, Levinthal DJ, Nusrat S. Effective constipation treatment changes more than bowel frequency: A systematic review and meta-analysis. <i>Journal of Neurogastroenterology and Motility</i> 2016; 22(1): 31-45.	Not focused on aetiology
Bielefeldt K. Approaching patients with irritable bowel syndrome. <i>F1000 Medicine Reports</i> 2010; 2(Journal Article): 50.	Not focused on aetiology
Billings W, Mathur K, Craven HJ, Xu HP, Shin A. Efficacy of Complementary and Alternative Medicine (CAM) in Adults With Irritable Bowel Syndrome (IBS): A Systematic Review and Meta-Analysis of Randomized Controlled Trials. <i>American Journal of Gastroenterology</i> 2020; 115: S250-S1.	Abstract only
Black CJ, Burr NE, Ford AC. Relative Efficacy of Tegaserod in a Systematic Review and Network Meta-analysis of Licensed Therapies for Irritable Bowel Syndrome With Constipation. <i>Clin Gastroenterol Hepatol</i> 2020; 18(5): 1238-9.e1.	Not focused on aetiology
Black CJ, Burr NE, Quigley EMM. Efficacy of secretagogues in patients with irritable bowel syndrome with constipation: systematic review and network meta-analysis (vol 155, pg 1753, 2018). <i>Gastroenterology</i> 2021; 160(6): 2227-9.	Not focused on aetiology
Black CJ, Staudacher HM, Ford AC. Efficacy of a low FODMAP diet in irritable bowel syndrome: systematic review and network meta-analysis. <i>Gut</i> : 10.	Not focused on aetiology
Black CJ, Thakur ER, Houghton LA, Quigley EMM, Moayyedi P, Ford AC. Efficacy of psychological therapies for irritable bowel syndrome: systematic review and network meta-analysis. <i>Gut</i> 2020; 69(8): 1441-51.	Not focused on aetiology
Blanchard EB. A critical review of cognitive, behavioral, and cognitive-behavioral therapies for irritable bowel syndrome. <i>Journal of Cognitive Psychotherapy</i> 2005; 19(2): 101-23.	Not focused on aetiology
Bolte LA, Vich Vila A, Imhann F, et al. Long-term dietary patterns are associated with pro-inflammatory and anti-inflammatory features of the gut microbiome. <i>Gut</i> 2021; 70(7): 1287-98.	No review

Reference	Reason of exclusion
Bonfiglio F, Liu X, Smillie C, et al. GWAS of stool frequency provides insights into gastrointestinal motility and irritable bowel syndrome. <i>Cell Genom</i> 2021; 1(3): None.	Not focused on aetiology
Bor S, Leher P, Chalbaud A, Tack J. Efficacy of pinaverium bromide in the treatment of irritable bowel syndrome: a systematic review and meta-analysis. <i>Therap Adv Gastroenterol</i> 2021; 14: 17562848211033740.	Not focused on aetiology
Bornstein RF, Gold SH. Comorbidity of personality disorders and somatization disorder: A meta-analytic review. <i>Journal of Psychopathology and Behavioral Assessment</i> 2008; 30(2): 154-61.	Not focused on aetiology
Boulazreg S, Rokach A. The Lonely, Isolating, and Alienating Implications of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. <i>Healthcare (Basel)</i> 2020; 8(4).	Not focused on aetiology
BouSaba J, Sannaa W, Camilleri M. Pain in irritable bowel syndrome: Does anything really help? <i>Neurogastroenterol Motil</i> 2022; 34(1): e14305.	Not focused on aetiology
Brandt LJ, Bjorkman D, Fennerty MB, et al. Systematic review on the management of irritable bowel syndrome in North America. 2002; 97(11 Suppl): S7-26.	Not focused on aetiology
Brandt LJ, Chey WD, Foxx-Orenstein AE, et al. An evidence-based position statement on the management of irritable bowel syndrome. <i>American Journal of Gastroenterology</i> 2008; 104(Suppl. 1): S1-S35.	Not focused on aetiology
Brandt LJ, Locke GR, Olden K, et al. An evidence-based approach to the management of irritable bowel syndrome in North America. <i>American Journal of Gastroenterology</i> 2002; 97(Suppl. 11): S1-S26.	Not focused on aetiology
Brenner DM, Sayuk GS. Current US Food and Drug Administration-Approved Pharmacologic Therapies for the Treatment of Irritable Bowel Syndrome with Diarrhea. <i>Advances in Therapy</i> 2020;37(1):83-96. doi: 10.1007/s12325-019-01116-z	Not focused on aetiology
Broadbent P, Liossi C, Schoth DE. Attentional bias to somatosensory stimuli in chronic pain patients: a systematic review and meta-analysis. <i>Pain</i> 2021; 162(2): 332-52.	Other functional syndrome
Brown RJ. Introduction to the special issue on medically unexplained symptoms: Background and future directions. <i>Clinical Psychology Review</i> 2007; 27(7): 769-80.	No review
Bu F, Wang W, Chen R, et al. Adding Chinese herbal medicine to probiotics for irritable bowel syndrome-diarrhea: A systematic review and meta-analysis of randomized controlled trials. <i>Journal of Traditional Chinese Medical Sciences</i> 2020; 7(1): 20-36.	Not focused on aetiology
Bunk S, Preis L, Zuidema S, et al. Executive Functions and Pain A Systematic Review. <i>Zeitschrift Fur Neuropsychologie</i> 2019;30(3):169-96. doi: 10.1024/1016-264X/a000264	Other FSS/pediatric condition

Reference	Reason of exclusion
Burke AL, Mathias JL, Denson LA. Psychological functioning of people living with chronic pain: A meta-analytic review. <i>The British Journal of Clinical Psychology</i> 2015; 54(3): 345-60.	Other FSS/pediatric condition
Calderon G, Jansson-Knodell C, Foster ED, McIlrath CN, Xu HP, Shin AS. A SYSTEMATIC REVIEW AND META-ANALYSIS OF NUTRIENT INTAKE IN ADULTS WITH IRRITABLE BOWEL SYNDROME. <i>Gastroenterology</i> 2021; 160(6): S576-S.	Complete fulltext unavailable
Cameron EC, Hemingway SL. Cannabinoids for fibromyalgia pain: a critical review of recent studies (2015-2019). <i>J Cannabis Res</i> 2020; 2(1): 19.	Not focused on aetiology
Camilleri M. Diagnosis and Treatment of Irritable Bowel Syndrome: A Review. <i>JAMA - Journal of the American Medical Association</i> 2021; 325(9): 865-77.	Not focused on aetiology
Camilleri M, Lembo A, Katzka DA. Opioids in Gastroenterology: Treating Adverse Effects and Creating Therapeutic Benefits. <i>Clinical Gastroenterology and Hepatology</i> 2017;15(9):1338-49. doi: 10.1016/j.cgh.2017.05.014	Not focused on aetiology
Campagnolo N, Johnston S, Collatz A, Staines D, Marshall-Gradisnik S. Dietary and nutrition interventions for the therapeutic treatment of chronic fatigue syndrome/myalgic encephalomyelitis: A systematic review. <i>Journal of Human Nutrition and Dietetics</i> 2017; 30(3): 247-59.	Not focused on aetiology
Campbell LC, Clauw DJ, Keefe FJ. Persistent pain and depression: A biopsychosocial perspective. <i>Biological Psychiatry</i> 2003; 54(3): 399-409.	Other FSS/pediatric condition
Candy B, Chalder T, Cleare AJ, Wessely S, White PD, Hotopf M. Recovery from infectious mononucleosis: A case for more than symptomatic therapy? A systematic review. <i>British Journal of General Practice</i> 2002; 52(483): 844-51.	Other FSS/pediatric condition
Cao CF, Ma KL, Li QL, et al. Balneotherapy for Fibromyalgia Syndrome: A Systematic Review and Meta-Analysis. <i>J Clin Med</i> 2021; 10(7).	Not focused on aetiology
Carmona-Sanchez R, Icaza-Chavez ME, Bielsa-Fernandez MV, et al. The Mexican consensus on irritable bowel syndrome. <i>Revista de Gastroenterologia de Mexico</i> 2016; 81(3): 149-67.	Not English language
Carrasco-Labra A, Lytvyn L, Falck-Ytter Y, et al. AGA Technical Review on the Evaluation of Functional Diarrhea and Diarrhea-Predominant Irritable Bowel Syndrome in Adults (IBS-D). <i>Gastroenterology</i> 2019;157(3):859-80. doi: 10.1053/j.gastro.2019.06.014	No review
Carroccio A, Mansueto P, D'Alcamo A, Iacono G. Non-celiac wheat sensitivity as an allergic condition: personal experience and narrative review. <i>The American Journal Of Gastroenterology</i> 2013; 108(12): 1845-52.	No review

Reference	Reason of exclusion
Carson AJ, Brown R, David AS, et al. Functional (conversion) neurological symptoms: research since the millennium. <i>Journal of Neurology Neurosurgery and Psychiatry</i> 2012; 83(8): 842-50.	Other FSS/pediatric condition
Casals-Gutiérrez S, Abbey H. Interoception, mindfulness and touch: A meta-review of functional MRI studies. <i>International Journal of Osteopathic Medicine</i> 2019 doi: 10.1016/j.ijosm.2019.10.006	Other FSS/pediatric condition
Castellini G, Maggi M, Ricca V. Chapter: Childhood sexual abuse and psychopathology. Emotional, physical and sexual abuse: Impact in children and social minorities. Cham, Switzerland; 2014: 71-91.	Other FSS/pediatric condition
Celli J, Rappold G, Niesler B. The Human Serotonin Type 3 Receptor Gene (HTR3A-E) Allelic Variant Database. <i>Human Mutation</i> 2017;38(2):137-47. doi: 10.1002/humu.23136	No review
Cerdó T, Diéguez E, Campoy C. Early nutrition and gut microbiome: interrelationship between bacterial metabolism, immune system, brain structure, and neurodevelopment. <i>American journal of physiology Endocrinology and metabolism</i> 2019;317(4):E617-E30. doi: 10.1152/ajpendo.00188.2019	Other FSS/pediatric condition
Chakiath RJ, Siddall PJ, Kellow JE, et al. Descending pain modulation in irritable bowel syndrome (IBS): A systematic review and meta-analysis. <i>Systematic Reviews</i> 2015; 4(1): 175.	No review
Chandar AK. Diagnosis and treatment of irritable bowel syndrome with predominant constipation in the primary-care setting: focus on linaclotide. <i>Int J Gen Med</i> 2017;10:385-93. doi: 10.2147/ijgm.S126581	Not focused on aetiology
Chandrasekaran B, Samarneh S, Jaber AMY, et al. Therapeutic Potentials of A(2B) Adenosine Receptor Ligands: Current Status and Perspectives. <i>Current Pharmaceutical Design</i> 2019;25(25):2741-71. doi: 10.2174/1381612825666190717105834	Other FSS/pediatric condition
Chaturvedi SK, Bhugra D. The concept of neurosis in a cross-cultural perspective. <i>Current Opinion in Psychiatry</i> 2007; 20(1): 47-51.	Other FSS/pediatric condition
Che X, Cash R, Ng SK, et al. A Systematic Review of the Processes Underlying the Main and the Buffering Effect of Social Support on the Experience of Pain. <i>Clinical Journal of Pain</i> 2018;34(11):1061-76. doi: 10.1097/AJP.0000000000000624	Other FSS/pediatric condition
Chen M, Qin D, Huang SL, Tang TC, Zheng H. Chinese herbal medicine versus antispasmodics in the treatment of irritable bowel syndrome: A network meta-analysis. <i>Neurogastroenterol Motil</i> 2021; 33(8): e14107.	Not focused on aetiology
Chen M, Tang TC, Qin D, Yue L, Zheng H. Pharmacologic Treatments for Irritable Bowel Syndrome: an Umbrella Systematic Review. <i>J Gastrointest Liver Dis</i> 2020; 29(2): 199-209.	Not focused on aetiology
Chen X, Yu X, Shi Y, Shen H. Overview of systematic evaluation of efficacy of Tongxie Yaofang in treating diarrhea-predominant irritable bowel syndrome. <i>Ann Palliat Med</i> 2021; 10(8): 9223-32.	Not focused on aetiology

Reference	Reason of exclusion
Chen X, Zou K, Abdullah N, et al. The placebo effect and its determinants in fibromyalgia: Meta-analysis of randomised controlled trials. <i>Clinical Rheumatology</i> 2017; 36: 1623-30.	Not focused on aetiology
Chitkara DK, Rawat DJ, Talley NJ. The epidemiology of childhood recurrent abdominal pain in Western countries: A systematic review. <i>The American Journal of Gastroenterology</i> 2005; 100(8): 1868-75.	Other FSS/pediatric condition
Choo YJ, Kwak SG, Chang MC. Effectiveness of Repetitive Transcranial Magnetic Stimulation on Managing Fibromyalgia: A Systematic Meta-Analysis. <i>Pain Med</i> 2022.	Not focused on aetiology
Christley Y, Duffy T, Martin CR. A review of the definitional criteria for chronic fatigue syndrome. <i>Journal of Evaluation in Clinical Practice</i> 2012; 18(1): 25-31.	Not focused on aetiology
Ciccolella ME, Davenport TE. Scientific and legal challenges to the functional capacity evaluation in chronic fatigue syndrome. <i>Fatigue: Biomedicine, Health and Behavior</i> 2013; 1(4): 243-55.	Not focused on aetiology
Claassen-van Dessel N, van der Wouden JC, Dekker J, et al. The cross-sectional relation between medically unexplained physical symptoms (MUPS) and the Cortisol Awakening Response. <i>J Psychosom Res</i> 2017;99:130-36. doi: 10.1016/j.jpsychores.2017.06.010	Other FSS/pediatric condition
Clark J, Nijs J, Yeowell G, et al. What Are the Predictors of Altered Central Pain Modulation in Chronic Musculoskeletal Pain Populations? A Systematic Review. <i>Pain Physician</i> 2017;20(6):487-500.	Other FSS/pediatric condition
Clauw DJ. Alpha-2-delta ligands in fibromyalgia: Is the glass half empty or full? <i>Pain</i> 2009; 145(1-2): 8-9.	No review
Clemons A, Vasiadi M, Kempuraj D, Kourelis T, Vondoros G, Theoharides TC. Amitriptyline and prochlorperazine inhibit proinflammatory mediator release from human mast cells: Possible relevance to chronic fatigue syndrome. <i>Journal of Clinical Psychopharmacology</i> 2011; 31(3): 385-7.	No review
Climet-Sanz C, Marco-Mitjavila A, Pastells-Peiró R, Valenzuela-Pascual F, Blanco-Blanco J, Gea-Sánchez M. Patient Reported Outcome Measures of Sleep Quality in Fibromyalgia: A COSMIN Systematic Review. <i>Int J Environ Res Public Health</i> 2020; 17(9).	Not focused on aetiology
Cockshell SJ, Mathias JL. Cognitive functioning in chronic fatigue syndrome: A meta-analysis. <i>Psychological Medicine</i> 2010; 40(8): 1253-67.	Not focused on aetiology
Collatz A, Johnston SC, Staines DR, Marshall-Gradisnik SM. A systematic review of drug therapies for chronic fatigue syndrome/myalgic encephalomyelitis. <i>Clinical Therapeutics</i> 2016; 38(6): 1263-71.e9.	Not focused on aetiology
Conde-Antón Á, Hernando-Garijo I, Jiménez-Del-Barrio S, Mingo-Gómez MT, Medrano-de-la-Fuente R, Ceballos-Laita L. Effects of transcranial direct current stimulation and transcranial magnetic stimulation in patients with fibromyalgia. A systematic review. <i>Neurologia (Engl Ed)</i> 2020.	Not English language

Reference	Reason of exclusion
Creed F. The outcome of medically unexplained symptoms-Will DSM-V improve on DSM-IV somatoform disorders? <i>Journal of Psychosomatic Research</i> 2009; 66(5): 379-81.	No review
Cruccu G, Garcia-Larrea L, Hansson P, et al. EAN guidelines on central neurostimulation therapy in chronic pain conditions. <i>European Journal of Neurology</i> 2016; 23(10): 1489-99.	Other FSS/pediatric condition
Cui YR, Guo S, Fang JY, Su XL, Wei W. EFFECTS OF VITAMIN D SUPPLEMENTATION IN PATIENTS WITH IRRITABLE BOWEL SYNDROME: A SYSTEMATIC REVIEW AND META-ANALYSIS. <i>Gastroenterology</i> 2021; 160(6): S282-S.	Abstract only
Dale HF, Rasmussen SH, Asiller OO, et al. Probiotics in Irritable Bowel Syndrome: An Up-to-Date Systematic Review. <i>Nutrients</i> 2019;11(9) doi: 10.3390/nu11092048	Not focused on aetiology
da Rocha AP, Mizzaci CC, Nunes Pinto ACP, da Silva Vieira AG, Civile V, Trevisani VFM. Tramadol for management of fibromyalgia pain and symptoms: Systematic review. <i>Int J Clin Pract</i> 2020; 74(3): e13455.	Not focused on aetiology
Dai YK, Wu YB, Li RL, et al. Efficacy and safety of non-pharmacological interventions for irritable bowel syndrome in adults. <i>World J Gastroenterol</i> 2020; 26(41): 6488-509.	Not focused on aetiology
David L, Fadgyas Stanculete M, Bolba AR, Chiaroni G, Barsan M, Popa SL. Coping Strategies and Irritable Bowel Syndrome: A Systematic Review. <i>J Gastrointestin Liver Dis</i> 2021; 30(4): 485-94.	Not focused on aetiology
Dawson KA, Tiidus PM. Physical activity in the treatment and management of fibromyalgia. <i>Critical Reviews in Physical and Rehabilitation Medicine</i> 2005; 17(1): 53-64.	Not focused on aetiology
Day MA, Ehde DM, Jensen MP. Psychosocial pain management moderation: The limit, activate, and enhance model. <i>Journal of Pain</i> 2015; 16(10): 947-60.	Not focused on aetiology
de Farias Á D, Eberle L, Amador TA, da Silva Dal Pizzol T. Comparing the efficacy and safety of duloxetine and amitriptyline in the treatment of fibromyalgia: overview of systematic reviews. <i>Adv Rheumatol</i> 2020; 60(1): 35.	Not focused on aetiology
De Greef E, Vandenplas Y, Hauser B, Devreker T, Veereman G. The use of probiotics in IBD and IBS. <i>Minerva Pediatrica</i> 2014; 66(5): 491-500.	Not focused on aetiology
De Gucht V, Fischler B. Somatization: A critical review of conceptual and methodological issues. <i>Psychosomatics</i> 2002; 43(1): 1-9.	Not focused on aetiology

Reference	Reason of exclusion
de Sequeira CL, Kaeber M, Cekin SE, Enck P, Mack I. The Effect of Probiotics on Quality of Life, Depression and Anxiety in Patients with Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis. <i>Journal of Clinical Medicine</i> 2021; 10(16): 19.	Not focused on aetiology
De Wit N, Rubin G, Jones RH. Irritable bowel syndrome. <i>BMJ Clinical Evidence</i> 2007; 2007.	Not focused on aetiology
Del-Moral-García M, Obrero-Gaitán E, Rodríguez-Almagro D, Rodríguez-Huguet M, Osuna-Pérez MC, Lomas-Vega R. Effectiveness of Active Therapy-Based Training to Improve the Balance in Patients with Fibromyalgia: A Systematic Review with Meta-Analysis. <i>J Clin Med</i> 2020; 9(11).	Not focused on aetiology
den Boer C, Dries L, Terluin B, et al. Central sensitization in chronic pain and medically unexplained symptom research: A systematic review of definitions, operationalizations and measurement instruments. <i>J Psychosom Res</i> 2019;117:32-40. doi: 10.1016/j.jpsychores.2018.12.010	Not focused on aetiology
Dépelteau A, Lagueux É, Pagé R, Hudon C. Occupational Adaptation of People Living With Fibromyalgia: A Systematic Review and Thematic Synthesis. <i>Am J Occup Ther</i> 2021; 75(4).	Not focused on aetiology
Derry S, Cording M, Wiffen PJ, Law S, Phillips T, Moore RA. Pregabalin for pain in fibromyalgia in adults. <i>Cochrane Database of Systematic Reviews</i> 2016; 2016(9).	Not focused on aetiology
Deshmukh F, Vasudevan A, Mengalie E. Association between irritable bowel syndrome and asthma: a meta-analysis and systematic review. <i>Ann Gastroenterol</i> 2019;32(6):570-77. doi: 10.20524/aog.2019.0426	Not focused on aetiology
Devanarayana NM, Rajindrajith S, Pathmeswaran A, Abegunasekara C, Gunawardena NK, Benninga MA. Epidemiology of irritable bowel syndrome in children and adolescents in Asia. <i>Journal of Pediatric Gastroenterology and Nutrition</i> 2015; 60(6): 792-8.	Not focused on aetiology
Dharmshaktu P, Tayal V, Kalra BS. Efficacy of antidepressants as analgesics: A review. <i>Journal of Clinical Pharmacology</i> 2012; 52(1): 6-17.	Not focused on aetiology
Di Lorenzo C, Colletti RB, Lehmann HP, et al. Chronic abdominal pain in children: A technical report of the American Academy of Pediatrics and the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition. <i>Journal of Pediatric Gastroenterology &amp; Nutrition</i> 2005; 40(3): 249-61.	Other FSS/pediatric condition
Di Pierro F, Pane M. Bifidobacterium longum W11: Uniqueness and individual or combined clinical use in association with rifaximin. <i>Clinical Nutrition ESPEN</i> 2021; 42: 15-21	Not focused on aetiology
Dimidi E, Rossi M, Whelan K. Irritable bowel syndrome and diet: where are we in 2018? <i>Curr Opin Clin Nutr Metab Care</i> 2017;20(6):456-63. doi: 10.1097/mco.0000000000000416	Not focused on aetiology



Reference	Reason of exclusion
Dinos S, Khoshaba B, Ashby D, et al. A systematic review of chronic fatigue, its syndromes and ethnicity: Prevalence, severity, co-morbidity and coping. <i>International Journal of Epidemiology</i> 2009; 38(6): 1554-70.	Not focused on aetiology
Domhardt M, Steubl L, Baumeister H. Internet- and mobile-based interventions for mental and somatic conditions in children and adolescents: A systematic review of meta-analyses. <i>Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie</i> 2020; 48(1): 33-46.	Other functional syndrome
Dong T, Li X, Ma X, et al. Moxibustion for diarrhea-predominant irritable bowel syndrome: A protocol for systematic review and network meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(51): e28373.	Not functional aetiology
Drossman DA, Chang L, Bellamy N, et al. Severity in irritable bowel syndrome: A Rome Foundation Working Team Report. <i>American Journal of Gastroenterology</i> 2011; 106(10): 1749-59.	Not focused on aetiology
D'Silva A, MacQueen G, Nasser Y, et al. (2020) Yoga as a Therapy for Irritable Bowel Syndrome. <i>Dig Dis Sci</i> 2019, 65(9): 2503-2514.	Not focused on aetiology
Duplessis CA, Gutierrez RL, Porter CK. Review: Chronic and persistent diarrhea with a focus in the returning traveler. <i>Tropical Diseases, Travel Medicine and Vaccines</i> 2017;3(1) doi: 10.1186/s40794-017-0052-2	Not focused on aetiology
Ek WE, Reznichenko A, Ripke S, et al. Exploring the genetics of irritable bowel syndrome: A GWA study in the general population and replication in multinational case-control cohorts. <i>Gut</i> 2015; 64(11): 1774-82.	No review
El-Salhy M, Hausken T, Hatlebakk JG. Current status of fecal microbiota transplantation for irritable bowel syndrome. <i>Neurogastroenterology and Motility</i> 2021; 33(11).	Not focused on aetiology
Elsenbruch S, Enck P. Placebo effects and their determinants in gastrointestinal disorders. <i>Nature Reviews Gastroenterology and Hepatology</i> 2015; 12(8): 472-85.	Not focused on aetiology
El-Shewy KM, Kunbaz A, Gad MM, et al. Hyperbaric oxygen and aerobic exercise in the long-term treatment of fibromyalgia: A narrative review. <i>Biomed Pharmacother</i> 2019;109:629-38. doi: 10.1016/j.biopha.2018.10.157	Not focused on aetiology
Enck P, Klosterhalfen S. Placebo Responses and Placebo Effects in Functional Gastrointestinal Disorders. <i>Front Psychiatry</i> 2020; 11: 797.	Other functional syndrome
Enck P, Klosterhalfen S. The Placebo and Nocebo Responses in Clinical Trials in Inflammatory Bowel Diseases. <i>Front Pharmacol</i> 2021; 12: 641436.	Not focused on aetiology
Erdrich S, Hawrelak JA, Myers SP, Harnett JE. A systematic review of the association between fibromyalgia and functional gastrointestinal disorders. <i>Therap Adv Gastroenterol</i> 2020; 13: 1756284820977402.	Not focused on aetiology

Reference	Reason of exclusion
Estévez-López, F., Guerrero-González, J. M., Salazar-Tortosa, D., et al. (2021). Interplay between genetics and lifestyle on pain susceptibility in women with fibromyalgia: The al-Ándalus project. <i>Rheumatology (Oxford)</i> . <a href="https://doi.org/10.1093/rheumatology/keab911">https://doi.org/10.1093/rheumatology/keab911</a>	No review
Estévez-López F, Maestre-Cascales C, Russell D, et al. Effectiveness of Exercise on Fatigue and Sleep Quality in Fibromyalgia: A Systematic Review and Meta-analysis of Randomized Trials. <i>Arch Phys Med Rehabil</i> 2021; 102(4): 752-61.	Not focused on aetiology
Evering RM, van Weering MG, Groothuis-Oudshoorn KC, Vollenbroek-Hutten MM. Daily physical activity of patients with the chronic fatigue syndrome: A systematic review. <i>Clinical Rehabilitation</i> 2011; 25(2): 112-33.	Not focused on aetiology
Fairbrass KM, Costantino SJ, Gracie DJ, Ford AC. Prevalence of irritable bowel syndrome-type symptoms in patients with inflammatory bowel disease in remission: a systematic review and meta-analysis. <i>Lancet Gastroenterol Hepatol</i> 2020; 5(12): 1053-62.	Not focused on aetiology
Fatt SJ, Cvejic E, Lloyd AR, et al. The Invisible Burden of Chronic Fatigue in the Community: a Narrative Review. <i>Curr Rheumatol Rep</i> 2019;21(2):5. doi: 10.1007/s11926-019-0804-2	Not focused on aetiology
Fava GA, Cosci F, Sonino N. Current Psychosomatic Practice. <i>Psychotherapy and psychosomatics</i> 2017; 86(1): 13-30.	Not focused on aetiology
Fedorak RN, Vanner SJ, Paterson WG, Bridges RJ. Canadian Digestive Health Foundation Public Impact Series 3: Irritable bowel syndrome in Canada. Incidence, prevalence, and direct and indirect economic impact. <i>Canadian Journal of Gastroenterology</i> 2012; 26(5): 252-6.	Not focused on aetiology
Ferraro S, Klugah-Brown B, Tench CR, et al. Dysregulated anterior insula reactivity as robust functional biomarker for chronic pain-Meta-analytic evidence from neuroimaging studies. <i>Human brain mapping</i> : 13.	Other functional syndrome
Ferreira I, Ortigoza A, Moore P. Magnesium and malic acid supplement for fibromyalgia. <i>Medwave</i> 2019;19(4):e7633. doi: 10.5867/medwave.2019.04.7632	Not focused on aetiology
Filip M, Tzaneva V, Dumitrascu DL. Fecal transplantation: digestive and extradigestive clinical applications. <i>Clujul Med</i> 2018;91(3):259-65. doi: 10.15386/cjmed-946	Not focused on aetiology
Fishbain DA, Pulikal A, Lewis JE, Gao J. Chronic pain types differ in their reported prevalence of Post - Traumatic Stress Disorder (PTSD) and there is consistent evidence that chronic pain is associated with PTSD: An evidence-based structured systematic review. <i>Pain Medicine</i> 2017; 18(4): 711-35.	Not focused on aetiology

Reference	Reason of exclusion
Fisher K, Hutcheon D, Ziegler J. Elimination of Fermentable Carbohydrates to Reduce Gastrointestinal Symptoms in Pediatric Patients With Irritable Bowel Syndrome: A Narrative Review. <i>Nutr Clin Pract</i> 2020; 35(2): 231-45.	Other functional syndrome
Fitzcharles MA, Baerwald C, Ablin J, Hauser W. Efficacy, tolerability and safety of cannabinoids in chronic pain associated with rheumatic diseases (fibromyalgia syndrome, back pain, osteoarthritis, rheumatoid arthritis): A systematic review of randomized controlled trials. <i>Schmerz (Berlin, Germany)</i> 2016; 30(1): 47-61.	Not focused on aetiology
Fitzcharles MA, Perrot S, Häuser W. Comorbid fibromyalgia: A qualitative review of prevalence and importance. <i>European Journal of Pain (United Kingdom)</i> 2018;22(9):1565-76. doi: 10.1002/ejp.1252	Not focused on aetiology
Fitzcharles MA, Shir Y, Ablin JN, et al. Classification and clinical diagnosis of fibromyalgia syndrome: recommendations of recent evidence-based interdisciplinary guidelines. <i>Evidence-Based Complementary &amp; Alternative Medicine: eCAM</i> 2013; 2013(Journal Article): 528952.	Not focused on aetiology
Flik CE, van Rood YR, de Wit NJ. Systematic review: Knowledge and educational needs of patients with irritable bowel syndrome. <i>European Journal of Gastroenterology &amp; Hepatology</i> 2015; 27(4): 367-71.	Not focused on aetiology
Flynn DM. Chronic Musculoskeletal Pain: Nonpharmacologic, Noninvasive Treatments. <i>Am Fam Physician</i> 2020; 102(8): 465-77.	Not focused on aetiology
Fond G, Loundou A, Hamdani N, et al. Anxiety and depression comorbidities in irritable bowel syndrome (IBS): A systematic review and meta-analysis. <i>European Archives of Psychiatry and Clinical Neuroscience</i> 2014; 264(8): 651-60.	Not focused on aetiology
Ford AC, Chey WD, Talley NJ, Malhotra A, Spiegel BM, Moayyedi P. Yield of diagnostic tests for celiac disease in individuals with symptoms suggestive of irritable bowel syndrome: Systematic review and meta-analysis. <i>Archives of Internal Medicine</i> 2009; 169(7): 651-8.	Not focused on aetiology
Ford AC, Harris LA, Lacy BE, et al. Systematic review with meta-analysis: the efficacy of prebiotics, probiotics, synbiotics and antibiotics in irritable bowel syndrome. <i>Aliment Pharmacol Ther</i> 2018;48(10):1044-60. doi: 10.1111/apt.15001	Not focused on aetiology
Ford AC, Marwaha A, Lim A, Moayyedi P. Systematic review and meta-analysis of the prevalence of irritable bowel syndrome in individuals with dyspepsia. <i>Clinical gastroenterology and hepatology : The official clinical practice journal of the American Gastroenterological Association</i> 2010; 8(5): 401-9.	Not focused on aetiology
Ford AC, Moayyedi P, Chey WD, et al. American College of Gastroenterology Monograph on Management of Irritable Bowel Syndrome. <i>Am J Gastroenterol</i> 2018;113(Suppl 2):1-18. doi: 10.1038/s41395-018-0084-x	Not focused on aetiology

Reference	Reason of exclusion
Ford AC, Moayyedi P, Lacy BE, et al. American College of Gastroenterology monograph on the management of irritable bowel syndrome and chronic idiopathic constipation. <i>The American Journal of Gastroenterology</i> 2014; 109 (Suppl. 11): S2-26; quiz S7.	Not focused on aetiology
Ford AC, Vandvik PO. Irritable bowel syndrome. <i>BMJ Clinical Evidence</i> 2010; 2010: 0410.	Not focused on aetiology
Ford AC, Vandvik PO. Irritable bowel syndrome. <i>BMJ Clinical Evidence</i> 2012; 2012: 0410.	Not focused on aetiology
Ford AC, Vandvik PO. Irritable bowel syndrome: Dietary interventions. <i>BMJ Clinical Evidence</i> 2015; 2015: 0410.	Not focused on aetiology
Forgeron PA, King S, Stinson JN, McGrath PJ, MacDonald AJ, Chambers CT. Social functioning and peer relationships in children and adolescents with chronic pain: A systematic review. <i>Pain Research and Management</i> 2010; 15(1): 27-41.	Other FSS/pediatric condition
Foroughi AA, Nazeri M, Asadi-Pooya AA. Brain connectivity abnormalities in patients with functional (psychogenic nonepileptic) seizures: A systematic review. <i>Seizure: European Journal of Epilepsy</i> 2020; 81: 269-75.	Other functional syndrome
Fortea J, Prior M. Irritable bowel syndrome with constipation: A European-focused systematic literature review of disease burden. <i>Journal of Medical Economics</i> 2013; 16(3): 329-41.	Not focused on aetiology
Friebel U, Eickhoff SB, Lotze M. Coordinate-based meta-analysis of experimentally induced and chronic persistent neuropathic pain. <i>Neuroimage</i> 2011; 58(4): 1070-80.	Other FSS/pediatric condition
Freidin MB, Stalteri MA, Wells PM, et al. An association between chronic widespread pain and the gut microbiome. <i>Rheumatology (Oxford)</i> 2021; 60(8): 3727-37.	Other functional syndrome
Fung W, Touma Z. Consideration of Fibromyalgia in the Assessment and Treatment of SLE. <i>Current Treatment Options in Rheumatology</i> 2021; 7(3): 182-93.	Other functional syndrome
Galambos A, Szabo E, Nagy Z, et al. A systematic review of structural and functional MRI studies on pain catastrophizing. <i>Journal of Pain Research</i> 2019;12 doi: 10.2147/jpr.S192246	Not focused on aetiology
Galvao-Moreira LV, de Castro LO, Moura ECR, et al. Pool-based exercise for amelioration of pain in adults with fibromyalgia syndrome: A systematic review and meta-analysis. <i>Modern Rheumatology</i> 2021; 31(4): 904-11.	Not focused on aetiology
Gálvez-Ontiveros Y, Páez S, Monteagudo C, Rivas A. Endocrine Disruptors in Food: Impact on Gut Microbiota and Metabolic Diseases. <i>Nutrients</i> 2020; 12(4).	Other functional syndrome

Reference	Reason of exclusion
Galvez-Sánchez CM, Del Paso GAR. Diagnostic criteria for fibromyalgia: Critical review and future perspectives. <i>Journal of Clinical Medicine</i> 2020; 9(4).	Not focused on aetiology
GarciaCampayo J, SanzCarrillo C, Larrubia J, Monton C. Reattribution revisited: A critical appraisal. <i>European Journal of Psychiatry</i> 1997; 11(1): 5-10.	Not focused on aetiology
Garcia-Campayo J, Sanz-Carrillo C. A review of the differences between somatizing and psychologizing patients in primary care. <i>International Journal of Psychiatry in Medicine</i> 1999; 29(3): 337-45.	Not focused on aetiology
Garcia-Correa HR, Sanchez-Montoya LJ, Daza-Arana JE, Ordonez-Mora LT. Aerobic Physical Exercise for Pain Intensity, Aerobic Capacity, and Quality of Life in Patients With Chronic Pain: A Systematic Review and Meta-Analysis. <i>Journal of Physical Activity &amp; Health</i> 2021; 18(9): 1126-42.	Other functional syndrome
Garijo IH, Del Barrio SJ, Gómez TM, de la Fuente RM, Laita LC. Effectiveness of non-pharmacological conservative therapies in adults with fibromyalgia: A systematic review of high-quality clinical trials. <i>Journal of back and musculoskeletal rehabilitation</i> 2021.	Not focused on aetiology
Gask L, Dowrick C, Salmon P, Peters S, Morriss R. Reattribution reconsidered: Narrative review and reflections on an educational intervention for medically unexplained symptoms in primary care settings. <i>Journal of Psychosomatic Research</i> 2011; 71(5): 325-34.	Not focused on aetiology
Geneen LJ, Moore RA, Clarke C, Martin D, Colvin LA, Smith BH. Physical activity and exercise for chronic pain in adults: An overview of Cochrane Reviews. <i>The Cochrane Database of Systematic Reviews</i> 2017; 4(Journal Article): CD011279.	Not focused on aetiology
Geraghty AWA, Maund E, Newell D, et al. Self-management for chronic widespread pain including fibromyalgia: A systematic review and meta-analysis. <i>PLoS ONE</i> 2021; 16(7): e0254642.	Other functional syndrome
Geraghty K. The negative impact of the psychiatric model of chronic fatigue syndrome on doctors' understanding and management of the illness. <i>Fatigue: Biomedicine, Health and Behavior</i> 2020; 8(3): 167-80.	Not focused on aetiology
Geraghty KJ, Blease C. Cognitive behavioural therapy in the treatment of chronic fatigue syndrome: A narrative review on efficacy and informed consent. <i>J Health Psychol</i> 2018;23(1):127-38. doi: 10.1177/1359105316667798	Not focused on aetiology
Geraghty KJ, Blease C. Myalgic encephalomyelitis/chronic fatigue syndrome and the biopsychosocial model: a review of patient harm and distress in the medical encounter. <i>Disabil Rehabil</i> 2018:1-10. doi: 10.1080/09638288.2018.1481149	Not focused on aetiology

Reference	Reason of exclusion
Ghazaleh S, Beran A, Sharma S, et al. EFFICACY AND SAFETY OF PEPPERMINT OIL IN IRRITABLE BOWEL SYNDROME - A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS. <i>Gastroenterology</i> 2021; 160(6): S280-S.	Abstract only
Giang J, Lan X, Crichton M, Marx W, Marshall S. Efficacy and safety of biophenol-rich nutraceuticals in adults with inflammatory gastrointestinal diseases or irritable bowel syndrome: A systematic literature review and meta-analysis. <i>Nutrition &amp; Dietetics</i> : 18.	Not focused on aetiology
Gieteling MJ, Bierma-Zeinstra SM, Van Leeuwen Y, Passchier J, Berger MY. Prognostic factors for persistence of chronic abdominal pain in children. <i>Journal of Pediatric Gastroenterology and Nutrition</i> 2011; 52(2): 154-61.	Other FSS/pediatric condition
Gill JR, Brown CA. A structured review of the evidence for pacing as a chronic pain intervention. <i>European Journal of Pain</i> 2009; 13(2): 214-6.	Not focused on aetiology
Gini G, Pozzoli T. Association between bullying and psychosomatic problems: A meta-analysis. <i>Pediatrics</i> 2009; 123(3): 1059-65.	Other FSS/pediatric condition
Gini G, Pozzoli T. Bullied children and psychosomatic problems: A meta-analysis. <i>Pediatrics</i> 2013; 132(4): 720-9.	Other FSS/pediatric condition
Głąbska, D., Kołota, A., Lachowicz, K., Skolmowska, D., Stachoń, M., & Guzek, D. (2021). Vitamin D Supplementation and Mental Health in Inflammatory Bowel Diseases and Irritable Bowel Syndrome Patients: A Systematic Review. <i>Nutrients</i> , 13(10). <a href="https://doi.org/10.3390/nu13103662">https://doi.org/10.3390/nu13103662</a>	Not focused on aetiology
Glynn H, Moller SP, Wilding H, Apputhurai P, Moore G, Knowles SR. Prevalence and Impact of Post-traumatic Stress Disorder in Gastrointestinal Conditions: A Systematic Review. <i>Digestive Diseases and Sciences</i> 2021; 66(12): 4109-19.	Other functional syndrome
Goeko X, Plotton C, Werner EL, et al. Adult patients with functional somatic symptoms and syndromes. <i>Exercer-La Revue Francophone De Medecine Generale</i> 2019(156):363-68.	Not English language
Goldenberg DL. Pharmacological treatment of fibromyalgia and other chronic musculoskeletal pain. <i>Best Practice and Research in Clinical Rheumatology</i> 2007; 21(3): 499-511.	Not focused on aetiology
Gómez-de-Regil L. Psychoeducation for Patients with Fibromyalgia: A Systematic Review. <i>Healthcare (Basel)</i> 2021; 9(6).	Not focused on aetiology

Reference	Reason of exclusion
Gómez-de-Regil L, Estrella-Castillo DF. Psychotherapy for Physical Pain in Patients with Fibromyalgia: A Systematic Review. <i>Pain Res Manag</i> 2020; 2020: 3408052.	Not focused on aetiology
Gonzalez, B., Novo, R., & Ferreira, A. S. (2020). Fibromyalgia: heterogeneity in personality and psychopathology and its implications. <i>Psychology Health &amp; Medicine</i> , 25(6), 703-709. <a href="https://doi.org/10.1080/13548506.2019.1695866">https://doi.org/10.1080/13548506.2019.1695866</a>	No review
Goubert D, Danneels L, Cagnie B, et al. Effect of pain induction or pain reduction on conditioned pain modulation in adults: A systematic review. <i>Pain Practice</i> 2015; 15(8): 765-77.	Other FSS/pediatric condition
Gracie DJ, Ford AC. Symbiotics in irritable bowel syndrome -better than probiotics alone? <i>Current Opinion in Clinical Nutrition and Metabolic Care</i> 2015; 18(5): 485-9.	Not focused on aetiology
Graham A, Ryan CG, MacSween A, et al. Sensory discrimination training for adults with chronic musculoskeletal pain: a systematic review. <i>Physiotherapy Theory and Practice</i> : 19.	Not focused on aetiology
Green JE, Davis JA, Berk M, et al. Efficacy and safety of fecal microbiota transplantation for the treatment of diseases other than Clostridium difficile infection: a systematic review and meta-analysis. <i>Gut Microbes</i> 2020; 12(1): 1-25.	Other functional syndrome
Groen RN, de Clercq NC, Nieuwdorp M, et al. Gut microbiota, metabolism and psychopathology: A critical review and novel perspectives. <i>Critical Reviews in Clinical Laboratory Sciences</i> 2018;55(4):283-93. doi: 10.1080/10408363.2018.1463507	Other FSS/pediatric condition
Grover M, Camilleri M. Effects on gastrointestinal functions and symptoms of serotonergic psychoactive agents used in functional gastrointestinal diseases. <i>Journal of Gastroenterology</i> 2013; 48(2): 177-81.	Not focused on aetiology
Guagnozzi D, Arias A, Lucendo AJ. Systematic review with meta-analysis: Diagnostic overlap of microscopic colitis and functional bowel disorders. <i>Alimentary Pharmacology &amp; Therapeutics</i> 2016; 43(8): 851-62.	Not focused on aetiology
Guandalini S. Are probiotics or prebiotics useful in pediatric irritable bowel syndrome or inflammatory bowel disease? <i>Frontiers in Medicine</i> 2014; 1: 23.	Not focused on aetiology
Gulewitsch MD, Muller J, Enck P, Weimer K, Schwille-Kiuntke J, Schlarb AA. Frequent abdominal pain in childhood and youth: a systematic review of psychophysiological characteristics. <i>Gastroenterology Research &amp; Practice</i> 2014; 2014: 524383.	Other FSS/pediatric condition
Guo J, Xing X, Wu J, et al. Acupuncture for Adults with Diarrhea-Predominant Irritable Bowel Syndrome or Functional Diarrhea: A Systematic Review and Meta-Analysis. <i>Neural Plast</i> 2020; 2020: 8892184.	Not focused on aetiology

Reference	Reason of exclusion
Guo J, Yang L, He J, Yang Z. Comparison of therapeutic effects of different acupuncture and moxibustion therapies on irritable bowel syndrome: A protocol for systematic review and network meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(35): e26920.	Not focused on aetiology
Guo R, Chen LH, Xing CG, et al. Pain regulation by gut microbiota: molecular mechanisms and therapeutic potential. <i>British Journal of Anaesthesia</i> 2019;123(5):637-54. doi: 10.1016/j.bja.2019.07.026	Other FSS/pediatric condition
Gureje O. Psychiatric aspects of pain. <i>Current Opinion in Psychiatry</i> 2007; 20(1): 42-6.	Other FSS/pediatric condition
Gwini SM, Forbes AB, Sim MR, Kelsall HL. Multisymptom illness in Gulf war veterans: A systematic review and meta-analysis. <i>Journal of Occupational and Environmental Medicine</i> 2016; 58(7): 659-67.	Other FSS/pediatric condition
Hadji-Michael M, McAllister E, Reilly C, et al. Alexithymia in children with medically unexplained symptoms: a systematic review. <i>J Psychosom Res</i> 2019;123:109736. doi: 10.1016/j.jpsychores.2019.109736	Other FSS/pediatric condition
Hagedorn JM, Gunn J, Budwany R, D'Souza RS, Chakravarthy K, Deer TR. How Well Do Current Laboratory Biomarkers Inform Clinical Decision-Making in Chronic Pain Management? <i>Journal of Pain Research</i> 2021; 14: 3695-710.	Other functional syndrome
Halkjær SI, Lo B, Cold F, Christensen AHH, Gluud LL, Petersen AM. Fecal microbiota transplantation for treatment of irritable bowel syndrome. <i>Cochrane Database of Systematic Reviews</i> 2020; 2020(5).	No review
Han G, Ko SJ, Kim K, Jun H, Park JW. The efficacy of the traditional Korean herbal medicine Tongsayobang for the treatment of irritable bowel syndrome: A protocol for a systematic review and meta-analysis. <i>Medicine (United States)</i> 2021; 100(48).	Not focused on aetiology
Hanel V, Schalla MA, Stengel A. Irritable bowel syndrome and functional dyspepsia in patients with eating disorders - a systematic review. <i>Eur Eat Disord Rev</i> 2021; 29(5): 692-719.	Other disorder
Hatfield E, Phillips K, Swidan S, Ashman L. Use of low-dose naltrexone in the management of chronic pain conditions: A systematic review. <i>J Am Dent Assoc</i> 2020; 151(12): 891-902.e1.	Not focused on aetiology
Häuser W, Ablin J, Perrot S, Fitzcharles M-A. Management of fibromyalgia: Key messages from recent evidence-based guidelines. <i>Polish Archives of Internal Medicine-Polskie Archiwum Medycyny</i> 2017; 127(1): 47-56.	Not focused on aetiology
Häuser W, Fitzcharles MA. Facts and myths pertaining to fibromyalgia. <i>Dialogues in Clinical Neuroscience</i> 2018;20(1):53-62.	Not focused on aetiology



Reference	Reason of exclusion
Häuser W, Jones G. Psychological therapies for chronic widespread pain and fibromyalgia syndrome. <i>Best Pract Res Clin Rheumatol</i> 2019;33(3):101416. doi: 10.1016/j.berh.2019.05.001	Not focused on aetiology
Häuser W, Thieme K, Turk DC. Guidelines on the management of fibromyalgia syndrome - A systematic review. <i>European Journal of Pain</i> 2010; 14(1): 5-10.	Not focused on aetiology
Hagger MS, Koch S, Chatzisarantis NLD, et al. The Common Sense Model of Self-Regulation: Meta-Analysis and Test of a Process Model. <i>Psychological bulletin</i> 2017;143(11):1117-54. doi: 10.1037/bul0000118	Other FSS/pediatric condition
Hajela N, Ramakrishna BS, Nair GB, Abraham P, Gopalan S, Ganguly NK. Gut microbiome, gut function, and probiotics: Implications for health. <i>Indian Journal of Gastroenterology</i> 2015; 34(2): 93-107.	Other FSS/pediatric condition
Haller H, Cramer H, Lauche R, Dobos G. Somatoform disorders and medically unexplained symptoms in primary care: A systematic review and meta-analysis of prevalence. <i>Deutsches Ärzteblatt International</i> 2015; 112(16): 279-87.	Not focused on aetiology
Han CJ, Yang GS. Fatigue in Irritable Bowel Syndrome: A Systematic Review and Meta-analysis of Pooled Frequency and Severity of Fatigue. <i>Asian Nursing Research</i> 2016; 10(1): 1-10.	Not focused on aetiology
Harris LA, Hansel S, DiBaise J, Crowell MD. Irritable bowel syndrome and chronic constipation: Emerging drugs, devices, and surgical treatments. <i>Current Gastroenterology Reports</i> 2006; 8(4): 282-90.	Not focused on aetiology
Harth M, Nielson WR. Fibromyalgia and disability adjudication: No simple solutions to a complex problem. <i>Pain Research Management</i> 2014; 19(6): 293-9.	Not focused on aetiology
Hasler WL, Schoenfeld P. Systematic review: Abdominal and pelvic surgery in patients with irritable bowel syndrome. <i>Alimentary Pharmacology &amp; Therapeutics</i> 2003; 17(8): 997-1005.	Not focused on aetiology
Hass U, Herpich C, Norman K. Anti-Inflammatory Diets and Fatigue. <i>Nutrients</i> 2019;11(10) doi: 10.3390/nu11102315	Not focused on aetiology
Hassan S, Muere A, Einstein G. Ovarian hormones and chronic pain: A comprehensive review. <i>Pain</i> 2014; 155(12): 2448-60.	Other FSS/pediatric condition
Hawk C, Whalen W, Farabaugh RJ, et al. Best Practices for Chiropractic Management of Patients with Chronic Musculoskeletal Pain: A Clinical Practice Guideline. <i>J Altern Complement Med</i> 2020; 26(10): 884-901.	Other functional syndrome
Hayee B, Forgacs I. Psychological approach to managing irritable bowel syndrome. <i>British Medical Journal</i> 2007; 334(7603): 1105-9.	Not focused on aetiology
Heijmans M, Olde Hartman TC, van Weel-Baumgarten E, Dowrick C, Lucassen PLBJ, van Weel C. Experts' opinions on the management of medically unexplained symptoms in primary care. A qualitative analysis of narrative reviews and scientific editorials. <i>Family Practice</i> 2011; 28(4): 444-55.	Not focused on aetiology

Reference	Reason of exclusion
Heizer WD, Southern S, McGovern S. The role of diet in symptoms of irritable bowel syndrome in adults: A narrative review. <i>Journal of the American Dietetic Association</i> 2009; 109(7): 1204-14.	Not focused on aetiology
Henning M, Subic-Wrana C, Wiltink J, Beutel M. Anxiety disorders in patients with somatic diseases. <i>Psychosomatic Medicine</i> 2020; 82(3): 287-95.	Other disorder
Henningsen P, Herzog W. Irritable bowel syndrome and somatoform disorders. <i>Journal of Psychosomatic Research</i> 2008; 64(6): 625-9.	Not focused on aetiology
Henningsen P, Zimmermann T, Sattel H. Medically unexplained physical symptoms, anxiety, and depression: A meta-analytic review. <i>Psychosomatic Medicine</i> 2003; 65(4): 528-33.	Not focused on aetiology
Henrich JF, Knittle K, De Gucht V, Warren S, Dombrowski SU, Maes S. Identifying effective techniques within psychological treatments for irritable bowel syndrome: A meta-analysis. <i>Journal of Psychosomatic Research</i> 2015; 78(3): 205-22.	Not focused on aetiology
Hesam-Shariati N, Chang WJ, Wewege MA, et al. The analgesic effect of electroencephalographic neurofeedback for people with chronic pain: A systematic review and meta-analysis. <i>European Journal of Neurology</i> : 16.	Other functional syndrome
Higgins DM, Martin AM, Baker DG, et al. The Relationship Between Chronic Pain and Neurocognitive Function A Systematic Review. <i>Clinical Journal of Pain</i> 2018;34(3):262-75. doi: 10.1097/ajp.0000000000000536	Not focused on aetiology
Hilderink PH, Collard R, Rosmalen JG, Oude Voshaar RC. Prevalence of somatoform disorders and medically unexplained symptoms in old age populations in comparison with younger age groups: A systematic review. <i>Ageing Research Reviews</i> 2013; 12(1): 151-6.	Not focused on aetiology
Holsting AF, Rask MT, Frosthalm L, Rosendal M, Rask CU. Self-help interventions for young people with persistent physical symptoms: A systematic review. <i>J Psychosom Res</i> 2021; 148: 110553.	Other functional syndrome
Hoogenes B, Querée M, Miller WC, Mortenson WB, Townson A, Eng JJ. Evidence on definitions, concepts, outcome instruments, and interventions for chronic fatigue in spinal cord injury: a scoping review protocol. <i>JB I Evid Synth</i> 2021; 19(8): 1999-2006.	No review
Hooten WM. Chronic pain and mental health disorders: Shared neural mechanisms, epidemiology, and treatment. <i>Mayo Clinic Proceedings</i> 2016; 91(7): 955-70.	Other FSS/pediatric condition

Reference	Reason of exclusion
Hou WH, Wang TY, Kang JH. The effects of add-on non-invasive brain stimulation in fibromyalgia: A meta-analysis and meta-regression of randomized controlled trials. <i>Rheumatology (Oxford, England)</i> 2016; 55(8): 1507-17.	Not focused on aetiology
Howick J, Moscrop A, Mebius A, et al. Effects of empathic and positive communication in healthcare consultations: a systematic review and meta-analysis. <i>Journal of the Royal Society of Medicine</i> 2018;111(7):240-52. doi: 10.1177/0141076818769477	Other FSS/pediatric condition
Hsu SI. Somatisation among Asian refugees and immigrants as a culturally-shaped illness behaviour. <i>Annals of the Academy of Medicine, Singapore</i> 1999; 28(6): 841-5.	Not focused on aetiology
Hu Z, Li M, Yao L, et al. The level and prevalence of depression and anxiety among patients with different subtypes of irritable bowel syndrome: a network meta-analysis. <i>BMC Gastroenterol</i> 2021; 21(1): 23.	Not focused on aetiology
Huang J, Lu M, Zheng Y, et al. Quality of Evidence Supporting the Role of Acupuncture for the Treatment of Irritable Bowel Syndrome. <i>Pain Res Manag</i> 2021; 2021: 2752246.	Not focused on aetiology
Huerta I, Valdovinos MA, Schmulson M. Irritable bowel syndrome in Mexico. <i>Digestive Diseases</i> 2001; 19(3): 251-7.	Not focused on aetiology
Husain K, Browne T, Chalder T. A review of psychological models and interventions for medically unexplained somatic symptoms in children. <i>Child and Adolescent Mental Health</i> 2007; 12(1): 2-7.	age of study population
Husak AJ, Bair MJ. Chronic Pain and Sleep Disturbances: A Pragmatic Review of Their Relationships, Comorbidities, and Treatments. <i>Pain medicine (Malden, Mass)</i> 2020 doi: 10.1093/pm/pnz343	Other FSS/pediatric condition
Hutcheon DA. The efficacy and safety of 4 natural products for the management of IBS. <i>Topics in Clinical Nutrition</i> 2014; 29(2): 113-22.	Not focused on aetiology
Ibrahim NK. A systematic review of the prevalence and risk factors of irritable bowel syndrome among medical students. <i>The Turkish Journal of Gastroenterology</i> 2016; 27(1): 10-6.	Not focused on aetiology
Inderjeeth AJ, Webberley KM, Muir J, et al. The potential of computerised analysis of bowel sounds for diagnosis of gastrointestinal conditions: a systematic review. <i>Syst Rev</i> 2018;7(1):124. doi: 10.1186/s13643-018-0789-3	Not focused on aetiology
Inyang KE, Folger JK, Laumet G. Can FDA-Approved Immunomodulatory Drugs be Repurposed/Repositioned to Alleviate Chronic Pain? <i>Journal of Neuroimmune Pharmacology</i> 2021; 16(3): 531-47.	Other functional syndrome
IsHak WW, Wen RY, Naghdechi L, et al. Pain and Depression: A Systematic Review. <i>Harvard review of psychiatry</i> 2018;26(6):352-63. doi: 10.1097/HRP.0000000000000198	Other FSS/pediatric condition

Reference	Reason of exclusion
Jackson T, Thomas S, Stabile V, Han X, Shotwell M, McQueen KAK. Chronic pain without clear etiology in low- and middle-income countries: A narrative review. <i>Anesthesia and Analgesia</i> 2016; 122(6): 2028-39.	Not focused on aetiology
Jackson T, Wang Y, Fan H. Associations between pain appraisals and pain outcomes: Meta-analyses of laboratory pain and chronic pain literatures. <i>The Journal of Pain</i> 2014; 15(6): 586-601.	Other FSS/pediatric condition
Jeffrey S, McClelland T, Carus C, Graham C. Relaxation and chronic pain: A critical review. <i>International Journal of Therapy and Rehabilitation</i> 2016; 23(6): 289-96.	Not focused on aetiology
Jiang J, Chen Y, Hu Z, et al. Effectiveness of Tong-Xie-Yao-Fang combined with Si-Ni-San for irritable bowel syndrome: A protocol for systematic review and meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(11): e25198.	No review
Jones GT, Mallawaarachchi B, Shim J, Lock J, Macfarlane GJ. The prevalence of fibromyalgia in axial spondyloarthritis. <i>Rheumatol Int</i> 2020; 40(10): 1581-91.	Other functional syndrome
Joshee S, Wybrecht A, Lim L, Berriesford R, Riddle M. Adverse Childhood Events (ACE) and Irritable Bowel Syndrome (IBS): A Meta-Analysis on Prevalence of IBS in Those with a History of ACE. <i>American Journal of Gastroenterology</i> 2021; 116: S242-S3.	Abstract only
Joyce J, Hotopf M, Wessely S. The prognosis of chronic fatigue and chronic fatigue syndrome: A systematic review. <i>QJM</i> 1997; 90(3): 223-33.	Not focused on aetiology
Jun H, Ko SJ, Kim K, Kim J, Jung HS, Park JW. Herbal medicine for irritable bowel syndrome: An overview of systematic reviews protocol. <i>Medicine (Baltimore)</i> 2021; 100(24): e26364.	No review
Kamp EJ, Kane JS, Ford AC. Irritable Bowel Syndrome and Microscopic Colitis: A Systematic Review and Meta-analysis. <i>Clinical Gastroenterology and Hepatology</i> 2016; 14(5): 659-68.e1; quiz e54.	Not focused on aetiology
Kan JM, Cowan CSM, Ooi CY, et al. What can the gut microbiome teach us about the connections between child physical and mental health? A systematic review. <i>Dev Psychobiol</i> 2019;61(5):700-13. doi: 10.1002/dev.21819	Not focused on aetiology
Kang JY. Systematic review: The influence of geography and ethnicity in irritable bowel syndrome. <i>Alimentary Pharmacology &amp; Therapeutics</i> 2005; 21(6): 663-76.	Not focused on aetiology
Kawi J, Lukkahatai N, Inouye J, Thomason D, Connelly K. Effects of exercise on select biomarkers and associated outcomes in chronic pain conditions: Systematic review. <i>Biological Research for Nursing</i> 2016; 18(2): 147-59.	Not focused on aetiology
Keefer L, Ko CW, Ford AC. AGA Clinical Practice Update on Management of Chronic Gastrointestinal Pain in Disorders of Gut-Brain Interaction: Expert Review. <i>Clin Gastroenterol Hepatol</i> 2021; 19(12): 2481-8.e1.	Other functional syndrome

Reference	Reason of exclusion
Kerns RD, Otis JD. Family therapy for persons experiencing pain: Evidence for its effectiveness. <i>Seminars in Pain Medicine</i> 2003; 1(2): 79-89.	Not focused on aetiology
Keskin G. Approach to stress endocrine response: Somatization in the context of gastroenterological symptoms: A systematic review. <i>African Health Sciences</i> 2019;19(3):2537-45. doi: 10.4314/ahs.v19i3.29	Other FSS/pediatric condition
Khatri GK, Tran TD, Fisher J. Prevalence and determinants of symptoms of antenatal common mental disorders among women who had recently experienced an earthquake: a systematic review. <i>BMC Psychiatry</i> 2019;19(1):47. doi: 10.1186/s12888-018-1986-2	Other FSS/pediatric condition
Khoury NM, Lutz J, Schuman-Olivier Z. Interoception in Psychiatric Disorders: A Review of Randomized, Controlled Trials with Interoception-Based Interventions. <i>Harvard review of psychiatry</i> 2018;26(5):250-63. doi: 10.1097/HRP.0000000000000170	Other FSS/pediatric condition
Khoury S, Piltonen MH, Ton AT, et al. A functional substitution in the L-aromatic amino acid decarboxylase enzyme worsens somatic symptoms via a serotonergic pathway. <i>Annals of Neurology</i> 2019;86(2):168-80. doi: 10.1002/ana.25521	No review
Kim DY, Lee JS, Park SY, Kim SJ, Son CG. Correction to: Systematic review of randomized controlled trials for chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME). <i>J Transl Med</i> 2020; 18(1): 492.	Complete fulltext unavailable
Kim PS, Fishman MA. Low-Dose Naltrexone for Chronic Pain: Update and Systemic Review. <i>Curr Pain Headache Rep</i> 2020; 24(10): 64.	Not focused on aetiology
Kim TH, Kim DH, Kang JW. Medicinal herbs for managing fatigue symptoms in patients with idiopathic chronic fatigue: A PRISMA compliant updated systematic review and meta-analysis of randomized controlled trials based on the GRADE approach. <i>European Journal of Integrative Medicine</i> 2020; 35.	Not focused on aetiology
Kim YS, Kim JW, Ha NY, Kim J, Ryu HS. Herbal Therapies in Functional Gastrointestinal Disorders: A Narrative Review and Clinical Implication. <i>Front Psychiatry</i> 2020; 11: 601.	Not focused on aetiology
Kirmayer LJ, Groleau D, Looper KJ, Dao MD. Explaining medically unexplained symptoms. <i>Canadian Journal of Psychiatry Revue Canadienne de Psychiatrie</i> 2004; 49(10): 663-72.	No review
Kisely SR. Treatments for chronic fatigue syndrome and the Internet: A systematic survey of what your patients are reading. <i>Australian and New Zealand Journal of Psychiatry</i> 2002; 36(2): 240-5.	Not focused on aetiology
Knijnik LM, Dussan-Sarria JA, Rozisky JR, et al. Repetitive transcranial magnetic stimulation for fibromyalgia: Systematic review and meta-analysis. <i>Pain Practice</i> 2016; 16(3): 294-304.	Not focused on aetiology

Reference	Reason of exclusion
Koechlin H, Coakley R, Schechter N, et al. The role of emotion regulation in chronic pain: A systematic literature review. <i>Journal of Psychosomatic Research</i> 2018;107:38-45. doi: 10.1016/j.jpsychores.2018.02.002	Other FSS/pediatric condition
Koloski NA, Talley NJ, Boyce PM. Predictors of health care seeking for irritable bowel syndrome and nonulcer dyspepsia: A critical review of the literature on symptom and psychosocial factors. <i>The American Journal of Gastroenterology</i> 2001; 96(5): 1340-9.	Not focused on aetiology
Kortnerink JJ, Diederik K, Benninga MA, Tabbers MM. Epidemiology of pediatric functional abdominal pain disorders: A meta-analysis. <i>Plos One</i> 2015; 10(5): e0126982.	Not focused on aetiology
Krismer M, van TM. Low back pain (non-specific). <i>Best Practice and Research in Clinical Rheumatology</i> 2007; 21(1): 77-91.	Other FSS/pediatric condition
Kroenke K. A practical and evidence-based approach to common symptoms: A narrative review. <i>Annals of Internal Medicine</i> 2014; 161(8): 579-U82.	Not focused on aetiology
Krouwel M, Farley A, Greenfield S, Ismail T, Jolly K. Systematic review, meta-analysis with subgroup analysis of hypnotherapy for irritable bowel syndrome, effect of intervention characteristics. <i>Complement Ther Med</i> 2021; 57: 102672.	Not focused on aetiology
Kulak-Bejda A, Bejda G, Waszkiewicz N. Antidepressants for irritable bowel syndrome-A systematic review. <i>Pharmacol Rep</i> 2017;69(6):1366-79. doi: 10.1016/j.pharep.2017.05.014	Not focused on aetiology
Kundakci B, Kaur J, Goh SL, et al. Efficacy of nonpharmacological interventions for individual features of fibromyalgia: a systematic review and meta-analysis of randomised controlled trials. <i>Pain</i> 2021.	Not focused on aetiology
Kundakci B, Kaur J, Shim SR, et al. THE COMPARATIVE EFFICACY OF NON-PHARMACOLOGICAL INTERVENTIONS FOR FIBROMYALGIA: A SYSTEMATIC REVIEW WITH BAYESIAN NETWORK META-ANALYSIS. <i>Annals of the Rheumatic Diseases</i> 2020; 79: 463-4.	Abstract only
Ladabaum U. Irritable bowel syndrome. <i>Advanced Studies in Medicine</i> 2004; 4(3): 128-34.	Not focused on aetiology
Laisné F, Lecomte C, Corbiere M. Biopsychosocial predictors of prognosis in musculoskeletal disorders: a systematic review of the literature. <i>Disability &amp; Rehabilitation</i> 2012; 34(5): 355-82.	Other FSS/pediatric condition
Laisné F, Lecomte C, Corbière M. Biopsychosocial predictors of prognosis in musculoskeletal disorders: A systematic review of the literature. <i>Disability and Rehabilitation</i> 2012; 34(22): 1912-41.	Other FSS/pediatric condition
Lambarth A, Zarate-Lopez N, Fayaz A. Oral and parenteral anti-neuropathic agents for the management of pain and discomfort in irritable bowel syndrome: A systematic review and meta-analysis. <i>Neurogastroenterol Motil</i> 2022; 34(1): e14289.	Not focused on aetiology

Reference	Reason of exclusion
Lanzara R, Scipioni M, Conti C. A Clinical-Psychological Perspective on Somatization Among Immigrants: A Systematic Review. <i>Front Psychol</i> 2018;9:2792. doi: 10.3389/fpsyg.2018.02792	Other FSS/pediatric condition
Lara-Cinisomo S, Akinbode TD, Wood J. A Systematic Review of Somatic Symptoms in Women with Depression or Depressive Symptoms: Do Race or Ethnicity Matter? <i>J Womens Health (Larchmt)</i> 2020; 29(10): 1273-82.	Other FSS/pediatric condition
Larsson B, Bjork J, Borsbo B, Gerdle B. A systematic review of risk factors associated with transitioning from regional musculoskeletal pain to chronic widespread pain. <i>European Journal of Pain</i> 2012; 16(8): 1084-93.	Not focused on aetiology
Larun L, Malterud K. Identity and coping experiences in Chronic Fatigue Syndrome: A synthesis of qualitative studies. <i>Patient Education and Counseling</i> 2007; 69(1-3): 20-08.	Not focused on aetiology
Lasheras I, Seral P, Latorre E, et al. Microbiota and gut-brain axis dysfunction in autism spectrum disorder: Evidence for functional gastrointestinal disorders. <i>Asian Journal of Psychiatry</i> 2020;47 doi: 10.1016/j.ajp.2019.101874	Other FSS/pediatric condition
Laufer S, Engel S, Knaevelsrud C, et al. Cortisol and alpha-amylase assessment in psychotherapeutic intervention studies: A systematic review. <i>Neuroscience and Biobehavioral Reviews</i> 2018;95:235-62. doi: 10.1016/j.neubiorev.2018.09.023	Other FSS/pediatric condition
Lee J, Sung WS, Kim EJ, Kim YW. Xiaoyao-san, a traditional Chinese herbal formula, for the treatment of irritable bowel syndrome: A protocol for a systematic review and meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(10): e24019.	No review
Lee S. Estranged bodies, simulated harmony, and misplaced cultures: neurasthenia in contemporary Chinese society. <i>Psychosomatic Medicine</i> 1998; 60(4): 448-57.	Not focused on aetiology
Leech B, Schloss J, Steel A. Association between increased intestinal permeability and disease: A systematic review. <i>Advances in Integrative Medicine</i> 2019;6(1):23-34. doi: 10.1016/j.aimed.2018.08.003	Other FSS/pediatric condition
Leone SS, Wessely S, Huibers MJ, Knottnerus JA, Kant I. Two sides of the same coin? On the history and phenomenology of chronic fatigue and burnout. <i>Psychology &amp; Health</i> 2011; 26(4): 449-64.	Not focused on aetiology
Lerner AM, Beqaj S. A paradigm linking herpesvirus immediate-early gene expression apoptosis and myalgic encephalomyelitis chronic fatigue syndrome. <i>Virus Adaptation and Treatment</i> 2011; 3(1): 19-24.	No review
Lewandowski AS, Palermo TM, Stinson J, Handley S, Chambers CT. Systematic review of family functioning in families of children and adolescents with chronic pain. <i>Journal of Pain</i> 2010; 11(11): 1027-38.	Other FSS/pediatric condition

Reference	Reason of exclusion
Li J, Wang C, Li ZM, Fu B, Han Q, Ye M. Abnormalities of intrinsic brain activity in irritable bowel syndrome (IBS): A protocol for systematic review and meta analysis of resting-state functional imaging. <i>Medicine (Baltimore)</i> 2021; 100(21): e25883.	No review
Li L, Tan J, Liu L, et al. Association between H. pylori infection and health Outcomes: an umbrella review of systematic reviews and meta-analyses. <i>Bmj Open</i> 2020;10(1):e031951. doi: 10.1136/bmjopen-2019-031951	Other FSS/pediatric condition
Li T, Wei J, Fritzsche K, et al. Validation of the Chinese Version of the Somatic Symptom Disorder-B Criteria Scale for Detecting DSM-5 Somatic Symptom Disorders: A Multicenter Study. <i>Psychosomatic Medicine</i> 2020; 82(3): 337-44.	Not focused on aetiology
Li X, Li B, Zhang J, et al. Efficacy of opioid receptor modulators in patients with irritable bowel syndrome: A systematic review and meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(4): e24361.	Not focused on aetiology
Li YL, Yao CJ, Lei R, et al. Acupuncture combined with Tongxieyaofang for diarrhea-type irritable bowel syndrome: A protocol for meta-analysis. <i>Medicine (Baltimore)</i> 2020; 99(48): e23457.	Not focused on aetiology
Lim, E. J., & Son, C. G. (2021). Prevalence of Chronic Fatigue Syndrome (CFS) in Korea and Japan: A Meta-Analysis. <i>J Clin Med</i> , 10(15). <a href="https://doi.org/10.3390/jcm10153204">https://doi.org/10.3390/jcm10153204</a>	Not focused on aetiology
Lindheimer JB, Barhorst EE, Boruch AE, Cook DB. Pain-related Post-exertional Malaise In People With Myalgic Encephalomyelitis/chronic Fatigue Syndrome And Fibromyalgia: A Meta-analysis. <i>Medicine and science in sports and exercise</i> 2021; 53(8): 317-8.	Abstract only
Linedale EC, Andrews JM. Diagnosis and management of irritable bowel syndrome: A guide for the generalist. <i>Medical Journal of Australia</i> 2017;207(7):309-15. doi: 10.5694/mja17.00457	Not focused on aetiology
Lovell RM, Ford AC. Prevalence of gastro-esophageal reflux-type symptoms in individuals with irritable bowel syndrome in the community: A meta-analysis. <i>The American Journal of Gastroenterology</i> 2012; 107(12): 1793-801; quiz 802.	Not focused on aetiology
Lu S, Jiang HY, Shi YD. Association between irritable bowel syndrome and Parkinson's disease: A systematic review and meta-analysis. <i>Acta Neurologica Scandinavica</i> : 7.	Other functional syndrome
Ludot M, Merlo M, Ibrahim N, et al. "Somatic symptom disorders" in adolescence. A systematic review of the recent literature. <i>Encephale</i> 2021.	Other functional syndrome



Reference	Reason of exclusion
Lumley MA, Schubiner H. Emotional Awareness and Expression Therapy for Chronic Pain: Rationale, Principles and Techniques, Evidence, and Critical Review. <i>Curr Rheumatol Rep</i> 2019;21(7):30. doi: 10.1007/s11926-019-0829-6	Other FSS/pediatric condition
Lund A. Neurochemical similarities in depression and pain, with special emphasis on serotonin. <i>Nordic Journal of Psychiatry</i> 1994; 48(6): 419-28.	Other FSS/pediatric condition
Luo C, Xu X, Wei X, et al. Natural medicines for the treatment of fatigue: Bioactive components, pharmacology, and mechanisms. <i>Pharmacological Research</i> 2019;148 doi: 10.1016/j.phrs.2019.104409	Not focused on aetiology
Luque-Suarez A, Martinez-Calderon J, Falla D. Role of kinesiophobia on pain, disability and quality of life in people suffering from chronic musculoskeletal pain: a systematic review. <i>British journal of sports medicine</i> 2019;53(9):554-+. doi: 10.1136/bjsports-2017-098673	Other FSS/pediatric condition
Maass U, Kuhne F, Maas J, Unverdross M, Weck F. Psychological interventions for health anxiety and somatic symptoms: A systematic review and meta-analysis. <i>Zeitschrift fur Psychologie</i> 2020; 228(2): 68-80.	Other functional syndrome
MacDougall P. In fibromyalgia, some therapies may provide small improvements in pain and quality of life. <i>Ann Intern Med</i> 2021; 174(3): Jc32.	No review
Mahadea D, Adamczewska E, Ratajczak AE, et al. Iron Deficiency Anemia in Inflammatory Bowel Diseases-A Narrative Review. <i>Nutrients</i> 2021; 13(11).	Other functional syndrome
Maj M, Akiskal HS, Mezzich JE, Okasha A. Somatoform disorders. <i>WPA Series in Evidence &amp; Experience in Psychiatry</i> ; 9.	No review
Maji S, Dixit S. Self-silencing and women's health: A review. <i>International Journal of Social Psychiatry</i> 2019;65(1):3-13. doi: 10.1177/0020764018814271	Other FSS/pediatric condition
Mander J, Neubauer AB, Schlarb A, et al. The therapeutic alliance in different mental disorders: A comparison of patients with depression, somatoform, and eating disorders. <i>Psychology and Psychotherapy</i> 2017; 90: 649-67.	No review
Mannikko N, Ruotsalainen H, Miettunen J, et al. Problematic gaming behaviour and health-related outcomes: A systematic review and meta-analysis. <i>J Health Psychol</i> 2020;25(1):67-81. doi: 10.1177/1359105317740414	Other FSS/pediatric condition
Mansell G, Kamper SJ, Kent P. Why and how back pain interventions work: What can we do to find out? <i>Best Practice and Research: Clinical Rheumatology</i> 2013; 27(5): 685-97.	Other FSS/pediatric condition
Mansfield KE, Sim J, Jordan JL, Jordan KP. A systematic review and meta-analysis of the prevalence of chronic widespread pain in the general population. <i>Pain</i> 2016; 157(1): 55-64.	Not focused on aetiology

Reference	Reason of exclusion
Marangell LB, Clauw DJ, Choy E, et al. Comparative pain and mood effects in patients with comorbid fibromyalgia and major depressive disorder: Secondary analyses of four pooled randomized controlled trials of duloxetine. <i>Pain</i> 2011; 152(1): 31-7.	Not focused on aetiology
Marinus J, Van Hilten JJ. Clinical expression profiles of complex regional pain syndrome, fibromyalgia and a-specific repetitive strain injury: more common denominators than pain? <i>Disability &amp; Rehabilitation</i> 2006; 28(6): 351-62.	Not focused on aetiology
Marlicz W, Skonieczna-Żydecka K, Krynicka P, Łoniewski I, Rydzewska G. Probiotics in irritable bowel syndrome - is the quest for the right strain over? Rapid review of existing guidelines and recommendations. <i>Prz Gastroenterol</i> 2021; 16(4): 369-82.	Not focused on aetiology
Marteau PR. Probiotics in clinical conditions. <i>Clinical Reviews in Allergy and Immunology</i> 2002; 22(3): 255-73.	Not focused on aetiology
Martinez-Calderon J, Flores-Cortes M, Morales-Asencio JM, Luque-Suarez A. Intervention Therapies to Reduce Pain-Related Fear in Fibromyalgia Syndrome: A Systematic Review of Randomized Clinical Trials. <i>Pain Med</i> 2021; 22(2): 481-98.	Not focused on aetiology
Masuy I, Pannemans J, Tack J. Irritable bowel syndrome: Diagnosis and management. <i>Minerva Gastroenterologica e Dietologica</i> 2020; 66(2): 136-50.	Not focused on aetiology
Mathias JL, Cant ML, Burke ALJ. Sleep disturbances and sleep disorders in adults living with chronic pain: a meta-analysis. <i>Sleep Medicine</i> 2018;52:198-210. doi: 10.1016/j.sleep.2018.05.023	Other FSS/pediatric condition
McFarland LV, Karakan T, Karatas A. Strain-specific and outcome-specific efficacy of probiotics for the treatment of irritable bowel syndrome: A systematic review and meta-analysis. <i>EClinicalMedicine</i> 2021; 41: 101154.	Not focused on aetiology
McGaw CD. The cannabinoids as therapeutic agents in the management of pain. <i>West Indian Medical Journal</i> 2017;66(5):576-80. doi: 10.7727/wimj.2017.192	Not focused on aetiology
McPartland JM, Guy GW, Di Marzo V. Care and feeding of the endocannabinoid system: A systematic review of potential clinical interventions that upregulate the endocannabinoid system. <i>Plos One</i> 2014; 9(3): e89566.	Not focused on aetiology
Meeus M, Nijs J, Vanderheiden T, Baert I, Descheemaeker F, Struyf F. The effect of relaxation therapy on autonomic functioning, symptoms and daily functioning, in patients with chronic fatigue syndrome or fibromyalgia: A systematic review. <i>Clinical Rehabilitation</i> 2015; 29(3): 221-33.	Not focused on aetiology

Reference	Reason of exclusion
Mengshoel AM, Helland IB, Meeus M, Castro-Marrero J, Pheby D, Bolle Strand E. Patients' experiences and effects of non-pharmacological treatment for myalgic encephalomyelitis/chronic fatigue syndrome - a scoping mixed methods review. <i>Int J Qual Stud Health Well-being</i> 2020; 15(1): 1764830.	Not focused on aetiology
Mengshoel AM, Sim J, Ahlsen B, et al. Diagnostic experience of patients with fibromyalgia - A meta-ethnography. <i>Chronic Illn</i> 2018;14(3):194-211. doi: 10.1177/1742395317718035	Not focused on aetiology
Merante D. The mirogabalin ALDAY phase 3 program in pain associated with fibromyalgia: the lessons learned. <i>Curr Med Res Opin</i> 2020; 36(4): 661-6.	Not focused on aetiology
Merten T, Merckelbach H. Symptom validity testing in somatoform and dissociative disorders: A critical review. <i>Psychological Injury and Law</i> 2013; 6(2): 122-37.	Not focused on aetiology
Migliorini F, Maffulli N, Eschweiler J, Betsch M, Tingart M, Colarossi G. Placebo effect in pharmacological management of fibromyalgia: a meta-analysis. <i>Br Med Bull</i> 2021; 139(1): 73-85.	Not focused on aetiology
Migliorini, F., Maffulli, N., Eschweiler, J., Tingart, M., Driessen, A., & Colarossi, G. (2021). BMI but not age and sex negatively impact on the outcome of pharmacotherapy in fibromyalgia: a systematic review. <i>Expert Review in Clinical Pharmacology</i> , 14(8), 1029-1038. <a href="https://doi.org/10.1080/17512433.2021.1929923">https://doi.org/10.1080/17512433.2021.1929923</a>	Not focused on aetiology
Mills SEE, Nicolson KP, Smith BH. Chronic pain: a review of its epidemiology and associated factors in population-based studies. <i>British Journal of Anaesthesia</i> 2019;123(2):E273-E83. doi: 10.1016/j.bja.2019.03.023	Not focused on aetiology
Mistiaen P, van Osch M, van Vliet L, et al. The effect of patient-practitioner communication on pain: A systematic review. <i>European Journal of Pain</i> 2016; 20(5): 675-88.	Other FSS/pediatric condition
Mizuta Y, Shikuwa S, Isomoto H, et al. Recent insights into digestive motility in functional dyspepsia. <i>Journal of Gastroenterology</i> 2006; 41(11): 1025-40.	Other FSS/pediatric condition
Moayyedi P, Andrews CN, MacQueen G, et al. Canadian Association of gastroenterology clinical practice guideline for the management of irritable bowel syndrome (IBS). <i>Journal of the Canadian Association of Gastroenterology</i> 2019;2(1):6-29. doi: 10.1093/jcag/gwy071	Not focused on aetiology
Moore Y, Serafimova T, Anderson N, et al. Recovery from chronic fatigue syndrome: a systematic review-heterogeneity of definition limits study comparison. <i>Arch Dis Child</i> 2021; 106(11): 1087-94.	Other functional syndrome
Moraes LJ, Miranda MB, Loures LF, et al. A systematic review of psychoneuroimmunology-based interventions. <i>Psychol Health Med</i> 2018;23(6):635-52. doi: 10.1080/13548506.2017.1417607	Not focused on aetiology
Morel V, Pickering ME, Goubayon J, Djobo M, Macian N, Pickering G. Magnesium for pain treatment in 2021? State of the art. <i>Nutrients</i> 2021; 13(5).	Other functional syndrome

Reference	Reason of exclusion
Mostafalou S, Abdollahi M. Pesticides and human chronic diseases: Evidences, mechanisms, and perspectives. <i>Toxicology and Applied Pharmacology</i> 2013; 268(2): 157-77.	Other FSS/pediatric condition
Mousavi T, Nikfar S, Abdollahi M. An update on efficacy and safety considerations for the latest drugs used to treat irritable bowel syndrome. <i>Expert Opinion on Drug Metabolism and Toxicology</i> 2020; 16(7): 583-604.	Not focused on aetiology
Mozaffari S, Rahimi R, Abdollahi M. Implications of melatonin therapy in irritable bowel syndrome: A systematic review. <i>Current Pharmaceutical Design</i> 2010; 16(33): 3646-55.	Not focused on aetiology
Muller AE, Tveito K, Bakken IJ, Flottorp SA, Mjaaland S, Larun L. Potential causal factors of CFS/ME: a concise and systematic scoping review of factors researched. <i>J Transl Med</i> 2020; 18(1): 484.	No review
Murray AM, Toussaint A, Althaus A, Löwe B. Barriers to the diagnosis of somatoform disorders in primary care: Protocol for a systematic review of the current status. <i>Systematic Reviews</i> 2013; 2: 99.	Not focused on aetiology
Murray AM, Toussaint A, Althaus A, Löwe B. The challenge of diagnosing non-specific, functional, and somatoform disorders: A systematic review of barriers to diagnosis in primary care. <i>Journal of Psychosomatic Research</i> 2016; 80(Journal Article): 1-10.	Not focused on aetiology
Musker M, McArthur A, Munn Z, Wong ML. Circulating leptin levels in patients with myalgic encephalomyelitis, chronic fatigue syndrome or fibromyalgia: a systematic review protocol. <i>JBIM Evid Synth</i> 2021; 19(3): 695-701.	No review
Nadal-Nicolás Y, Miralles-Amorós L, Martínez-Olcina M, Sánchez-Ortega M, Mora J, Martínez-Rodríguez A. Vegetarian and Vegan Diet in Fibromyalgia: A Systematic Review. <i>Int J Environ Res Public Health</i> 2021; 18(9).	Not focused on aetiology
Nascimento SS, Oliveira LR, DeSantana JM. Correlations between brain changes and pain management after cognitive and meditative therapies: A systematic review of neuroimaging studies. <i>Complementary Therapies in Medicine</i> 2018;39:137-45. doi: 10.1016/j.ctim.2018.06.006	Not focused on aetiology
Nelson AD, Black CJ, Houghton LA, Lugo-Fagundo NS, Lacy BE, Ford AC. Systematic review and network meta-analysis: efficacy of licensed drugs for abdominal bloating in irritable bowel syndrome with constipation. <i>Aliment Pharmacol Ther</i> 2021; 54(2): 98-108.	Not focused on aetiology
Nelson NL. Muscle strengthening activities and fibromyalgia: A review of pain and strength outcomes. <i>Journal of Bodywork &amp; Movement Therapies</i> 2015; 19(2): 370-6.	Not focused on aetiology
Newton BJ, Southall JL, Raphael JH, Ashford RL, LeMarchand K. A narrative review of the impact of disbelief in chronic pain. <i>Pain Management Nursing</i> 2013; 14(3): 161-71.	Not focused on aetiology

Reference	Reason of exclusion
Nielsen CS, Knudsen GP, Steingrimsdottir OA. Twin studies of pain. <i>Clinical Genetics</i> 2012; 82(4): 331-40.	Other FSS/pediatric condition
Nielson WR, Jensen MP, Karsdorp PA, Vlaeyen JWS. Activity pacing in chronic pain concepts, evidence, and future directions. <i>Clinical Journal of Pain</i> 2013; 29(5): 461-8.	Other FSS/pediatric condition
Nijs J, Kosek E, Van Oosterwijck J, Meeus M. Dysfunctional endogenous analgesia during exercise in patients with chronic pain: to exercise or not to exercise? <i>Pain Physician</i> 2012; 15(Suppl. 3): ES205-13.	Not focused on aetiology
Niu HL, Xiao JY. The efficacy and safety of probiotics in patients with irritable bowel syndrome: Evidence based on 35 randomized controlled trials. <i>Int J Surg</i> 2020; 75: 116-27.	Not focused on aetiology
Novo R, Gonzalez B, Peres R, et al. "A meta-analysis of studies with the Minnesota Multiphasic Personality Inventory in fibromyalgia patients": Corrigendum. <i>Personality and Individual Differences</i> 2017;119:354.	No review
Oberndorff-Klein Woolthuis AH, Brummer RJ, de Wit NJ, Muris JW, Stockbrugger RW. Irritable bowel syndrome in general practice: An overview. <i>Scandinavian Journal of Gastroenterology Supplement</i> 2004; 241: 17-22.	Not focused on aetiology
Oka H, Miki K, Kishita I, Kong DF, Uchida T. A Multicenter, Prospective, Randomized, Placebo-Controlled, Double-Blind Study of a Novel Pain Management Device, AT-02, in Patients with Fibromyalgia. <i>Pain Med</i> 2020; 21(2): 326-32.	Not focused on aetiology
Oka, P., Parr, H., Barberio, B., Black, C. J., Savarino, E. V., & Ford, A. C. (2020). Global prevalence of irritable bowel syndrome according to Rome III or IV criteria: a systematic review and meta-analysis. <i>Lancet Gastroenterology &amp; Hepatology</i> , 5(10), 908-917. <a href="https://doi.org/10.1016/s2468-1253(20)30217-x">https://doi.org/10.1016/s2468-1253(20)30217-x</a>	Not focused on aetiology
Okifuji A, Hare BD, Gatchel RJ, Schultz IZ. Chronic widespread pain and fibromyalgia syndrome. In: Gatchel RJ, Schultz IZ, eds. Handbook of musculoskeletal pain and disability disorders in the workplace. New York, NY, US; 2014: 101-20.	No review
Ooi SL, Correa D, Pak SC. Probiotics, prebiotics, and low FODMAP diet for irritable bowel syndrome - What is the current evidence? <i>Complement Ther Med</i> 2019;43:73-80. doi: 10.1016/j.ctim.2019.01.010	Not focused on aetiology
Orhan C, Van Looveren E, Cagnie B, et al. Are Pain Beliefs, Cognitions, and Behaviors Influenced by Race, Ethnicity, and Culture in Patients with Chronic Musculoskeletal Pain: A Systematic Review. <i>Pain Physician</i> 2018;21(6):541-58.	Not focused on aetiology

Reference	Reason of exclusion
Pakneshan S, Shah A, Fairlie T, Morrison M, Holtmann G. Effect of prebiotics, probiotics, and synbiotics on fecal microbiome in adult patients with constipation-predominant irritable bowel syndrome and functional constipation, and links with symptom relief: A systematic review. <i>Journal of gastroenterology and hepatology</i> 2021; 36: 154-.	Abstract only
Paley CA, Johnson MI. Physical activity to reduce systemic inflammation associated with chronic pain and obesity: A narrative review. <i>Clinical Journal of Pain</i> 2016; 32(4): 365-70.	Other FSS/pediatric condition
Pan F, Zhao HJ. FECAL MICROBIOTA TRANSPLANTATION FOR PATIENTS WITH IRRITABLE BOWEL SYNDROME: A SYSTEMATIC REVIEW AND META-ANALYSIS. <i>Gastroenterology</i> 2021; 160(6): S572-S3.	Abstract only
Park J, Ko SJ, Han G, Kim K, Jun H, Park JW. Gwakhyangjeonggi-san for irritable bowel syndrome: A protocol for systematic review and meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(27): e26635.	No review
Parker RS, Lewis GN, Rice DA, McNair PJ. Is motor cortical excitability altered in people with chronic pain? A systematic review and meta-analysis. <i>Brain Stimulation</i> 2016; 9(4): 488-500.	Other FSS/pediatric condition
Pas R, Ickmans K, Van Oosterwijck S, et al. Hyperexcitability of the Central Nervous System in Children with Chronic Pain: A Systematic Review. <i>Pain Med</i> 2018;19(12):2504-14. doi: 10.1093/pm/pnx320	Other FSS/pediatric condition
Patetsos E, Horjales-Araujo E. Treating chronic pain with SSRIs: What do we know? <i>Pain Research and Management</i> 2016; 2016.	Not focused on aetiology
Peng WY, Ye K, Qin D, Tang TC, Chen M, Zheng H. Searching for a Definition of Refractory Irritable Bowel Syndrome: a Systematic Review and Meta-analysis. <i>J Gastrointest Liver Dis</i> 2021; 30(4): 495-505.	Not focused on aetiology
Peres MFP. Fibromyalgia and headache disorders. <i>Current Pain and Headache Reports</i> 2009; 13(5): 335-6.	No review
Persson J. Ketamine in Pain Management. <i>CNS Neuroscience and Therapeutics</i> 2013; 19(6): 396-402.	Other FSS/pediatric condition
Peters MJ, Broer L, Willemien HLD, et al. Genome-wide association study meta-analysis of chronic widespread pain: Evidence for involvement of the 5p15.2 region. <i>Annals of the Rheumatic Diseases</i> 2013; 72(3): 427-36.	No review
Phelps L. Critical issues in chronic illnesses of women. In: Fletcher-Janzen E, ed. <i>The neuropsychology of women</i> ; 2009: US: Srrnger Sene Business Mea; US-US: Srrnger Sene Business Mea; US.	No review
Pickett-Blakely O. Obesity and irritable bowel syndrome: A comprehensive review. <i>Gastroenterology and Hepatology</i> 2014; 10: 411-6.	Not focused on aetiology

Reference	Reason of exclusion
Pihur V, Datta S, Datta S. Meta analysis of Chronic Fatigue Syndrome through integration of clinical, gene expression, SNP and proteomic data. <i>Bioinformation</i> 2011; 6(3): 120-4.	No review
Pike BL, Porter CK, Sorrell TJ, Riddle MS. Acute gastroenteritis and the risk of functional dyspepsia: A systematic review and meta-analysis. <i>American Journal of Gastroenterology</i> 2013; 108(10): 1558-63.	Other FSS/pediatric condition
Pilkington K, Ridge DT, Igwesi-Chidobe CN, et al. A relational analysis of an invisible illness: A meta-ethnography of people with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) and their support needs. <i>Soc Sci Med</i> 2020; 265: 113369.	Not focused on aetiology
Plow EB, Pascual-Leone A, MacHado A. Brain stimulation in the treatment of chronic neuropathic and non-cancerous pain. <i>Journal of Pain</i> 2012; 13(5): 411-24.	Other FSS/pediatric condition
Polakovská L, Řiháček T. What is it like to live with medically unexplained physical symptoms? A qualitative meta-summary. <i>Psychology &amp; Health</i> 2021: 1-17.	Not focused on aetiology
Poon D, Major G, Andreyev JAJ. SYSTEMATIC REVIEW AND META-ANALYSIS: PREVALENCE OF ORGANIC GASTROINTESTINAL CONDITIONS IN PATIENTS WITH IRRITABLE BOWEL SYNDROME. <i>Gut</i> 2021; 70: A217-A.	Abstract only
Pourová M, Klocek A, Řiháček T, Čevelíček M. Therapeutic change mechanisms in adults with medically unexplained physical symptoms: A systematic review. <i>J Psychosom Res</i> 2020; 134: 110124.	Not focused on aetiology
Prados G, Miro E. Fibromyalgia and sleep: A review. <i>Revista de Neurologia</i> 2012; 54(4): 227-40.	Not English language
Pratt C, Campbell MD. The Effect of Bifidobacterium on Reducing Symptomatic Abdominal Pain in Patients with Irritable Bowel Syndrome: A Systematic Review. <i>Probiotics Antimicrob Proteins</i> 2020; 12(3): 834-9.	Not focused on aetiology
Price JR. Managing physical symptoms: The clinical assessment as treatment. <i>Journal of Psychosomatic Research</i> 2000; 48(1): 1-10.	Other FSS/pediatric condition
Puntillo F, Giglio M, Paladini A, et al. Pathophysiology of musculoskeletal pain: a narrative review. <i>Therapeutic Advances in Musculoskeletal Disease</i> 2021; 13.	Other functional syndrome
Puri PR, Dimsdale JE. Health care utilization and poor reassurance: Potential predictors of somatoform disorders. <i>Psychiatric Clinics of North America</i> 2011; 34(3): 525-44.	Not focused on aetiology
Qin HY, Wu JC, Tong XD, Sung JJ, Xu HX, Bian ZX. Systematic review of animal models of post-infectious/post-inflammatory irritable bowel syndrome. <i>Journal of Gastroenterology</i> 2011; 46(2): 164-74.	Other FSS/pediatric condition

Reference	Reason of exclusion
Quigley EMM, Fried M, Gwee K-A, et al. World Gastroenterology Organisation Global Guidelines Irritable Bowel Syndrome: A global perspective update September 2015. <i>Journal of Clinical Gastroenterology</i> 2016; 50(9): 704-13.	Not focused on aetiology
Reddy B, Das S, Guruprasad S. Research challenges in somatoform disorders: A narrative review. <i>Asian J Psychiatr</i> 2018;34:65-66. doi: 10.1016/j.ajp.2018.04.018	Not focused on aetiology
Reis F, Guimaraes F, Nogueira LC, et al. Association between pain drawing and psychological factors in musculoskeletal chronic pain: A systematic review. <i>Physiother Theory Pract</i> 2019;35(6):533-42. doi: 10.1080/09593985.2018.1455122	Other FSS/pediatric condition
Ren J, He T, Zhou X, Wu Z, Kong L. The effects of traditional Chinese manual therapy (Tuina) for chronic fatigue syndrome: A protocol for systematic review and meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(44): e27700.	Not focused on aetiology
Reneau M. Heart Rate Variability Biofeedback to Treat Fibromyalgia: An Integrative Literature Review. <i>Pain Manag Nurs</i> 2020;21(3): 225-232.	Not focused on aetiology
Ribeiro LM, Alves NG, da Silva-Fonseca VA, de Aguiar Nemer AS. Influence of individual response to stress and psychiatric comorbidity in irritable bowel syndrome. <i>Revista de Psiquiatria Clinica</i> 2011; 38(2): 77-83.	Not English language
Robinson LJ, Durham J, Newton JL. A systematic review of the comorbidity between Temporomandibular Disorders and Chronic Fatigue Syndrome. <i>Journal of Oral Rehabilitation</i> 2016; 43(4): 306-16.	Not focused on aetiology
Rodriguez-Rodriguez L, Lamas JR, Abasolo L, et al. The rs3771863 single nucleotide polymorphism of the TACR1 gene is associated to a lower risk of sicca syndrome in fibromyalgia patients. <i>Clinical and Experimental Rheumatology</i> 2015; 33: S33-S40.	No review
Rohlf HG, Knipscheer JW, Kleber RJ. Somatization in refugees: A review. <i>Social psychiatry and Psychiatric Epidemiology</i> 2014; 49(11): 1793-804.	Not focused on aetiology
Ronel J, Hausteiner Wiehle C, Schaefert R, et al. A new national german guideline on non-specific, functional and somatoform bodily complaints. <i>Journal of Psychosomatic Research</i> 2013; 74(6): 557.	Not English language
Rostami A, Riahi SM, Haghighi A, et al. Erratum to: the role of Blastocystis sp. and Dientamoeba fragilis in irritable bowel syndrome: a systematic review and meta-analysis. <i>Parasitol Res</i> 2017;116(9):2611-12. doi: 10.1007/s00436-017-5556-1	No review
Rostro F, Cancelo MJ, Castelo-Branco C. Pain in fibromyalgia patients. <i>Therapy</i> 2007; 4(2): 193-200.	Not focused on aetiology
Roy R, de la Vega R, Jensen MP, Miró J. Neurofeedback for Pain Management: A Systematic Review. <i>Front Neurosci</i> 2020; 14: 671.	Not focused on aetiology



Reference	Reason of exclusion
Ruscio M. Is SIBO A Real Condition? <i>Altern Ther Health Med</i> 2019;25(5):30-38.	Not focused on aetiology
Russell C, Kyle SD, Wearden AJ. Do evidence based interventions for chronic fatigue syndrome improve sleep? A systematic review and narrative synthesis. <i>Sleep Medicine reviews</i> 2017; 33(Journal Article): 101-10.	Not focused on aetiology
Sainsbury A, Sanders DS, Ford AC. Prevalence of irritable bowel syndrome-type symptoms in patients with celiac disease: A meta-analysis. <i>Clinical Gastroenterology &amp; Hepatology</i> 2013; 11(4): 359-65.e1.	Other FSS/pediatric condition
Saito YA, Schoenfeld P, Locke GR, 3rd. The epidemiology of irritable bowel syndrome in North America: A systematic review. <i>The American Journal of Gastroenterology</i> 2002; 97(8): 1910-5.	Not focused on aetiology
Saltychev M, Laimi K. Effectiveness of repetitive transcranial magnetic stimulation in patients with fibromyalgia: A meta-analysis. <i>International Journal of Rehabilitation Research</i> 2017; 40(1): 11-8.	Not focused on aetiology
Sanchez AI, Valenza MC, Martinez MP, et al. Gender differences in pain experience and physical activity of fibromyalgia syndrome patients. <i>Journal of Musculoskeletal Pain</i> 2013; 21(2): 147-55.	No review
Saracutu M, Rance J, Davies H, et al. The effects of osteopathic treatment on psychosocial factors in people with persistent pain: A systematic review. <i>International Journal of Osteopathic Medicine</i> 2018;27:23-33. doi: 10.1016/j.ijosm.2017.10.005	Not focused on aetiology
Sarter L, Heider J, Kirchner L, et al. Cognitive and emotional variables predicting treatment outcome of cognitive behavior therapies for patients with medically unexplained symptoms: A meta-analysis. <i>Journal of Psychosomatic Research</i> 2021; 146: 10.	Not focused on aetiology
Sarter L, Heider J, Kirchner L, Witthoft M, Rief W, Kleinstauben M. Predictors of treatment outcome in cognitive behavioral therapies for patients with somatic symptom disorder: A systematic review and meta-analysis. <i>International journal of behavioral medicine</i> 2021; 28(SUPPL 1): S187-S.	Abstract only
Scarpato E, Auricchio R, Penagini F, et al. Efficacy of the gluten free diet in the management of functional gastrointestinal disorders: a systematic review on behalf of the Italian Society of Paediatrics. <i>Ital J Pediatr</i> 2019;45(1):9. doi: 10.1186/s13052-019-0606-1	Not focused on aetiology
Schaefer R, Hausteiner-Wiehle C, Hauser W, Ronel J, Herrmann M, Henningsen P. Non-specific, functional, and somatoform bodily complaints. <i>Deutsches Aerzteblatt International</i> 2012; 109: 803-13.	Not focused on aetiology
Schmulson M, Bielsa MV, Carmona-Sanchez R, et al. Microbiota, gastrointestinal infections, low-grade inflammation, and antibiotic therapy in irritable bowel syndrome: An evidence-based review. <i>Revista de Gastroenterologica de Mexico</i> 2014; 79(2): 96-134.	Not English language

Reference	Reason of exclusion
Schulze NB, Salemi MD, de Alencar GG, Moreira MC, de Siqueira GR. Efficacy of Manual Therapy on Pain, Impact of Disease, and Quality of Life in the Treatment of Fibromyalgia: A Systematic Review. <i>Pain Physician</i> 2020; 23(5): 461-75.	Not focused on aetiology
Shah ED, Riddle MS, Chang C, Pimentel M. Estimating the contribution of acute gastroenteritis to the overall prevalence of irritable bowel syndrome. <i>Journal of Neurogastroenterology and Motility</i> 2012; 18(2): 200-4.	No review
Shah ED, Salwen-Deremer JK, Gibson PR, Muir JG, Eswaran S, Chey WD. Pharmacologic, Dietary, and Psychological Treatments for Irritable Bowel Syndrome With Constipation: Cost Utility Analysis. <i>MDM Policy Pract</i> 2021; 6(1): 2381468320978417.	Not focused on aetiology
Shah K, Ramos-Garcia M, Bhavsar J, Lehrer P. Mind-body treatments of irritable bowel syndrome symptoms: An updated meta-analysis. <i>Behav Res Ther</i> 2020; 128: 103462.	Not focused on aetiology
Shanker A, Robles A, Deoker A, et al. Cytokine Gene Polymorphisms in Irritable Bowel Syndrome vs Inflammatory Bowel Disease: A Network Meta-Analysis. <i>American Journal of Gastroenterology</i> 2020; 115: S241-S.	Abstract only
Shahrokhi M, Nagalli S. Probiotics. <i>StatPearls</i> 2020	No review
Sharpe M, Mayou R, Walker J. Bodily symptoms: New approaches to classification. <i>Journal of Psychosomatic Research</i> 2006; 60(4): 353-6.	Not focused on aetiology
Sharpe M. The symptom of generalised fatigue. <i>Practical Neurology</i> 2006; 6(2): 72-7.	Not focused on aetiology
Shen B, Kochhar GS, Navaneethan U, et al. The placebo response rate in pharmacological trials in patients with irritable bowel syndrome: a systematic review and meta-analysis. <i>Lancet Gastroenterology &amp; Hepatology</i> 2021; 6(6): 482-97.	Not focused on aetiology
Sherwood IM. A meta-analysis of the relation of trauma and somatization: An investigation of methodological factors related to effect size. <i>Dissertation Abstracts International: Section B: The Sciences and Engineering</i> 2018;79(7-B(E)):No Pagination Specified.	Complete fulltext not available
Shraim MA, Massé-Alarie H, Hall LM, Hodges PW. Systematic review and synthesis of mechanism-based classification systems for pain experienced in the musculoskeletal system. <i>Clinical Journal of Pain</i> 2020; 36(10): 793-812.	Other functional syndrome
Sim J, Madden S. Illness experience in fibromyalgia syndrome: A metasynthesis of qualitative studies. <i>Social Science &amp; Medicine (1982)</i> 2008; 67(1): 57-67.	Not focused on aetiology

Reference	Reason of exclusion
Siqveland J, Hussain A, Lindstrom JC, et al. Prevalence of Posttraumatic Stress Disorder in Persons with Chronic Pain: A Meta-analysis. <i>Front Psychiatry</i> 2017;8:164. doi: 10.3389/fpsy.2017.00164	Not focused on aetiology
Skelly AC, Chou R, Dettori JR, et al. AHRQ Comparative Effectiveness Reviews. <i>Noninvasive Nonpharmacological Treatment for Chronic Pain: A Systematic Review Update</i> 2020.	Not focused on aetiology
Smith A, López-Solà M, McMahon K, et al. Multivariate pattern analysis utilizing structural or functional MRI—In individuals with musculoskeletal pain and healthy controls: A systematic review. <i>Seminars in Arthritis and Rheumatism</i> 2017;47(3):418-31. doi: 10.1016/j.semarthrit.2017.06.005	Not focused on aetiology
So D, Gibson PR, Muir JG, Yao CK. Dietary fibres and IBS: translating functional characteristics to clinical value in the era of personalised medicine. <i>Gut</i> 2021; 70(12): 2383-94.	Not focused on aetiology
Soltani S, Kopala-Sibley DC, Noel M. The Co-occurrence of Pediatric Chronic Pain and Depression A Narrative Review and Conceptualization of Mutual Maintenance. <i>Clinical Journal of Pain</i> 2019;35(7):633-43. doi: 10.1097/ajp.0000000000000723	Other FSS/pediatric condition
Somers SC, Lembo A. Irritable bowel syndrome: Evaluation and treatment. <i>Gastroenterology Clinics of North America</i> 2003; 32(2): 507-29.	Not focused on aetiology
Song KH, Jung HK, Kim HJ, et al. Clinical Practice Guidelines for Irritable Bowel Syndrome in Korea, 2017 Revised Edition. <i>J Neurogastroenterol Motil</i> 2018;24(2):197-215. doi: 10.5056/jnm17145	Not focused on aetiology
Sonneveld LP, Brilleslijper-Kater SN, Benninga MA, Van Konijnenburg EMMH, Sieswerda-Hoogendoorn T, Teeuw AH. Prevalence of child sexual abuse in pediatric patients with chronic abdominal pain. <i>Journal of Pediatric Gastroenterology and Nutrition</i> 2013; 56(5): 475-80.	Other FSS/pediatric condition
Sood R, Gracie DJ, Law GR, Ford AC. Systematic review with meta-analysis: The accuracy of diagnosing irritable bowel syndrome with symptoms, biomarkers and/or psychological markers. <i>Alimentary Pharmacology &amp; Therapeutics</i> 2015; 42(5): 491-503.	Not focused on aetiology
Spencer M, Gupta A, Dam LV, Shannon C, Menees S, Chey WD. Artificial sweeteners: A systematic review and primer for gastroenterologists. <i>Journal of Neurogastroenterology and Motility</i> 2016; 22(2): 168-80.	Not focused on aetiology
Stanculete MF, Chiarioni G, Dumitrascu DL, Dumitrascu DI, Popa SL. Disorders of the brain-gut interaction and eating disorders. <i>World J Gastroenterol</i> 2021; 27(24): 3668-81.	Other disorder
Steffen R. Epidemiology of travellers' diarrhea. <i>Journal of Travel Medicine</i> 2017; 24(Suppl. 1): S2-S5.	Other FSS/pediatric condition
Sturman S, Killingback C. Is there a dose response relationship between soft tissue manual therapy and clinical outcomes in fibromyalgia? <i>J Bodyw Mov Ther</i> 2020; 24(3): 141-53.	Not focused on aetiology

Reference	Reason of exclusion
Su H, Li YT, Heitkemper MM, et al. Effects of Low-FODMAPS Diet on Irritable Bowel Syndrome Symptoms and Gut Microbiome. <i>Gastroenterol Nurs</i> 2019;42(2):150-58. doi: 10.1097/sga.0000000000000428	Not focused on aetiology
Su XT, Wang LQ, Zhang N, et al. Standardizing and optimizing acupuncture treatment for irritable bowel syndrome: A Delphi expert consensus study. <i>Integr Med Res</i> 2021; 10(3): 100728.	Not focused on aetiology
Szałwińska P, Włodarczyk J, Spinelli A, Fichna J, Włodarczyk M. IBS-Symptoms in IBD Patients- Manifestation of Concomitant or Different Entities. <i>J Clin Med</i> 2020; 10(1).	Other functional syndrome
Szilagyi A, Xue X. Comparison of geographic distributions of Irritable Bowel Syndrome with Inflammatory Bowel Disease fail to support common evolutionary roots: Irritable Bowel Syndrome and Inflammatory Bowel Diseases are not related by evolution. <i>Med Hypotheses</i> 2018;110:31-37. doi: 10.1016/j.mehy.2017.10.020	No review
Talavera JIR, Parrill AM, Elsayad C, Fogel J, Riggs JC, Peng B. The association between ectopic pregnancy and inflammatory bowel disease, irritable bowel syndrome, and celiac disease: A systematic review. <i>J Obstet Gynaecol Res</i> 2021; 47(5): 1601-9.	Other functional syndrome
Tan N, Gwee KA, Tack J, et al. Herbal medicine in the treatment of functional gastrointestinal disorders: A systematic review with meta-analysis. <i>J Gastroenterol Hepatol</i> 2020; 35(4): 544-56.	Not focused on aetiology
Tangirala S, Patel CJ. Integrated Analysis of Gene Expression Differences in Twins Discordant for Disease and Binary Phenotypes. <i>Sci Rep</i> 2018;8(1):17. doi: 10.1038/s41598-017-18585-3	No review
Teixeira PEP, Alawdah L, Alhassan HAA, et al. The Analgesic Effect of Transcranial Direct Current Stimulation (tDCS) combined with Physical Therapy on Common Musculoskeletal Conditions: A Systematic Review and Meta-Analysis. <i>Princ Pract Clin Res</i> 2020; 6(1): 23-6.	Other functional syndrome
Tennen H, Affleck G, Buunk BP, Gibbons FX. Social comparison as a coping process: A critical review and application to chronic pain disorders. In: Buunk BP, Gibbons FX, eds. Health, coping, and well-being: Perspectives from social comparison theory. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 1997: 263-98.	No review
Teufel M, Biedermann T, Rapps N, et al. Psychological burden of food allergy. <i>World Journal of Gastroenterology</i> 2007; 13(25): 3456-65.	Other FSS/pediatric condition
Thomann AK, Mak JWY, Zhang JW, et al. Review article: bugs, inflammation and mood—a microbiota-based approach to psychiatric symptoms in inflammatory bowel diseases. <i>Alimentary Pharmacology and Therapeutics</i> 2020; 52(2): 247-66.	Other functional syndrome

Reference	Reason of exclusion
Tomaino L, Serra-Majem L, Martini S, et al. Fibromyalgia and Nutrition: An Updated Review. <i>Journal of the American College of Nutrition</i> 2021; 40(7): 665-78.	Not focused on aetiology
Treder N, Jodzio K. Prevalence and clinical specificity of fatigue symptoms in chronic fatigue syndrome, multiple sclerosis, and myasthenia gravis. <i>Health Psychology Report</i> 2014; 2(2): 83-9.	Not focused on aetiology
Tseng PT, Zeng BS, Chen YW, Wu MK, Wu CK, Lin PY. A meta-analysis and systematic review of the comorbidity between irritable bowel syndrome and bipolar disorder. <i>Medicine</i> 2016; 95(33): e4617.	Not focused on aetiology
Turco R, Salvatore S, Miele E, et al. Does a low FODMAPs diet reduce symptoms of functional abdominal pain disorders? A systematic review in adult and paediatric population, on behalf of Italian Society of Pediatrics. <i>Ital J Pediatr</i> 2018;44(1):53. doi: 10.1186/s13052-018-0495-8	Not focused on aetiology
Uceyler N, Sommer C. Reply: "Small fibre neuropathy, fibromyalgia and dorsal root ganglia sodium channels". <i>Brain: A Journal of Neurology</i> 2013; 136(9): 1.	No review
Ullas G, McClelland L, Jones NS. Medically unexplained symptoms and somatisation in ENT. <i>Journal of Laryngology and Otology</i> 2013; 127(5): 452-7.	Other FSS/pediatric condition
Usai-Satta P, Bassotti G, Bellini M, Lai M. Irritable bowel syndrome and gluten-related disorders. <i>Nutrients</i> 2020; 12(4).	Other disorder
Valentin N, Camilleri M, Altayar O, et al. Biomarkers for bile acid diarrhoea in functional bowel disorder with diarrhoea: A systematic review and meta-analysis. <i>Gut</i> 2015; 65(12): 1951-9.	Not focused on aetiology
Van Der Veek SM, Derkx H, De Haan E, Benninga MA, Plak RD, Boer F. Do parents maintain or exacerbate pediatric functional abdominal pain? A systematic review and meta-analysis. <i>Journal of Health Psychology</i> 2012; 17(2): 258-72.	Other FSS/pediatric condition
Van Hemert S, Breedveld AC, Rovers JM, et al. Migraine associated with gastrointestinal disorders: Review of the literature and clinical implications. <i>Frontiers in Neurology</i> 2014; 5: 241.	Other FSS/pediatric condition
Vance CGT, Dailey DL, Rakel BA, Sluka KA. Using TENS for pain control: The state of the evidence. <i>Pain Management</i> 2014; 4(3): 197-209.	Not focused on aetiology
VanElzakker MB, Brumfield SA, Lara Mejia PS. Corrigendum: Neuroinflammation and Cytokines in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): A Critical Review of Research Methods. <i>Front Neurol</i> 2019;10:316. doi: 10.3389/fneur.2019.00316	No review

Reference	Reason of exclusion
VanElzakker MB, Brumfield SA, Lara Mejia PS. Corrigendum: Neuroinflammation and Cytokines in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): A Critical Review of Research Methods. <i>Front Neurol</i> 2020; 11: 863.	Complete fulltext unavailable
van Kessel, L., Teunissen, D., & Lagro-Janssen, T. (2021). Sex-Gender Differences in the Effectiveness of Treatment of Irritable Bowel Syndrome: A Systematic Review. <i>Int J Gen Med</i> , 14, 867-884. <a href="https://doi.org/10.2147/ijgm.S291964">https://doi.org/10.2147/ijgm.S291964</a>	Not focused on aetiology
van Lanen, A. S., de Bree, A., & Greyling, A. (2021). Efficacy of a low-FODMAP diet in adult irritable bowel syndrome: a systematic review and meta-analysis. <i>Eur J Nutr</i> , 60(6), 3505-3522. <a href="https://doi.org/10.1007/s00394-020-02473-0">https://doi.org/10.1007/s00394-020-02473-0</a>	Not focused on aetiology
Vilarino GT, Andreato LV, de Souza LC, Branco JHL, Andrade A. Effects of resistance training on the mental health of patients with fibromyalgia: a systematic review. <i>Clin Rheumatol</i> 2021; 40(11): 4417-25.	Not focused on aetiology
Villanueva A, Domínguez-Muñoz JE, Mearin F. Update in the therapeutic management of irritable bowel syndrome. <i>Digestive Diseases</i> 2001; 19(3): 244-50.	Not focused on aetiology
Viniol A, Keunecke C, Biroga T, et al. Studies of the symptom abdominal pain-A systematic review and meta-analysis. <i>Family Practice</i> 2014; 31(5): 517-29.	Other FSS/pediatric condition
Voigt K, Nagel A, Meyer B, Langs G, Braukhaus C, Löwe B. Towards positive diagnostic criteria: A systematic review of somatoform disorder diagnoses and suggestions for future classification. <i>Journal of Psychosomatic Research</i> 2010; 68(5): 403-14.	Not focused on aetiology
Völker JM, Arguissain FG, Andersen OK, Biurrun Manresa J. Variability and effect sizes of intracranial current source density estimations during pain: Systematic review, experimental findings, and future perspectives. <i>Human brain mapping</i> 2021; 42(8): 2461-76.	Other functional syndrome
Wang B, Duan R, Duan L. Prevalence of sleep disorder in irritable bowel syndrome: A systematic review with meta-analysis. <i>Saudi J Gastroenterol</i> 2018;24(3):141-50. doi: 10.4103/sjg.SJG 603 17	Not focused on aetiology
Wang F, He S, Yan J, Mai L, Yang L. Effects of herb-partitioned moxibustion for diarrhoea-predominant irritable bowel syndrome: A protocol for systematic review and meta-analysis. <i>Medicine (Baltimore)</i> 2020; 99(34): e21817	No review
Wang, J., Yang, P., Zhang, L., & Hou, X. (2021). A Low-FODMAP Diet Improves the Global Symptoms and Bowel Habits of Adult IBS Patients: A Systematic Review and Meta-Analysis. <i>Frontiers in Nutrition</i> , 8, 683191. <a href="https://doi.org/10.3389/fnut.2021.683191">https://doi.org/10.3389/fnut.2021.683191</a>	Not focused on aetiology

Reference	Reason of exclusion
Wang M, Yi G, Gao H, Wu B, Zhou Y. Music-based interventions to improve fibromyalgia syndrome: A meta-analysis. <i>Explore (NY)</i> 2020; 16(6): 357-62.	Not focused on aetiology
Wang R, Huang X, Wu Y, Sun D. Efficacy of Qigong Exercise for Treatment of Fatigue: A Systematic Review and Meta-Analysis. <i>Front Med (Lausanne)</i> 2021; 8: 684058.	Not focused on aetiology
Wang Y, Zhang S, Zhou Q, Meng M, Chen W. Efficacy of Shenlingbaizhu formula on irritable bowel syndrome: a systematic review. <i>J Tradit Chin Med</i> 2020; 40(6): 897-907.	Not focused on aetiology
Weiland A, Van de Kraats RE, Blankenstein AH, et al. Encounters between medical specialists and patients with medically unexplained physical symptoms; influences of communication on patient outcomes and use of health care: A literature overview. <i>Perspectives on Medical Education</i> 2012; 1(4): 192-206.	Not focused on aetiology
Wen JK. Folk belief, illness behavior and mental health in Taiwan. <i>Chang Gung Medical Journal / Chang Gung Memorial Hospital</i> 1998; 21(1): 1-12.	Other FSS/pediatric condition
Wen Y, Li J, Long Q, Yue CC, He B, Tang XG. The efficacy and safety of probiotics for patients with constipation-predominant irritable bowel syndrome: A systematic review and meta-analysis based on seventeen randomized controlled trials. <i>Int J Surg</i> 2020; 79: 111-9.	Not focused on aetiology
Wensel TM, Luthin DR. Linaclotide: A novel approach to the treatment of irritable bowel syndrome. <i>Annals of Pharmacotherapy</i> 2011; 45(12): 1535-43.	Not focused on aetiology
Wheat AL, Larkin KT. Biofeedback of heart rate variability and related physiology: A critical review. <i>Applied Psychophysiology and Biofeedback</i> 2010; 35(3): 229-42.	Not focused on aetiology
Wicksell RK, Kemani M, Jensen K, et al. Acceptance and commitment therapy for fibromyalgia: A randomized controlled trial. <i>European Journal of Pain</i> 2013; 17(4): 599-611.	No review
Williamson TJ, Bolles CL, Hedges NA, Kettner NW. Chronic Primary Pain of the Spine: an Integrative Perspective Part 1. <i>SN Comprehensive Clinical Medicine</i> 2021; 3(2): 461-72.	Other functional syndrome
Wofford JC. Meta-analysis of relations of stress propensity with subjective stress and strain. <i>Psychological Reports</i> 2002; 91(3 Pt 2): 1133-6.	Other FSS/pediatric condition
Wong WM. Restriction of FODMAP in the management of bloating in irritable bowel syndrome. <i>Singapore Medical Journal</i> 2016; 57(9): 476-84.	Not focused on aetiology
World Gastroenterology Organisation Advisory Board. Systematic review on the management of irritable bowel syndrome in the European Union. <i>European Journal of Gastroenterology &amp; Hepatology</i> 2007; 19 S(Suppl. 1): S11-37.	Not focused on aetiology

Reference	Reason of exclusion
Wright A, Fisher PL, Baker N, O'Rourke L, Cherry MG. Perfectionism, depression and anxiety in chronic fatigue syndrome: A systematic review. <i>Journal of Psychosomatic Research</i> 2021; 140: 10.	Not focused on aetiology
Wu J, Fu Q, Yang S, Wang H, Li Y. Efficacy and Safety of Acupoint Catgut Embedding for Diarrhea-Predominant Irritable Bowel Syndrome and Constipation-Predominant Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis. <i>Evid Based Complement Alternat Med</i> 2020; 2020: 5812320.	Not focused on aetiology
Wu YB, Dai YK, Zhang L, et al. Pharmacological treatments of Chinese herbal medicine for irritable bowel syndrome in adults: A network meta-analysis of randomized controlled trials. <i>PLoS ONE</i> 2021; 16(8 August).	Not focused on aetiology
Xu D, Chen VL, Steiner CA, et al. Efficacy of Fecal Microbiota Transplantation in Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis. <i>Am J Gastroenterol</i> 2019;114(7):1043-50. doi: 10.14309/ajg.0000000000000198	Not focused on aetiology
Xue K, Wang Y, Wang X, et al. The efficacy and safety of moxibustion for chronic fatigue syndrome: A protocol for systematic review and meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(18): e25742.	No review
Yahya AS, Khawaja S. Electroconvulsive Therapy as a Treatment for Somatization Disorder. <i>Prim Care Companion CNS Disord</i> 2021; 23(3).	Not focused on aetiology
Yang J, Bauer BA, Wu Q, et al. Impact of herbs and dietary supplements in patients with fibromyalgia: A protocol for a systematic review and meta-analysis of randomized controlled trials. <i>Medicine (Baltimore)</i> 2020; 99(21): e20257.	No review
Yao CK, Muir JG, Gibson PR. Review article: Insights into colonic protein fermentation, its modulation and potential health implications. <i>Alimentary Pharmacology and Therapeutics</i> 2016; 43(2): 181-96.	Other FSS/pediatric condition
Yin ZH, Wang LJ, Cheng Y, et al. Acupuncture for Chronic Fatigue Syndrome: An Overview of Systematic Reviews. <i>Chin J Integr Med</i> 2021; 27(12): 940-6.	Not focused on aetiology
Yong WC, Sanguankeo A, Upala S. Effect of vitamin D supplementation in chronic widespread pain: a systematic review and meta-analysis. <i>Clin Rheumatol</i> 2017;36(12):2825-33. doi: 10.1007/s10067-017-3754-y	Not focused on aetiology
Zhang ML, Fu HJ, Tang Y, Luo ZG, Li JY, Li R. Effect of acupoint catgut embedding in chronic fatigue syndrome patients: A protocol for systematic review and meta-analysis. <i>Medicine (Baltimore)</i> 2021; 100(5): e23946.	No review



Reference	Reason of exclusion
Zhao Q, Fang Y, Yan C, et al. Effects of linaclotide in the treatment of chronic constipation and irritable bowel syndrome with constipation: a meta-analysis. <i>Z Gastroenterol</i> 2021.	Not focused on aetiology
Zheng H, Jin S, Shen YL, et al. Chinese Herbal Medicine for Irritable Bowel Syndrome: A Meta-Analysis and Trial Sequential Analysis of Randomized Controlled Trials. <i>Front Pharmacol</i> 2021; 12: 694741.	Not focused on aetiology
Zyoud SH, Smale S, Waring WS, Sweileh W, Al-Jabi SW. Global research trends in the microbiome related to irritable bowel syndrome: A bibliometric and visualized study. <i>World Journal of Gastroenterology</i> 2021; 27(13): 1341-53.	Not focused on aetiology
Zhu CE, Yu B, Zhang W, Chen WH, Qi Q, Miao Y. Effectiveness and safety of transcranial direct current stimulation in fibromyalgia: A systematic review and meta-analysis. <i>Journal of Rehabilitation Medicine</i> 2017; 49(1): 2-9.	Not focused on aetiology

Note. FSS=functional somatic syndrome.

**Supplementary Material 4 (Continued).** Characteristics of included systematic reviews without meta-analysis (k=123) and systematic reviews with meta-analyses (k=132)

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Alciati et al. (2012)	SR	I	Rheumatol	FMS	49	N/A	N/A	critically low
Ahmed et al. (2021)	SR	UK	Gastroenterol Hepatol	IBS	14	16	552	moderate
Almenar-Perez et al. (2019)	SR	E, USA	Pharmacol Pharm	CFS/ME	0	0	0	moderate
Almutairi et al. (2020)	SR	UK, KSA	Med-Gen Intern	CFS	35	9	89	moderate
Anderson et al. (2012)	SR	USA	Psychiat	CFS/ME	35	1	66	low
Aroke et al. (2020)	SR	USA	Nurs	FMS+	18	18	30	moderate
Band et al. (2015)	SR	UK	Psychol-Clin	CFS/ME	14	21	155	low
Barbara et al. (2019)	SR	I, USA, CDN, UK, IND, S, SRB	Gastroenterol Hepatol	IBS	3	18	100	critically low
Beckers et al. (2017)	SR	NL, H	Gastroenterol Hepatol, Pharmacol Pharm	IBS	21	0	0	low
Bègue et al. (2019)	SR	CH, UK, USA	Neuroimag	SSD+	15	11	186	moderate
Berwick et al. (2021)	SR	UK	Neuroscie, Clin Neurol	FMS	48	11	381	moderate
Bjurstrom et al. (2016)	SR	USA	Neuroscie, Clin Neurol	FMS+	19	8	45	low

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Blundell et al. (2015)	SR	UK	Neuroscie, Immunol, Psychiat	CFS/ME	38	9	298	moderate
Borsini et al. (2014)	SR	UK	Psychol, Psychiat	CFS/ME, FMS	31	7	1,348	critically low
Browning et al. (2011)	SR	UK	Psychol, Psychiat	IBS, CFS/ME, FMS, SSD	N/A	N/A	N/A	critically low
Burns et al. (2019)	SR	AUS	Gastroenterol Hepatol	IBS+	7	10	133	moderate
Burton (2003)	SR	UK	Med-Gen Intern, Prim Health Care	MUS	N/A	N/A	N/A	critically low
Cagnie et al. (2014)	SR	B	Rheumatol	FMS	22	6	58	moderate
Capannolo et al. (2018)	SR	I	Gastroenterol Hepatol	IBS+	16	10	139	low
Carrozzino et al. (2018)	SR	I, DK	Psychology, Multidiscip Scie	IBS+	7	10	108	moderate
Chaves-Filho et al. (2019)	SR	BR, T, AUS	Neuroscie, Behav Scie	CFS/ME	17	10	176	low
Chey et al. (2015)	SR	USA	Med-Gen Intern	IBS	139	N/A	N/A	critically low
Chitkara et al. (2008)	SR	USA	Gastroenterol hepatol	IBS	25	20	333	critically low
Conversano et al. (2018)	SR	I	N/A	FMS	27	8	452	low
Coppieters et al. (2016)	SR	B, AUS	Neuroscie, Clin Neurol	FMS+	9	10	35	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Corbitt et al. (2019)	SR	AUS	Clin Neurol	CFS/ME	28	14	403	moderate
Creed (2019)	SR	UK	Gastroenterol Hepatol, Pharmacol Pharm	IBS	15	0	0	moderate
Creed et al. (2004)	SR	UK, USA	Psychiat	SSD+	47	N/A	N/A	low
De Melo et al. (2021)	SR	BR	Neuroscie, Psychol, Clin Neurol, Psychiat, Neuroimag	FMS	20	10	133	low
Dias et al. (2019)	SR	BR	Gastroenterol Hepatol, Pharmacol Pharm	FMS	36	10	83	low
Diaz-Piedra et al. (2015)	SR	E , USA	Neuroscie, Clin Neurol	FMS	34	10	442	moderate
Di Lernia et al. (2016)	SR	I	Neuroscie, Behav Scie	FMS, SSD	6	18	45	moderate
Douzenis et al. (2013)	SR	GR	Psychiat	IBS, CFS/ME, FMS, SSD	17	20	456	low
Duan et al. (2019)	SR	AUS	Gastroenterol Hepatol	IBS	12	15	100	moderate
Duboc et al. (2020)	SR	F	Gastroenterol Hepatol	IBS+	34	0	0	critically low
Du Preez et al. (2018)	SR	CHN	Med-Gen Intern	IBS	77	0	0	moderate
Eaton-Fitch et al. (2019)	SR	AUS	Med-Gen Intern	CFS/ME	0	0	0	moderate
Ellis et al. (2018)	SR	UK	Rheumatol	FMS	4	63	600	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
El-Serag et al. (2004)	SR	USA	Gastroenterol Hepatol, Pharmacol Pharm	IBS	14	13	163	low
Erdrich et al. (2020)	SR	AUS	Orthop, Rheumatol	FMS	11	17	105	moderate
Eriksen (2018)	SR	N	Med-Res Exp	CFS/ME	26	11	205	moderate
Feinle-Bisset et al. (2013)	SR	AUS , E	Gastroenterol Hepatol	IBS	N/A	N/A	N/A	critically low
Filler et al. (2014)	SR	USA	Biochemist Mol Biol	CFS/ME	25	4	328	low
Ford et al. (2011)	SR	UK, AUS	Gastroenterol Hepatol	IBS	16	10	77	low
Gadour et al. (2021)	SR	UK, UAE	Med-General Intern	IBS	3	259	865	moderate
Gerdle et al. (2020)	SR	S	Biochem Res Meth	FMS+	27	12	41	moderate
Guney et al. (2019)	SR	D	Multidiscip Scie	FMS, IBS, CFS/ME, SSD	14	25	84	moderate
Hanning et al. (2021)	SR	USA, B	Gastroenterol Hepatol	IBS	66	10	183	moderate
Hartman et al. (2009)	SR	NL	Psychiat	SSD+	13	25	1,596	moderate
Holden et al. (2020)	SR	AUS	Med-Res Exp	CFS	19	6	193	moderate
Hughes et al. (2016)	SR	UK	Psychol-Clin	CFS/ME	8	11	48	moderate
Huth et al. (2020)	SR	AUS	Med-Res Exp	CFS	11	4	162	moderate
Iloson et al. (2021)	SR	S	Obstet Gyn	SSD	7	67	2,264	moderate
Janssen et al. (1998)	SR	NL	Gastroenterol Hepatol	IBS	16	25	1,301	low

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Jensen et al. (2016)	SR	S, D, USA, CDN	Anesth, Neuroscie, Clin Neurol	IBS, FMS	12	7	40	low
Kerr et al. (2017)	SR	CH, NZ	Clin Neurol	FMS	7	1	482	moderate
Keskindag et al. (2017)	SR	TR	Med-Gen Intern	FMS	16	16	2,196	moderate
Koutouratsas et al. (2019)	SR	GR, CY	Gastroenterol Hepatol	IBS+	13	15	40	low
Krammer et al. (2019)	SR	D	Gastroenterol Hepatol	IBS	46	11	298	moderate
Kregel et al. (2017)	SR	B	Anesth, Clin Neurol	FMS+	9	10	25	moderate
Krivzov et al. (2021)	SR	B	Psychol, Educ Psychol Appl	SSD	23	1	1	critically low
Kumar et al. (2017)	SR	IND	Pharmacol Pharm	IBS	51	1	7,130	critically low
Lam et al. (2019)	SR	CHN	Neuroscie	IBS	12	11	46	moderate
Larsson et al. (2012)	SR	S	Anesth, Neuroscie, Clin Neurol	FMS	15	53	3,276	moderate
Lenhart et al. (2017)	SR	US	Nutr Diet	IBS	29	8	197	critically low
Lenoir et al. (2020)	SR	B	Anest, Med-Gen Intern	FMS	18	7	199	moderate
Levine et al. (2020)	SR	USA, IL	Psychiat	FMS	14	0	0	low
Low et al. (2020)	SR	SGP	Clin Neurol, Gastroenterol Hepatol	IBS	27	28	24,633	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Lukkahatai et al. (2013)	SR	USA	Psychiat	CFS/ME+	14	16	288	low
Lyall et al. (2003)	SR	UK	Psychiat	CFS/ME	58	10	579	moderate
Macina et al. (2021)	SR	CH	Psychiat	SSD	8	35	810	moderate
Malfliet et al. (2017)	SR	B, NL	Anesth, Neuroscie, Clin Neurol	IBS, FMS	16	9	82	moderate
Mansueto et al. (2015)	SR	I	Nutr Diet	IBS	31	4	183	low
Martinez-C. et al. (2018)	SR	E, USA	Neuroscie, Clin Neurol	FMS+	22	10	77	moderate
Martínez-M. et al. (2014)	SR	MEX	Rheumatol	IBS, CFS/ME, FMS	196	N/A	N/A	critically low
Martins et al. (2020)	SR	BR	Nutr Diet	FMS	5	59	522	moderate
Martin-Viñas et al. (2016)	SR	USA	Gastroenterol Hepatol	IBS	66	10	100	critically low
Matricon et al. (2012)	SR	F	Gastroenterol Hepatol, Pharmacol Pharm	IBS	74	1	77	moderate
Mazurak et al. (2012)	SR	D , UA	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	20	8	165	low
McKenzie et al. (2016)	SR	UK	Nutr Diet	IBS	86	N/A	N/A	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Meeus et al. (2007)	SR	B	Anesth, Neuroscie, Clin Neurol	CFS/ME	11	3	145	low
Meeus et al. (2013)	SR	B	Anesth, Neuroscie, Clin Neurol	CFS/ME, FMS	16	10	50	critically low
Mendonca et al. (2021)	SR	BR	N/A	FMS	21	15	86	moderate
Menzies et al. (2021)	SR	USA	Pub Environ Occup H	CFS+	2	68	87	moderate
Monzón-Nomdedeu et al. (2021)	SR	E, UK	Cell Biol, Cell Tissue Eng	FMS, CFS	18	10	105	low
Nelson et al. (2021)	SR	CDN, CHN, UK	Neuroscie, Clin Neurol	CFS	11	6	45	low
Niec et al. (1998)	SR	AUS	Gastroenterol Hepatol	IBS	7	5	200	low
Nijs et al. (2011)	SR	B	Rehabil	CFS/ME	15	N/A	N/A	low
Noghani et al. (2016)	SR	IR	N/A	IBS+	N/A	N/A	N/A	critically low
Ohlsson et al. (2016)	SR	S	Surg	IBS+	N/A	N/A	N/A	critically low
Ortiz-Lucas et al. (2010)	SR	E	Gastroenterol Hepatol	IBS	17	8	134	critically low
Pae et al. (2007)	SR	ROK , USA	Med-Gen Intern	IBS	N/A	N/A	N/A	critically low
Papadopoulos et al. (2011)	SR	UK	Endocrinol Metab	CFS/ME	30	12	81	low



<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Park et al. (2006)	SR	USA	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	12	10	428	critically low
Penfold et al. (2016)	SR	CDN	Psychiat	CFS/ME, FMS	8	30	132	moderate
Pittayanon et al. (2019)	SR	CDN, T	Gastroenterol Hepatol	IBS	11	50	385	moderate
Pogreba-B. et al. (2019)	SR	USA	Food Scie Technol	IBS+	12	19	205	low
Polli et al. (2020)	SR	B	Neuroscie, Clin Neurol	FMS, IBS+	37	10	1,708	moderate
Pyke et al. (2017)	SR	AUS	Anesth, Clin Neurol	FMS	14	29	409	moderate
Raanes et al. (2021)	SR	N	Psychiatry	CFS	14	18	265	low
Rezende et al. (2019)	SR	BR	Nutr Diet	FMS	12	20	325	moderate
Romans et al. (2008)	SR	CDN	Psychiat	IBS, CFS/ME, FMS	29	13	440	low
Rossetti et al. (2021)	SR	I, F	Neuroscie, Behav Scie	SSD	45	14	28	moderate
Salari et al. (2011)	SR	IR	Gastroenterol Hepatol	IBS	10	N/A	N/A	critically low
Schaper et al. (2021)	SR	D	Psychiat	IBS+	37	8	57	moderate
Schulte et al. (2011)	SR	D	Psychiat, Pediatr	SSD	5	22	71	low
Schwille-Kiuntke et al. (2011)	SR	D	Gastroenterol Hepatol	IBS	23	38	1,300	critically low

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Shan et al. (2020)	SR	AUS	Med-Res Exp	CFS	63	0	0	low
Simpson et al. (2020)	SR	AUS	Psychiat	IBS+	17	8	110	moderate
Sirri et al. (2017)	SR	I	Psychol-Clin, Psychiat, Subst Abuse	IBS	12	18	49	moderate
Teodoro et al. (2018)	SR	UK, P	Psychiat, Clin Neurol, Surg	FMS, CFS/ME	34	10	306	low
Transeth et al. (2020)	SR	N	Gastroenterol Hepatol	IBS+	13	5	113	low
Tu et al. (2017)	SR	USA	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	21	6	142	low
V. Cauwenbergh et al. (2014)	SR	B	Med-Gen Intern, Med- Res Exp	CFS/ME	27	14	75	low
Wang, Yin et al. (2017)	SR	USA	Neuroscie, Immunol, Psychiat	CFS/ME+	16	35	171	moderate
Wedlake et al. (2009)	SR	UK	Gastroenterol Hepatol, Pharmacol Pharm	IBS	18	13	197	moderate
Whitehead et al. (2002)	SR	USA	Gastroenterol Hepatol	IBS	30	20	546	critically low
Whitehead et al. (2016)	SR	USA, S	Neuroscie, Gastroenterol Hepatol Clin Neurol	IBS	15	10	210	critically low

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Williams et al. (2018)	SR	UK	Nutr Diet	IBS	29	1	1,244	moderate
Windgassen et al. (2017)	SR	UK	Psychol-Clin	IBS	9	54	195	moderate
Wong et al. (2019)	SR	CHN	N/A	IBS	14	16	503	moderate
Yang et al. (2019)	SR	CHN, J	Med-Res Exp	CFS/ME	23	8	61	moderate
Yavne et al. (2018)	SR	IL	Rheumatol	FMS	11	18	1,813	low
Abedi et al. (2021)	SR+MA	IR	Microbiol, Immunol	IBS	32	3	105	moderate
Adeyemo et al. (2010)	SR+MA	USA	Gastroenterol Hepatol, Pharmacol Pharm	IBS	39	7	2,510	low
Afari et al. (2014)	SR+MA	USA	Psychol, Psychiat	IBS, CFS/ME, FMS	71	26	20,917	moderate
Albusoda et al. (2018)	SR+MA	UK, DK, D	Gastroenterol Hepatol, Pharmacol Pharm	IBS	14	12	70	high
Amiri, Esmaili et al. (2021)	SR+MA	CDN, IR	Rehabil, Sport Scie	FMS	9	8	137	high
Amiri, Rhudy et al. (2021)	SR+MA	CDN, USA	Clin Neurol	FMS	9	8	134	moderate
Andrés-Rodríguez et al. (2020)	SR+MA	E, UK, T, CDN	Neuroscie, Psychiat, Immunol	FMS	29	16	250	high
Areeshi et al. (2013)	SR+MA	KSA , IND	Multidiscip Scie	IBS	12	41	390	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Ayoub et al. (2019)	SR+MA	CDN, USA	Anesth, Neuroscie, Clin Neurol	FMS, IBS, SSD	8	10	25	moderate
Azami et al. (2017)	SR+MA	IR	Psychiat	CFS/ME	43	12	173	moderate
Barhorst et al. (2020)	SR+MA	USA	Sport Scie	FMS, CFS	37	6	141	low
Barhorst et al. (2021)	SR+MA	USA	Anesth, Med-Gen Intern	FMS, CFS	15	8	48	low
Bashashati et al. (2018)	SR+MA	USA	Neuroscie  Gastroenterol Hepatol,  Clin Neurol	IBS	10	17	177	moderate
Bashashati et al. (2017)	SR+MA	USA, IR, CDN, I, AUS, CHN, ROK, F, S, MEX	Immunol, Biochemist Mol Biol, Cell Biol	IBS	12	9	107	moderate
Bashashati et al. (2012)	SR+MA	CDN , IR, D	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	5	23	230	low

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Bashashati et al. (2014)	SR+MA	CDN, IR, IRL, USA, S, MEX	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	9	30	76	moderate
Berryman et al. (2014)	SR+MA	AUS, UK	Psychol-Clin	FMS	10	15	63	low
Boeckle et al. (2016)	SR+MA	A, D	Neuroimag	SSD+	10	9	25	low
Bonfiglio et al. (2018)	SR+MA	E, S, UK, NL, D, FIN	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	38	24	24,633	critically low
Chen et al. (2018)	SR+MA	CHN, USA	Gastroenterol Hepatol	IBS	14	15	743	moderate
Chen et al. (2010)	SR+MA	USA	Med-Gen Intern	SSD+	3	6	28	moderate
Chen et al. (2021)	SR+MA	AUS, UK	Psychiat	SSD	10	136	641	moderate
Cheng Huang et al. (2020)	SR+MA	RC	Neuroscie, Behav Scie	FMS, IBD, CFS, SSD	85	0	0	low
Chiaffarino et al. (2021)	SR+MA	I	Obstet Gyn	IBS+	11	0	0	moderate
Cockshell et al. (2010)	SR+MA	AUS	Psychol Psychiat	CFS/ME	52	172	1,509	low
Czogalla et al. (2015)	SR+MA	UK , USA, MEX, B, D	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	12	23	895	low

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Dai et al. (2012)	SR+MA	CHN	Gastroenterol Hepatol, Surg	IBS	21	3	2,041	low
Davenport et al. (2019)	SR+MA	USA	Pediatr	CFS/ME	6	9	60	low
Dehghan et al. (2016)	SR+MA	D, USA, E	Neuroscie, Radiol Nucl Med Med Imag, Neuroimag	FMS	37	6	40	low
D'Onghia et al. (2021)	SR+MA	I	Rheumatol	FMS	41	34	888	moderate
Esan et al. (2017)	SR+MA	UK	Med-Res Exp	IBS	12	6	57,425	moderate
Ford et al. (2009)	SR+MA	CDN , USA	Gastroenterol Hepatol	IBS	12	98	325	low
Franklin et al. (2019)	SR+MA	UK	Nutr Diet	CFS/ME	19	14	139	moderate
Gandhi et al. (2021)	SR+MA	AUS	Microbiol, Gastroenterol Hepatol	IBS+	17	23	296	moderate
Ghoshal et al. (2019)	SR+MA	IND	Gastroenterol Hepatol	IBS	119	0	0	moderate
Ghoshal et al. (2020)	SR+MA	IND	Gastroenterol Hepatol	IBS	37	12	331	moderate
Grayston et al. (2019)	SR+MA	UK, D, Q	Rheumatol	FMS	10	10	45	moderate
Guan et al. (2017)	SR+MA	CHN	Oncol, Cell Biol	IBS	9	10	54	moderate
Guo et al. (2021)	SR+MA	CHN	Clin Neurol	IBS+	6	32	27,437	moderate
Halvorson et al. (2006)	SR+MA	USA, ET	Gastroenterol Hepatol	IBS	8	97	584,626	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Harvie et al. (2017)	SR+MA	AUS, B	Neuroscie, Clin Neurol	IBS, FMS	4	14	30	moderate
Häuser et al. (2011)	SR+MA	D	Rheumatol	FMS	18	18	465	moderate
Hsiao et al. (2015)	SR+MA	RC	Anesth	FMS	12	8	743	low
Jia et al. (2019)	SR+MA	CHN	Pharmacol Pharm, Med-Res Exp	IBS	55	11	5,566	low
Jiang et al. (2018)	SR+MA	CHN	Oncol, Cell Biol	IBS	147	9	2,569	moderate
Joustra et al. (2017)	SR+MA	NL	Multidiscip Scie	CFS/ME, FMS	45	5	205	high
Kaleycheva et al. (2021)	SR+MA	UK	Psychiat, Psychol-Clin	FMS	19	26	515	moderate
Kamp et al. (2015)	SR+MA	NL , UK	Gastroenterol Hepatol	IBS	10	23	555	moderate
Klem et al. (2017)	SR+MA	USA, BR	Gastroenterol Hepatol	IBS	45	1	1,200	high
Kumbhare et al. (2021)	SR+MA	CDN	Neuroscie, Clin Neurol, Anesth	FMS	54	8	1,125	moderate
Lee et al. (2012)	SR+MA	ROK	Rheumatol	FMS	18	37	209	critically low
Lee, et al. (2015)	SR+MA	ROK	Rheumatol	FMS	12	37	209	low
Lewis et al. (2012)	SR+MA	NZ	Neuroscie, Clin Neurol	IBS, CFS/ME, FMS	30	N/A	N/A	moderate
Li et al. (2020)	SR+MA	CHN	Med-Gen Intern	IBS	8	5	335	high

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Lin et al. (2016)	SR+MA	RC, USA	Biotechnol Appl Microbiol, Med-Res Exp,	FMS	7	10	30	critically low
Liu et al. (2013)	SR+MA	CHN	Gastroenterol Hepatol	IBS	11	8	106	low
Liu et al. (2017)	SR+MA	CHN	Gastroenterol Hepatol	IBS	13	3	50	low
Liu et al. (2021)	SR+MA	CHN	Microbiol, Immunol	IBS	6	15	113	critically low
Lovell et al. (2012a)	SR+MA	UK	Gastroenterol Hepatol	IBS	80	7	2,294	low
Lovell et al. (2012b)	SR+MA	UK	Gastroenterol Hepatol	IBS	56	25	2,294	low
Loy et al. (2016)	SR+MA	USA	Sport Scie	CFS/ME	7	9	33	critically low
Luo et al. (2021)	SR+MA	CHN	Gastroenterol Hepatol	IBS	10	15	154	moderate
Makrani et al. (2017)	SR+MA	IR	Clin Neurol	FMS	13	6	118	moderate
Maksoud, Eaton-Finch et al. (2021)	SR+MA	AUS	H Policy Ser	CFS	20	10	53	moderate
Marcuzzi et al. (2019)	SR+MA	AUS	Gastroenterol Hepatol	IBS	9	7	169	moderate
Martinez-Cald. et al. (2019)	SR+MA	E	Anesth, Clin Neurol	FMS+	8	23	415	high
McAndrew et al. (2019)	SR+MA	USA	Psychol-Clin	FMS, IBS, CFS/ME	50	43	555	moderate
Mohr et al. (2021)	SR+MA	D, USA, E, UK, BIH, AUS, S,	Cell Biol, Med-Res Exp	IBS	13	1	305	low



Review	Review Type*	Country <sup>#</sup>	Journal category <sup>†</sup>	Diagnostic category <sup>‡</sup>	k <sub>studies</sub>	n <sub>min</sub>	n <sub>max</sub>	Total quality score <sup>§</sup>
		IRL, CHL, GR, B, CH						
Mozghani et al. (2021)	SR+MA	IR	Virol	CFS	11	15	319	high
Nahman-A. et al. (2016)	SR+MA	IL	Anesth, Clin Neurol	IBS, FMS	5	20	50	critically low
Nelson et al. (2019)	SR+MA	AUS	Med-Gen Intern	CFS/ME	36	6	427	moderate
Ng et al. (2019a)	SR+MA	SGP	Gastroenterol Hepatol	IBS	32	6	178	moderate
Ng et al. (2019b)	SR+MA	SGP, UK	Gastroenterol Hepatol	IBS	37	12	555	moderate
Nourrisson et al. (2014)	SR+MA	F	Multidiscip Scie	IBS	11	21	877	critically low
Novo et al. (2017)	SR+MA	P, BR	Psychol-Soc	FMS	8	17	46	moderate
Núñez-Fuentes (2021)	SR+MA	E	Med-General Intern	FMS	19	15	487	high
O'Brien et al. (2018)	SR+MA	USA, BR, E	Neuroscie, Clin Neurol	FMS	5	26	500	moderate
Ohlsson (2017)	SR+MA	S	Gastroenterol Hepatol	IBS+	6	78	254	critically low
O'Mahony et al. (2021)	SR+MA	UK	Rheumatol	FMS	22	16	255	low
Ortiz-Rubio et al. (2021)	SR+MA	E	Resp Sys	FMS	4	46	100	moderate
Pan et al. (2014)	SR+MA	CHN	Gastroenterol Hepatol	IBS	7	60	385	moderate
Paras et al. (2009)	SR+MA	USA	Med-Gen Intern	IBS, FMS	10	16	1,196	high
Park et al. (2021)	SR+MA	ROK	Rheumatol	FMS	5	37	207	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Powell et al. (2013)	SR+MA	UK , D	Neuroscie, Endocrinol Metab, Psychiat	CFS/ME	8	14	108	low
Qin et al. (2013)	SR+MA	CHN , FIN	Gastroenterol Hepatol	IBS	8	23	312	moderate
Rathbone et al. (2016)	SR+MA	CDN	Clin Neurol	FMS+	15	15	23	critically low
Rezaei et al. (2020)	SR+MA	IR	Psychiat	SSD	7	10	148	moderate
Robles et al. (2019)	SR+MA	USA, MEX	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	64	6	427	moderate
Rostami et al. (2017)	SR+MA	IR	Parasitol	IBS	9	31	335	moderate
Sadowski et al. (2020)	SR+MA	USA	Gastroenterol Hepatol	IBS+	19	15	165	high
Safadi et al. (2021)	SR+MA	USA, UK	Biochemist Mol Biol, Neuroscie, Psychiat	CFS	19	15	90	high
Saha et al. (2021)	SR+MA	USA	Gastroenterol Hepatol	IBS	15	7	4,122	high
Saidi et al. (2020)	SR+MA	S	Reprod Biol, Obstet Gyn	IBS	8	34	11,461	moderate
Schierhout et al. (2020)	SR+MA	AUS, F	Infect Dis	FMS+	10	11	103	high
Schmaling et al. (2018)	SR+MA	USA	Psychol-Clin	SSD	23	10	90	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Schwille-Kiuntke et al. (2015)	SR+MA	D	Gastroenterol Hepatol, Pharmacol Pharm	IBS	6	60	852	high
Shah et al. (2020)	SR+MA	AUS	Gastroenterol Hepatol	IBS	24	14	1,582	moderate
Shah et al. (2010)	SR+MA	USA	Gastroenterol Hepatol	IBS	11	17	225	low
Shi et al. (2016)	SR+MA	CHN	Rheumatol	FMS	7	10	30	low
Sibelli et al. (2016)	SR+MA	UK	Psychol, Psychiat	IBS	11	86	5,250	moderate
Slattery et al. (2015)	SR+MA	UK	Gastroenterol Hepatol, Pharmacol Pharm	IBS	6	64	288	moderate
Strawbridge et al. (2019)	SR+MA	UK	Neuroscie, Behav Scie	CFS/ME	17	35	877	moderate
Sun et al. (2019)	SR+MA	CHN	Med-Gen Intern	IBS	4	46	0	moderate
Svendsen et al. (2019)	SR+MA	DK	Gastroenterol Hepatol	IBS	1	41	41	high
Tak et al. (2009)	SR+MA	NL , UK	Psychol, Behav Scie	IBS, CFS/ME, FMS	23	8	70	high
Tak et al. (2011)	SR+MA	NL , UK	Psychol, Behav Scie	IBS, CFS/ME, FMS	85	7	121	high
Talley et al. (2021)	SR+MA	AUS, UK, FIN, S	Pharmacol Pharm, Gastroenterol Hepatol	IBS+	3	37	179	critically low
Tammimäki et al. (2012)	SR+MA	USA, FIN	Biotechnol Appl Microbiol, Genet	FMS+	9	37	1,009	low

Review	Review Type*	Country <sup>#</sup>	Journal category <sup>†</sup>	Diagnostic category <sup>‡</sup>	k <sub>studies</sub>	n <sub>min</sub>	n <sub>max</sub>	Total quality score <sup>§</sup>
			Hered, Pharmacol Pharm					
Thabane et al. (2007)	SR+MA	CDN	Gastroenterol Hepatol, Pharmacol Pharm	IBS	18	38	1,368	moderate
Tillisch et al. (2011)	SR+MA	USA	Gastroenterol Hepatol	IBS	18	8	42	critically low
Tracy et al. (2016)	SR+MA	AUS	Anesth, Neuroscie, Clin Neurol	IBS, FMS	26	12	731	high
Ubeda-D'Ocasar (2020)	SR+MA	E	Med-Gen Intern	FMS	10	12	31	moderate
Üçeyler et al. (2011)	SR+MA	D	Orthop, Rheumatol	FMS	25	7	285	moderate
Van Kerkhoven et al. (2007)	SR+MA	NL	Gastroenterol Hepatol, Pharmacol Pharm	IBS	8	33	190	high
Varjú et al. (2019)	SR+MA	H, RO	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS	25	17	331	high
Vreijling et al. (2021)	SR+MA	NL	Psychol, Psychiat-Multidiscip	FMS, IBS, CFS	58	8	165	low
Wang et al. (2017)	SR+MA	USA	Med-Res Exp	IBS	9	10	114	moderate
Wang et al. (2019)	SR+MA	CHN	Nutr Diet	IBS	42	9	298	high
Wang et al. (2020)	SR+MA	CHN, KSA	Nutr Diet	IBS	23	8	60	moderate

<b>Review</b>	<b>Review Type*</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category<sup>‡</sup></b>	<b>k<sub>studies</sub></b>	<b>n<sub>min</sub></b>	<b>n<sub>max</sub></b>	<b>Total quality score<sup>§</sup></b>
Wang et al. (2021)	SR+MA	CHN	Med-Gen Intern	IBS	31	5	2,401	high
Wongtrakul et al. (2021)	SR+MA	T	Gastroenterol Hepatol	IBS+	11	0	0	moderate
Wu et al. (2017)	SR+MA	RC	Psychiat	FMS+	25	9	172	moderate
Wu et al. (2018)	SR+MA	NZ	Pub Environ Occup H, Nutr Diet	FMS	8	24	120	high
Yuta et al. (2013)	SR+MA	J	Neuroimag, Psychiat, Clin Neurol	FMS	4	10	30	low
Zhang et al. (2019)	SR+MA	CHN	Biotechnol Appl Microbiol, Med-Res Exp	IBS	94	99	71,813	low
Zhang, Duan et al. (2014)	SR+MA	CHN	Gastroenterol Hepatol	IBS	25	NA	NA	moderate
Zhang, Zhu et al. (2014)	SR+MA	CHN	Oncol, Pathol	FMS	8	37	113	moderate
Zhou et al. (2014)	SR+MA	CHN	Gastroenterol Hepatol	IBS	7	7	137	moderate
Zhu et al. (2014)	SR+MA	CHN	Gastroenterol Hepatol	IBS	97	7	2,294	low
Zhu et al. (2018)	SR+MA	CHN	Genet Hered	IBS	28	23	895	high
Zhu et al. (2019)	SR+MA	CHN	Gastroenterol Hepatol	IBS	27	6	186	low
Zhuang et al. (2017)	SR+MA	CHN	Gastroenterol Hepatol	IBS	17	10	63	low

*Note.*

\*SR=systematic review, MA=meta-analysis

#A=Austria, AUS=Australia, B=Belgium, BIH=Bosnia and Herzegovina, BR=Brazil, CDN=Canada, CH=Switzerland, CHL=Chile, CHN=China, CY=Cyprus, D=Germany, DK=Denmark, E=Spain, ET=Egypt, F=France, FIN=Finland, GR=Greece, H=Hungary, I=Italy, IND=India, IL=Israel, IR=Iran, IRL=Ireland, J=Japan, JO=Jordan, KSA=Saudi Arabia, LB=Lebanon, MEX=Mexico, N=Norway, NL=The Netherlands, NZ=New Zealand, P=Portugal, Q=Qatar, RC=Taiwan, RO=Romania, ROK=South Korea, S=Sweden, SGP=Singapore, SRB=Serbia, T=Thailand, TR=Turkey, UA=Ukraine, UAE=United Arab Emirates, UK=United Kingdom, USA=United States of America

†Journal Category (InCites Journal Citation Reports): Anesth=Anesthesiology SCIE, Behav Scie=Behavioral Sciences SCIE, Biochem Res Meth=Biochemical Research Methods SCIE, Biochemist Mol Biol=Biochemistry & Molecular Biology SCIE, Biotechnol Appl Microbiol=Biotechnology & Applied Microbiology SCIE, Biol=Biology SCIE, Cell Biol=Cell Biology SCIE, Cell Tissue Eng=Cell & Tissue Engineering SCIE, Clin Neurol=Clinical Neurology SCIE/ESCIE, Educ Psychol Appl=Educational Psychology, Applied SCIE, Endocrinol Metab=Endocrinology & Metabolism SCIE, Food Scie Technol=Food Sciences & Technology SCIE, Gastroenterol Hepatol=Gastroenterology & Hepatology SCIE, Genet Hered=Genetics Heredity SCIE, H Policy Ser=Health Policy & Services SCIE, Immunol=Immunology SCIE, Infect Dis=Infectious Diseases SCIE, Integr Complement Med =Integrative & Complementary Medicine SCIE, Med-Gen Intern=Medicine, General & Internal SCIE, Med-Res Exp=Medicine, Research & Experimental SCIE/ESCIE, Microbiol=Microbiology, Multidiscip Scie=Multidisciplinary Sciences SCIE, Neuroimag=Neuroimaging SCIE, Neuroscie=Neurosciences SCIE, Nurs=Nursing SCIE, Nutr Diet=Nutrition & Dietetics SCIE/ESCIE, Obstet Gyn=Obstetrics & Gynecology SCIE, Oncol=Oncology SCIE, Orthop=Orthopedics SCIE, Parasitol=Parasitology SCIE, Pathol=Pathology SCIE, Pediatr=Pediatrics SCIE, Pharmacol Pharm=Pharmacology & Pharmacy SCIE, Physiol=Physiology SCIE, Prim Health Care=Primary Health Care SCIE, Psychiat =Psychiatry SCIE/SSCI, Psychiat-Multidiscip=Psychiatry, Multidisciplinary SCIE, Psychol=Psychology SCIE, Psychol-Clin=Psychology, Clinical SSCI, Psychol-Multidiscip=Psychology, Multidisciplinary SSCI, Psychol-Soc=Psychology, Social SSCI, Pub Environ Occup H=Public, Environmental & Occupational Health SCIE, Radiol Nucl Med Med Imag =Radiology, Nuclear Medicine & Medical Imaging SCIE, Rehabil=Rehabilitation SCIE, Reprod Biol=Reproductive Biology SCIE, Resp Sys=Respiratory System SCIE, Rheumatol=Rheumatology SCIE/ESCIE, Sport Scie=Sport Sciences SCIE, Subst Abuse=Substance Abuse SSCI, Surg=Surgery SCIE, Urol Nephrol=Urology & Nephrology SCIE, Virol=Virology SCIE, ESCIE=Emerging Sources Citation Index, SCIE=Science Citation Index Expanded™, SSCI=Social Sciences Citation Index™.

‡IBS=irritable bowel syndrome, CFS/ME=chronic fatigue syndrome/Myalgic Encephalomyelitis, FMS=fibromyalgia syndrome, SSD=somatic symptom disorder, MUS=medically unexplained symptoms. + after IBS, CFS/ME etc. indicates that this review had a broad diagnostic approach (cf. Figure 1), although data for only one of the four diagnosis explored in this umbrella review could be extracted

§Overall rating of confidence in the results of the review according to AMSTAR-2: critically low=more than one critical flaw with or without non-critical weaknesses, low=one critical flaw with or without non-critical weaknesses, moderate=more than one non-critical weakness, high=No or one non-critical weakness

N/A=Not available.

**Supplementary Material 5 (Continued).** Characteristics of included narrative reviews (k=197)

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Aaron et al. (2003)	USA	Rheumatol	IBS, CFS/ME, FMS
Abbi et al. (2013)	USA	Med-Gen Intern	CFS/ME, FMS
Abeles et al. (2007)	USA	Med-Gen Intern	FMS
Ablin et al. (2014)	IL	Anesth, Neuroscie, Clin Neurol	FMS
Ablin et al. (2015)	IL	Rheumatol	FMS
Agargun (2002)	TR	N/A	FMS
Alaradi et al. (2002)	USA	Med-Gen Intern	IBS
Algera et al. (2019)	S, NL, B	Nutr Diet	IBS
Anderson et al. (2014)	UK , AUS, T	Psychiat	CFS/ME, SSD
Arnold et al. (2016)	USA, UK	Med-Gen Intern	FMS
Ariani et al. (2021)	I	Rheumatol	FMS
Attademo et al. (2018)	I, B	Prim Health Care	FMS
Atzeni et al. (2017)	I	Pharmacol Pharm	FMS
Asha et al. (2020)	JO	N/A	IBS
Baker (2005)	USA	Pharmacol Pharm	IBS
Barbara et al. (2018)	I, E	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS
Barboi et al. (2020)	CDN, USA	Neuroscie	CFS/ME+
Bazzichi et al. (2011)	I	Rheumatol	FMS

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Bergeron et al. (2021)	CDN	Neuroscie	FMS+
Binder et al. (2004)	USA	Psychol, Clin Neurol	CFS/ME, FMS
Birrer (2002)	USA	Med-Gen Intern	IBS
Blanco et al. (2005)	E, USA	Med-Res Exp	FMS
Blanco et al. (2007)	E, S, USA	Rehabil, Rheumatol	FMS
Borman (2001)	UK	Pharmacol Pharm	IBS
Bourke et al. (2015)	UK	Psychiat	IBS, CFS/ME, FMS
Bradesi et al. (2006)	USA	Pharmacol Pharm	IBS
Bruta et al. (2021)	IND	N/A	IBS
Buskila et al. (2001)	IL	Rheumatol	CFS/ME, FMS
Camilleri (2009)	USA	Endocrinol Metab	IBS
Camilleri et al. (2002)	USA, UK, CDN	Gastroenterol Hepatol, Pharmacol Pharm	IBS
Camilleri et al. (2017)	USA, B	Gastroenterol Hepatol	IBS
Canakis et al. (2020)	USA	Endocrinol Metab	IBS
Carco et al. (2020)	I	Microbiol, Immunol	IBS+
Casellas et al. (2018)	E	Gastroenterol Hepatol,	IBS
Cash et al. (2004)	USA	N/A	IBS
Chen et al. (2016)	CHN	Endocrinol Metab	IBS, CFS/ME, FMS
Cheng Li et al. (2020)	CHN	Med-Gen Intern	IBS



<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Chey et al. (2020)	USA	Gastroenterol Hepatol	IBS
Chey et al. (2006)	USA	N/A	IBS
Cirillo et al. (2011)	B	Endocrinol Metab	IBS
Clark et al. (2005)	UK	Psychol-Clin	CFS/ME
Clauw (2014)	USA	Med-Gen Intern	FMS
Collebrusco et al. (2014)	I	Integr Complement Med	IBS
Coskun Benlidayi (2020)	TR	Rheumatol	FMS
Costedio et al. (2007)	USA	Gastroenterol Hepatol, Surg	IBS
Cuatrecasas et al. (2014)	E	Endocrinol Metab	FMS
Deary et al. (2007)	UK	Psychol-Clin	IBS, CFS/ME, SSD
Dibble et al. (2020)	UK	Biochemist Mol Biol, Genet Hered	CFS
Drossman (2016)	USA	Gastroenterol Hepatol	IBS
Edwards et al. (2006)	USA	Rheumatol	FMS
Farhadi et al. (2001)	USA	Pharmacol Pharm	IBS
Farmer et al. (2014)	UK	Neuroscie, Clin Neurol	IBS
Farthing (2004)	UK	Gastroenterol Hepatol	IBS
Ferreira et al. (2020)	PT	Gastroenterol Hepatol	IBS
Finan et al. (2015)	USA	Anesth, Clin Neurol	FMS
Fisher et al. (2019)	USA	Nutr Diet	IBS

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Fujimori (2021)	J	Gastroenterol Hepatol	IBS+
Fukudo et al. (2021)	J	Gastroenterol Hepatol	IBS
Gazouli et al. (2016)	GR, B, BIH, N, IL, SRB, CY, PL, E, D	Gastroenterol Hepatol	IBS
Geraghty et al. (2016)	UK, IRL	Psychol-Clin	CFS/ME
Gerwyn et al. (2017)	UK, AUS	Rheumatol	CFS/ME
Goebel et al. (2021)	UK, HU, AT, S	Immunol	FMS+
Gotts et al. (2014)	UK	Med-Res Exp	CFS/ME
Griffith et al. (2008)	USA	Psychol-Clin, Psychiat	CFS/ME
Grundy et al. (2006)	UK, USA, CDN, CHN	Gastroenterol Hepatol	IBS
Hackshaw (2020)	USA	Pathol	FMS
Haddad et al. (2021a)	USA	Clin Neurol	FMS
Haddad et al. (2021b)	USA	Psychol-Clin	FMS
Hamilton et al. (2012)	USA	Psychol-Clin	FMS
Hempel et al. (2008)	UK	Psychol, Psychiat	CFS/ME
Hemati et al. (2020)	IR	Integr Complement Med	FMS
Henningsen et al. (2018)	D, UK	Psychol, Psychiat	FMS, IBS, CFS, SSD
Henningsen et al. (2007)	D	Med-Gen Intern	IBS, CFS/ME, FMS

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Hulens et al. (2018)	B	Clin Neurol	FMS, CFS/ME
Imamura et al. (2009)	BR , USA	Anesth, Neuroscie, Clin Neurol	FMS
Imperatore et al. (2017)	I	Gastroenterol Hepatol	IBS+
Jackson et al. (2012)	AUS	Clin Neurol	CFS/ME
Johanson (2004)	USA	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS
Johnson et al. (2020)	USA, UK	Neuroscie, Clin Neurol, Gastroenterol Hepatol	IBS
Jones (2016)	UK	Rheumatol	IBS, FMS
Jones et al. (2007)	USA , UK	Psychol, Psychiat	IBS+
Kalcev et al. (2021)	I	Chemist Appl	FMS
Karvelas et al. (2011)	USA	Clin Neurol	FMS
Keszthelyi et al. (2012)	NL	Gastroenterol Hepatol, Physiol	IBS
Keszthelyi et al. (2012)	NL, S	Anesth, Neuroscie, Clin Neurol	IBS
Knoop et al. (2010)	NL, UK	Psychiat	CFS/ME
Koloski et al. (2020)	AUS	Gastroenterol Hepatol	IBS+
Koumbi et al. (2020)	GR	Nutr Diet	IBS+
Kranzler et al. (2002)	USA, CDN	Psychiat, Pharmacol Pharm	FMS
Kravitz et al. (2015)	USA	Rheumatol	FMS
Kumbhare et al. (2018)	CDN	Rheumatol	FMS
Kurlyandchik et al. (2021)	AUS	Integr Complement Med	FMS

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Kwong et al. (2020)	AUS	Dent Oral Surg Med	SSD+
Lacourt et al. (2018)	USA	Neuroscie, Behav Scie	CFS/ME+
Larrimore et al. (2019)	USA	Med-Gen Intern	CFS/ME
Lawson (2016)	UK	Pharmacol Pharm	FMS
Livshits et al. (2021)	IL	Anesth, Med-General Intern	FMS
Mai (2004)	CDN	Psychiat	SSD
Maksoud, Balinas et al. (2021)	AUS	Med-Res Exp	CFS
Maquet et al. (2006)	B	N/A	CFS/ME
Mari et al. (2020)	IL	Med-General Intern	IBS
Marino (2014)	AUS	Med-Res Exp	CFS/ME
Marshall (2009)	CDN	Urol Nephrol	IBS
Martínez-Lavín (2018)	MEX	Rheumatol	FMS
Masquelier et al. (2021)	B	Rheumatol	FMS
Matisz et al. (2021)	CDN	Neuroscie, Behav Scie	IBS+
Mayer et al. (2006)	USA	Gastroenterol Hepatol, Pharmacol Pharm	IBS
Mertz (2003)	USA	Med-Gen Intern	IBS
Michalak et al. (2016)	PL	Pharmacol Pharm	IBS
Mir et al. (2003)	IND, USA	N/A	IBS

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Moldofsky (2008)	CDN	Rehabil, Rheumatol	CFS/ME, FMS
Morris, Anderson et al. (2017)	UK, AUS, BR, T, BG	Neuroscie	CFS/ME
Morris, Berk et al. (2017)	UK, AUS, NL	Neuroscie	CFS/ME
Morris, Berk et al. (2016)	AUS, UK, T, BR	Neuroscie	CFS/ME
Morris et al. (2013)	UK, PL, AUS, T	Med-Gen Intern	CFS/ME
Morris, Walder et al. (2016)	UK, AUS, PL, T, BR	Neuroscie	CFS/ME
Naylor et al. (2017)	AUS	Clin Neurol	FMS+
Nee et al. (2021)	USA	Pharmacol Pharm, Gastroenterol Hepatol	IBS
Nelkowska (2020)	PL	Gastroenterol Hepatol	IBS
Nezu et al. (2001)	USA	Psychol-Clin, Psychiat	CFS/ME, FMS, SSD
Nijs et al. (2008)	B	Pharmacol Pharm	CFS/ME
Nijs, Crombez et al. (2012)	B, NL	Anesth	CFS/ME
Nijs, Meeus et al. (2012)	B	Med-Gen Intern, Med-Res Exp	CFS/ME
Noddin et al. (2005)	USA	N/A	IBS
Noor et al. (2021)	USA, IR, I	N/A	CFS
Nouvenne et al. (2018)	I	N/A	IBS+
O'Brien (2017)	UK	Gastroenterol Hepatol	IBS+
O'Neal et al. (2021)	USA	Med-Gen Intern	CFS

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Ostojic (2016)	SRB	Med-Res Exp	CFS/ME
Outlaw et al. (2006)	USA	Gastroenterol Hepatol	IBS
Pagliai et al. (2020)	I	Nutr Diet	FMS
Paine (2021)	UK	Pharmacol Phar, Gastroenterol Hepatol	IBS
Pandey et al. (2020)	USA	Integr Complement Med	IBS
Pastrak et al. (2021)	CDN, USA, LB	Med-Gen Intern	FMS
Poenaru et al. (2021)	CND	Infect Dis	CFS
Pongratz et al. (1997)	D	Rehabil	FMS
Prins et al. (2006)	NL	Med-Gen Intern	CFS/ME
Ranjith (2005)	UK	Pub Environ Occup H	CFS/ME
Rao et al. (2007)	USA	Psychiat	FMS
Raphael et al. (2004)	USA	Clin Neurol	FMS+
Rekatsina et al. (2019)	UK, I, CY, USA	Clin Neurol	FMS+
Riedl et al. (2008)	D	Psychiat	IBS
Řiháček et al. (2020)	CZ	Psychol-Clin	SSD
Rimbaut et al. (2016)	B	Med-Gen Intern	CFS/ME
Rodiño-Janeiro et al. (2018)	E	Pharmacol Pharm, Med-Res Exp	IBS
Roerink et al. (2017)	NL, USA	Neuroscie, Immunol	CFS/ME+
Roudsari et al. (2019)	IR, BR	Pharmacol Pharm	IBS

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Rutherford et al. (2016)	UK	Geriatr Gerontol	CFS/ME
Sadeghi et al. (2019)	IR	N/A	IBS
Sancassiani et al. (2017)	I, BR	Psychiat	FMS
Sarzi-Puttini et al. (2020)	I	Rheumatol	FMS
Shaver et al. (2018)	USA, ZA	Clin Neurol	FMS, CFS/ME
Shaver (2004)	USA	Nurs	FMS
Simren et al. (2013)	S, I, UK, USA, CDN, NL	Gastroenterol Hepatol	IBS
Singh et al. (2018)	USA	Gastroenterol Hepatol	IBS
Slyepchenko et al. (2017)	CDN, AUS, T, BR, NL, USA, E	Psychol, Psychiat	IBS, CFS/ME
Smith et al. (2002)	USA	N/A	FMS
Smith et al. (2011)	USA	Med-Gen Intern	FMS
Smith et al. (2014)	USA	Neuroscie, Endocrinol Metab	IBS, FMS
Spiller (2003)	UK	Gastroenterol Hepatol	IBS
Spiller (2007)	UK	N/A	IBS
Spiller (2008)	UK	Pharmacol Pharm	IBS
Spinelli (2007)	I	Pharmacol Pharm	IBS
Staud et al. (2006)	USA	Rheumatol	FMS
Strassheim et al. (2017)	UK	Rehabil	CFS/ME

<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Sun et al. (2020)	CHN	Gastroenterol Hepatol	IBS
Tak et al. (2010)	NL	Psychiat	IBS, CFS/ME, FMS
Tang et al. (2021)	CHN	Oncol, Med-Res Exp	IBS
Teckchandani et al. (2021)	USA	Neuroscie, Clin Neurol, Anesth	FMS
Tiersky et al. (1997)	USA	Psychol, Clin Neurol	CFS/ME
Toljan et al. (2017)	HR, USA	Clin Neurol	IBS+
Tozlu et al. (2021)	USA	Gastroenterol Hepatol	IBS
Van Elzakker et al. (2019)	USA	Neuroscie, Clin Neurol	CFS/ME
van Ravenzwaaij et al. (2010)	NL	N/A	MUS
Van West et al. (2001)	B, NL, USA	Immunol, Oncol, Pharmacol Pharm	FMS
Vasant et al. (2021)	UK, USA	Gastroenterol Hepatol	IBS
Vincent et al. (2013)	USA	Rheumatol	FMS
Wallace (1991)	UK	Med-Gen Intern	CFS/ME+
Wallis et al. (2017)	AUS	Med-Res Exp	CFS/ME
Weltens et al. (2018)	B, J	Multidiscip Scie	IBS+
Whelan (2011)	UK	Endocrinol Metab, Nutr Diet	IBS
Whelan et al. (2013)	UK, IRL	Gastroenterol Hepatol	IBS
Whitehead et al. (1998)	USA	Gastroenterol Hepatol	IBS
Williams et al. (2006)	USA	Rheumatol	FMS



<b>Study</b>	<b>Country<sup>#</sup></b>	<b>Journal category<sup>†</sup></b>	<b>Diagnostic category <sup>†</sup></b>
Witthöft et al. (2010)	D	Psychol	IBS, CFS/ME, FMS, SSD
Wood (2013)	USA	Pharmacol Pharm	IBS
Wouters (2011)	B	Neuroscie, Gastroenterol Hepatol, Clin Neurol	IBS
Xiao et al. (2020)	CHN	Gastroenterol Hepatol	IBS
Xiong et al. (2020)	CHN	Med-Gen Intern	IBS
Yamano et al. (2021)	J	Biochemist Mol Biol, Chemist Multidiscip	CFS
Yang et al. (2021)	RC, USA	N/A	IBS
Yunus (2007)	USA	Rheumatol	IBS, CFS/ME, FMS
Zamuner et al. (2019)	CHL, BR	Clin Neurol	FMS
Zhang et al. (2016)	CHN, USA	Gastroenterol Hepatol	FMS+
Zhou et al. (2018)	USA	Neuroscie, Clin Neurol	IBS
Zielińska et al. (2018)	PL	Pharmacol Pharm	IBS
Zigich et al. (2013)	USA	Gastroenterol Hepatol, Nurs	IBS

*Note.*

<sup>#</sup>AUS=Australia, AT=Austria, B=Belgium, BIH=Bosnia and Herzegovina, BR=Brazil, BG=Bulgaria, CDN=Canada, CHL=Chile, CHN=China, CY=Cyprus, CZ=Czechia, D=Germany, E=Spain, GR=Greece, HR=Croatia, HU=Hungary, I=Italy, IND=India, IL=Israel, IR=Iran, IRL=Ireland, J=Japan, JO=Jordan, MEX=Mexico, N=Norway, NL=The Netherlands, PL=Poland, PT=Portugal, RC=Taiwan, S=Sweden, SRB=Serbia, T=Thailand, TR=Turkey, UK=United Kingdom, USA=United States of America, ZA=South Africa

<sup>†</sup>Journal Category (InCites Journal Citation Reports): Anesth=Anesthesiology SCIE, Behav Scie=Behavioral Sciences SCIE, Biochemist Mol Biol=Biochemistry & Molecular Biology SCIE, Chemist Appl=Chemistry, Applied, Chemist Multidiscip=Chemistry, Multidisciplinary, Clin Neurol=Clinical Neurology SCIE, Dent Oral Surg Med=Dentistry, Oral Surgery & Medicine, Endocrinol Metab=Endocrinology & Metabolism SCIE, Gastroenterol Hepatol=Gastroenterology & Hepatology SCIE/ESCIE, Genet Hered=Genetics Heredity SCIE, Geriatr Gerontol=Geriatrics &

Gerontology ESCIE, Immunol=Immunology SCIE, Infect Dis=Infectious Diseases SCIE Integr Complement Med =Integrative & Complementary Medicine SCIE, Med-Gen Intern=Medicine, General & Internal SCIE, Med-Res Exp=Medicine, Research & Experimental SCIE/ESCIE, Microbiol=Microbiology, Multidiscip Scie=Multidisciplinary Sciences SCIE, Neuroscie=Neurosciences SCIE, Nurs=Nursing SCIE, Nutr Diet=Nutrition & Dietetics SCIE, Oncol=Oncology SCIE, Pathol=Pathology SCIE, Pharmacol Pharm=Pharmacology & Pharmacy SCIE, Physiol=Physiology SCIE, Prim Health Care=Primary Health Care SCIE, Psychiat =Psychiatry SCIE/SSCI, Psychol=Psychology SCIE, Psychol-Clin=Psychology, Pub Environ Occup H=Public, Environmental & Occupational Health SCIE, Rehabil=Rehabilitation SCIE, Rheumatol=Rheumatology SCIE, Surg=Surgery SCIE, Urol Nephrol=Urology & Nephrology SCIE, ESCIE=Emerging Sources Citation Index, SCIE=Science Citation Index Expanded<sup>TM</sup>, SSCI=Social Sciences Citation Index<sup>TM</sup>.  
‡IBS=irritable bowel syndrome, CFS/ME=chronic fatigue syndrome/Myalgic Encephalomyelitis, FMS=fibromyalgia syndrome, SSD=somatic symptom disorder, MUS=medically unexplained symptoms. +after IBS, CFS/ME etc. indicates that this review had a broad diagnostic approach (cf. Figure 2), although data for only one of the four diagnosis explored in this umbrella review could be extracted

**Supplementary Material 6A (Continued).** Specific biological factors investigated in diagnosis-specific systematic reviews (FMS, IBS, CFS/ME and SSD) or systematic reviews that investigated at least two of these diagnoses simultaneously (combinations of FSS/SSD)

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
<b>Nervous system</b>					
Central sensitization Endogenous excitatory (Temporal Summation) or inhibitory (Conditioned Pain Modulation) pain modulation Brain activity or connectivity during (anticipation of) pain induction Brain regions showing structural or functional alterations Total or regional gray matter volume Hippocampal N-acetylaspartate Glutamate levels in the brain Microglial activation Small fiber pathology Interoception (accuracy, sensibility, awareness) Nociceptive flexion reflex Alteration of postural balance Temperature sensitivity	Alciati et al., 2012, Yuta et al. 2013, Cagnie et al. 2014, Diaz-Piedra et al. 2015, Bjurstrom et al. 2016, Coppieters et al. 2016, Dehghan et al. 2016, Lin et al 2016, Pyke et al 2016, Keskindag et al. 2017, Kregel et al. 2017, Pyke et al. 2017, Wu et al. 2017, O'Brien et al. 2018,	Pae et al. 2007, Tillisch et al. 2011, Salari 2011, Noghani et al. 2016, Albusoda et al. 2018, Marcuzzi et al. 2019, Schaper et al. 2021	Meeus et al. 2007, Chaves-Filho et al. 2019, Shan et al. 2020, Almutairi et al. 2020, Nelson et al. 2021	Boeckle et al. 2016, Rossetti et al. 2021	Browning et al. 2011 [FMS + IBS + CFS/ME + SSD], Lewis et al. 2012 [FMS + IBS + CFS/ME], Jensen et al. 2016 [FMS + IBS], Malfliet et al. 2017 [FMS + IBS], DiLernia et al. 2016 [FMS +SSD], Ayoub et al. 2019 [FMS + IBS + SSD], Nahman-Averbuch et al. 2016 [IBS + FMS]

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
	Dias et al. 2019, Grayston et al. 2019, Lenoir et al. 2020, Amiri Esmaili et al. 2021, Amiri Rhudy et al. 2021, De Melo et al. 2021, Núñez-Fuentes et al. 2021, Berwick et al. 2021				
<b>Sleep, fatigue, and circadian rhythm</b>					
Nighttime activity levels (fragmentation index, periodic movement of the legs) Sleep (onset) latency, time, number of awakenings and efficiency Number of sleep cycles and sleep stages Brain waves during sleep stages (number and threshold of arousals, Alpha power in various non-REM stages or total sleep, intrusion of alpha wave sleep and NREM (non-rapid eye movement) sleep in delta sleep, Sleep spindles in stage non-REM2) Sleep disorders (Sleep apnea)		Tu et al. 2017, Creed 2019, Duboc et al. 2020	Maksoud, Eaton-Finch et al. 2021, Menzies et al. 2021, Raanes et al. 2021		

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
Fatigue Circadian rhythm					
<b>HPA axis</b>					
Basal levels, total 24h output and circadian rhythm of cortisol Basal levels and circadian variation of ACTH Basal levels of DHEA and DHEAS Cortisol after dexamethasone suppression test Cortisol, ACTH, DHEA after stress test	Ubeda-D'Ocasar 2020	Schaper et al. 2021	Papadopoulos et al. 2011' Powell et al. 2013		Tak et al. 2011 [FMS + IBS + CFS/ME]
<b>Autonomic nervous system</b>					
Heart rate (baseline or during/after exercise, mental or orthostatic challenge) Heart rate variability (HRV, resting or during orthostatic challenge) Sympathetic skin response Stress reactivity		Whitehead et al. 2002, Mazurak et al. 2012, Liu et al. 2013, Sadowski et al. 2020, Schaper et al. 2021	Nijs et al. 2011, Van Cauwenbergh et al. 2014, Davenport et al. 2019, Nelson et al. 2019		Tak et al. 2009 [FMS + IBS + CFS/ME], Meeus et al. 2013 [FMS + IBS + CFS/ME], Martínez-Martínez et al. 2014 [FMS + IBS + CFS/ME], Tracy et al. 2016 [FMS + IBS], Cheng, Huan et al. 2020 [FMS + IBS + CFS + SSD], Vreijling et al. 2021 [FMS + IBS + CFS]
<b>Immune system</b>					

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
<p>Cytokines (Il-1-2-4-5-6-7-8-9-10-12-13-15-16-17-18-23, IFN, TNF, TGF)</p> <p>Chemokines (CXCL1-5-8-9-10-11, CCL2-3-4-5-7-11-13-17-19-20-22-24-26, SECTM1)</p> <p>Leukocytes: quantity, function, subpopulations, activation status (T-cells, B-cells, plasma cells, neutrophils, eosinophils, mast cells, macrophages, monocytes, NK-cells)</p> <p>Adhesion molecules (MAdCAM-1+)</p> <p>Regulatory factors and growth factors (EGR1, FOXP-3, G-CSF, M-CSF, VEGF, HGF, FGF, BDNF)</p> <p>Immunoglobulins (IgG, IgG1, IgM)</p> <p>Acute-phase proteins (C-reactive protein (CRP), ferritin)</p> <p>Fecal inflammatory markers (calprotectin, lactoferrin)</p> <p>Autoimmune disease (thyroid autoimmunity)</p>	<p>Üçeyler et al. 2011,</p> <p>Andrés-Rodríguez et al. 2020,</p> <p>Kumbhare et al. 2021,</p> <p>O'Mahoni et al. 2021,</p> <p>Park et al. 2021</p>	<p>Whitehead et al. 2002,</p> <p>Ortiz-Lucas et al. 2010,</p> <p>Salari et al. 2011,</p> <p>Ford et al. 2011,</p> <p>Matricon et al. 2012,</p> <p>Bashashati et al, 2014,</p> <p>Zhou et al. 2014,</p> <p>Martin-Viñas et al. 2016,</p> <p>Bashashati et al. 2017,</p> <p>Kumar et al. 2017,</p> <p>Bashashati et al. 2018,</p> <p>Capannolo et al. 2018,</p> <p>Barbara et al., 2019</p> <p>Burns et al. 2019,</p>	<p>Lyall et al. 2003,</p> <p>Blundell et al. 2015,</p> <p>Corbitt et al. 2019,</p> <p>Eaton-Fitch et al. 2019,</p> <p>Strawbridge et al. 2019,</p> <p>Yang et al. 2019,</p> <p>Raanes et al. 2021</p>		

	Fibromyalgia Syndrome	Irritable Bowel Syndrome	Chronic Fatigue Syndrome / Myalgic Encephalomyelitis	Somatic Symptom Disorder	Combinations of FSS/SSD
		Krammer et al. 2019, Robles et al. 2019, Schaper et al. 2021			
<b>Infection</b>					
<p>Bacterial (<i>Yersinia</i> spp., <i>Campylobacter</i> spp., <i>Clostridium difficile</i>, <i>Salmonella</i> spp., <i>Shigella</i> spp., <i>E. coli</i> spp., <i>Listeria</i>, <i>Helicobacter pylori</i>, antibodies to cytolethal distending toxin B (CdtB) or the flagellin antigen</p> <p>Viral (Borna Disease Virus, Norovirus, Human T-cell lymphotropic virus type 1 [HTLV-1], human herpes virus)</p> <p>Parasitic (<i>Giardia</i>, <i>Dientamoeba fragilis</i>, <i>Blastocystis</i> spp., <i>Cryptosporidium parvum</i>, <i>Cyclospora</i>)</p> <p>Acute gastro-enteritis (clinical characteristics)</p>	Schierhout et al. 2020	<p>Halvorson et al. 2006,</p> <p>Thabane et al. 2007,</p> <p>Salari et al. 2011,</p> <p>Dai et al. 2012,</p> <p>Nourrisson et al. 2014,</p> <p>Schwille-Kiuntke et al. 2015,</p> <p>Schwille-Kiuntke et al. 2011,</p> <p>Sibelli et al. 2016,</p> <p>Esan et al. 2017,</p>	<p>Azami 2017,</p> <p>Eriksen 2018,</p> <p>Mozhgani et al. 2021</p>		

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
		Klem et al. 2017, Rostami et al. 2017, Barbara et al. 2019, Creed 2019, Ng et al. 2019, Pogreba-Brown et al. 2019, Svendsen et al. 2019, Abedi et al. 2021, Li et al. 2020, Saha et al. 2021, Wang, Yin et al. 2021			
<b>Vitamins and minerals</b>					
Vitamins (A, B1, folic acid, B12, C, D, E) Minerals (iron (Fe), manganese (Mn), calcium (Ca), magnesium (Mg), sodium (Na), potassium (K), zinc (Zn), selenium (Se), chrome (Cr), phosphorus (P), copper (Cu),	Hsiao et al. 2015, Makrani et al. 2017, Ellis et al. 2018, Wu et al. 2018, Rezende et al. 2019,	Williams et al. 2018			Joustra et al. 2017 [FMS + CFS/ME]



	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
silver (Ag), boron (B), barium (Ba), bromine (Br), cadmium (Cd), cobalt (Co), cesium (Cs), mercury (Hg), iodine (I), lithium (Li), molybdenum (Mo), lead (Pb), rubidium (Rb), tin (Sn), strontium (Sr), uranium (U), vanadium (V))	Martins et al. 2020				
<b>Intestinal structure and function</b>					
Dysmotility Visceral hypersensitivity Intestinal permeability Lactose malabsorption and maldigestion Bile acid malabsorption Microscopic colitis Mucosal enteroendocrine cells (5-HT and Peptide YY containing enterochromaffin cells, cholecystokinin positive cells) Mucosal serotonin metabolism (serotonin levels, serotonin transporter levels, serotonin turnover) Enzyme levels (Trypsin, thrombin, $\alpha$ -1 sodium pump isozyme) Hormone levels (resistin, leptin, ghrelin) Transient receptor potential (TRP) channels Substance P and Substance P (NK-1) receptor levels		Whitehead et al. 2002, Pae et al. 2007, Wedlake et al, 2009, Salari et al. 2011, Matricon et al. 2012, Chey et al. 2015, Kamp et al. 2015, Slattery et al. 2015, McKenzie et al. 2016, Whitehead et al. 2016,			

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
		Beckers et al. 2017, Barbara et al. 2019, Koutouratsas et al. 2019, Varjú et al. 2019, Luo et al. 2021, Hanning et al. 2021, Schaper et al. 2021			
<b>Microbiome (intestinal bacterial composition)</b>					
Total bacteria count Bacteria type (Gram positive/negative, aerobic/anaerobic, pro-inflammatory/anti-inflammatory) Microbiota composition in feces, in mucosal biopsies or aspirates at level of: -Phylum: Proteobacteria, Bacteroidetes, Actinobacteria, Firmicutes, Firmicutes to Bacteroidetes ratio -Class: Gammaproteobacteria -Family: <i>Enterobacteriaceae</i> , <i>Lactobacillaceae</i>	Erdrich et al. 2020	Ford et al. 2009, Shah et al. 2010, Nourrisson et al. 2014, Chey et al. 2015, Liu et al. 2017, Zhuang et al. 2017, Chen et al. 2018, Barbara et al. 2019,	Du Preez et al. 2018, Safadi et al. 2021		

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
<p>-Genus: <i>Enterobacter</i>, <i>Bacteroides</i>, <i>Parabacteroides</i>, <i>Prevotella</i>, <i>Alistipes</i>, <i>Odoribacter</i>, <i>Barnesiella</i>, <i>Asaccharobacter</i>, <i>Bifidobacterium</i>, <i>Veillonella</i>, <i>Lactobacillus</i>, <i>Syntrophococcus</i>, <i>Dialister</i>, <i>Enterococcus</i>, <i>Clostridium</i>, <i>Lactonifactor</i>, <i>Roseburia</i>, <i>Fusobacterium</i>, <i>Holdemania</i></p> <p>-Species: <i>Escherichia coli</i>, <i>Bacteroides vulgatus</i>, <i>Bacteroides intestinalis</i>, <i>Bacteroides ovatus</i>, <i>Bacteroides plebeius</i>, <i>Bacteroides uniformis</i>, <i>Prevotella tannerae</i>, <i>Faecalibacterium prausnitzii</i>, <i>Enterococcus faecalis</i>, <i>Clostridium coccoides</i>, <i>Streptococcus sanguinis</i>, <i>Subdoligranulum variabile</i></p> <p>Indexes of alpha-diversity in feces, mucosal biopsies or aspirates (Shannon index, Chao1 index, Numbers of operational taxonomic units (OTUs), Rare fraction of OTUs, Faith's phylogenetic diversity index, ACE index, Simpson index, Pielou's evenness index)</p> <p>Small intestinal bacterial overgrowth (SIBO)</p> <p>Fecal short-chain fatty acids (SCFAs) generated from gut microbiota (acetate, propionate, butyrate, isobutyrate, valerate, isovalerate)</p>		<p>Duan et al. 2019,</p> <p>Ghoshal et al. 2019,</p> <p>Pittayanon et al. 2019,</p> <p>Sun et al. 2019,</p> <p>Wang et al. 2019,</p> <p>Shah et al. 2020,</p> <p>Gandhi et al. 2021,</p> <p>Goshal et al. 2020,</p> <p>Liu et al. 2021,</p> <p>Wang et al. 2020,</p> <p>Simpson et al. 2020,</p> <p>Transeth et al. 2020</p>			

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
<b>Diet, BMI, physical exercise, tobacco/alcohol use</b>					
Dietary energy and macronutrients intake FODMAP(s) (fermentable oligo-, di-, and monosaccharides and polyols): fructose, lactose, fructans, galactans, polyols (sorbitol, mannitol, maltitol, xylitol, erythritol, polydextrose, and isomalt) Adverse food reactions (hypersensitivity, intolerance, allergy) BMI Smoking/alcohol Physical exercise	D’Onghia et al. 2021	Niec et al. 1998, Park et al. 2006, Feinle-Bisset et al. 2013, Chey et al. 2015 Mansueto et al., 2015 Noghani et al., 2016 Lenhart et al. 2017, Ohlsson 2017, Sirri et al. 2017, Creed 2019, Zhang et al. 2019, Talley et al. 2021			
<b>Mitochondrial structure or function and metabolism</b>					
Mitochondrial number, shape, and/or size in muscle biopsies Mitochondrial enzymes (Citrate synthase, Succinate reductase, Cytochrome-c oxidase,	Aroke et al. 2020		Filler et al. 2014, Holden et al. 2020		Monzón-Nomdedeu et al. 2021 [FMS + CFS]

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
<p>Myoadenylate deaminase, Lactate dehydrogenase, Coenzyme Q10)</p> <p>Oxidative and nitrosative stress (antioxidants, reactive oxygen and nitrogen species, F<sub>2</sub>-isoprostane)</p> <p>Mitochondrial energy metabolism (Adenosine Triphosphate [ATP] profile test, aerobic respiration and respiratory chain function , fatty acid metabolism assessed by carnitine levels)</p> <p>Metabolites (choline, ceramides, carnitines, glucose, ATP, 2 amino acids [lysine, tyrosine])</p> <p>Autoimmune response to mitochondrial phospholipids</p>					
<b>Muscular and cardiorespiratory metabolism</b>					
<p>Physical endurance (test duration)</p> <p>Peak oxygen uptake</p> <p>Respiratory exchange ratio</p> <p>Blood lactate</p> <p>Habitual physical activity (accelerometer)</p> <p>Muscle strength (peak isometric muscle power)</p> <p>Proteins involved in muscular metabolism</p> <p>Acute exercise</p> <p>Respiratory disturbance</p>	<p>Ortiz-Rubio et al. 2021,</p> <p>Gerdle et al. 2020</p>		<p>Nijs et al. 2011,</p> <p>Loy et al. 2016,</p> <p>Franklin et al. 2019,</p> <p>Huth et al. 2020</p>		<p>Barhost et al. 2020 [FMS + CFS],</p> <p>Barhost et al. 2021 [FMS + CFS]</p>
<b>Reproductive system</b>					

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
IgM antibodies (Gonadotropin-releasing hormone (GnRH)-1, GnRH receptor, Progonadoliberein-2) Menstrual cycle, menopausal status and hormone supplementation Endometriosis	Dias et al. 2019, Park et al. 2021	Adeyemo 2010, Ohlsson 2016, Saidi et al. 2020, Chiaffarino et al. 2021			
<b>Genetic polymorphisms and epigenetic changes</b>					
Genome-wide association study (GWAS) Specific polymorphisms related to: -Serotonin (transporter, receptor 2A and 3) -Cytokines (IL-1R14-6-8-10-23R, TNF- $\alpha$ , TGF- $\beta$ 1, DCP1) -HLA-subtypes (DQA1*01, combination of RAGE-374A, HLA-DRB1*1301, RAGE-374A, and HLA-DRB1*1301, DRB*1104) -Signal transduction (G-protein polypeptide 3, GN $\beta$ 3) -Neurotransmitter function or metabolism (COMT, TPH2, GTP cyclohydrolase I, ADRB2, GRIK2) -HPA-axis (SERPINA6, NR3C1) -Circadian rhythm (NPAS2) -Hormones (GHRL) -Mitochondrial function (CCT5, FAM173B genes) Epigenetic changes	Lee et al., 2012 Tammimäki et al. 2012, Zhang et al. 2014a, Lee et al. 2015, Kerr et al. 2017	Van Kerkhoven et al. 2007, Bashashati et al. 2012, Areeshi et al. 2013, Qin et al. 2013, Pan et al. 2014, Zhang et al. 2014b, Czogalla et al. 2015, Bashashati et al. 2017, Guan et al. 2017, Bonfiglio et al. 2018,	Filler et al. 2014, Wang et al. 2017, Almenar-Perez et al. 2019		Polli et al. 2020 [FMS + IBS]

	<b>Fibromyalgia Syndrome</b>	<b>Irritable Bowel Syndrome</b>	<b>Chronic Fatigue Syndrome / Myalgic Encephalomyelitis</b>	<b>Somatic Symptom Disorder</b>	<b>Combinations of FSS/SSD</b>
		Jiang et al. 2018, Zhu et al. 2018, Barbara et al. 2019, Koutouratsas et al. 2019, Jia et al. 2019, Zhu et al. 2019, Mohr et al. 2021			
<b>Parental biological factors</b>					
Parental IBS Parental substance abuse		Low et al. 2020			
<b>Comorbid FSS or somatic illness</b>					
- other FSS - other pain conditions - acute illness - migraine - joint hypermobility - restless leg syndrome - transaminitis		Creed et al. 2019, Whitehead et al. 2002, Wongtrakul et al. 2021, Guo et al. 2021, Gadour et al. 2021		Chen et al. 2021	
<b>Prenatal/perinatal factors</b>					
Low birth weight		Low et al. 2020			

*Note.*

CFS/ME=chronic fatigue syndrome/ myalgic encephalomyelitis, FMS=fibromyalgia, FSS=functional somatic syndrome, IBS=irritable bowel syndrome, SSD=somatic symptom disorder.



**Supplementary Material 6B (Continued).** Specific psychosocial factors investigated in diagnosis-specific systematic reviews (FMS, IBS, CFS/ME and SSD) or systematic reviews that investigated at least two of these diagnoses simultaneously (combinations of FSS/SSD)

	<b>Fibromyalgia</b>	<b>Irritable bowel syndrome</b>	<b>Chronic fatigue syndrome / Myalgic Encephalomyelitis</b>	<b>Somatoform disorders/ persistent MUS</b>	<b>Combinations of FSS/SSD*</b>
<b>Traumatization/ childhood abuse</b>					
<ul style="list-style-type: none"> <li>- psychological trauma</li> <li>- PTSD</li> <li>- childhood stressors, early stress</li> <li>- verbal, emotional, physical, sexual abuse traumatic events during childhood (loss of parents)</li> <li>- deployment of war</li> <li>- early life adversity</li> </ul>	Häuser et al. 2011, Yavne et al. 2018	Chitkara et al. 2008, Ng et al. 2019b, Chey et al. 2015, Farmer et al. 2014, Whitehead et al. 2002, Low et al. 2020		Chen et al. 2010, Iloson et al. 2021	Afari et al. 2014 [FMS + IBS + CFS/ME], Borsini et al. 2014 [FMS + CFS/ME], Paras et al. 2009 [FMS + IBS], Romans et al. 2008 [FMS + IBS + CFS/ME]
<b>Psychiatric comorbidity</b>					
<ul style="list-style-type: none"> <li>- comorbid mental disorder (incl. depression, anxiety, suicidality)</li> </ul>	Keskindag et al. 2017, Levine et al. 2020,	El-Serag et al. 2004, Janssen et al. 1998, Klem et al. 2017, Pae et al. 2007, Sibelli et al. 2016,	Meeus et al. 2007	Creed et al. 2004	Malfliet et al. 2017 [FMS + IBS]

	<b>Fibromyalgia</b>	<b>Irritable bowel syndrome</b>	<b>Chronic fatigue syndrome / Myalgic Encephalomyelitis</b>	<b>Somatoform disorders/ persistent MUS</b>	<b>Combinations of FSS/SSD*</b>
- childhood psychopathology (anxiety, depression)	Creed et al. 2019, Park et al. 2021	Whitehead et al. 2002, Low et al. 2020, Simpson et al. 2021			
<b>Affect/affect regulation</b>					
- Mood/ negative emotions (e.g. anger, anxiety) - affective factors - alexithymia - neuroticism - positive affect - emotional hypersensitivity - visceral anxiety - affect regulation	Alciati et al. 2012, Larsson et al. 2012	Carrozzino et al. 2018, Windgassen et al. 2017, Janssen et al. 1998, Marcuzzi et al. 2019, Nelkowska et al. 2020, Weltens et al. 2018	Raanes et al. 2021	Hartmann et al. 2009	Guney et al. 2019 [FMS + IBS + CFS/ME + SSD], Malfliet et al. 2017 [FMS + IBS]
<b>Stress</b>					
- stressors - stress - workstress - psychological stress/distress - emotional stress - stressful/adverse life event	Kaleycheva et al. 2020	Windgassen et al. 2017, Barbara et al. 2019, Chey et al. 2015, Creed et al. 2019, Janssen et al. 1998, Marcuzzi et al. 2019, Salari et al. 2011, Schaper et al. 2021	Anderson et al. 2012		

	<b>Fibromyalgia</b>	<b>Irritable bowel syndrome</b>	<b>Chronic fatigue syndrome / Myalgic Encephalomyelitis</b>	<b>Somatoform disorders/ persistent MUS</b>	<b>Combinations of FSS/SSD*</b>
<ul style="list-style-type: none"> <li>- psychosocial stress</li> <li>- chronic stress</li> <li>- perceived stress</li> <li>- (maladaptive) stress coping</li> </ul>					
<b>Cognitive functioning</b>					
<ul style="list-style-type: none"> <li>- executive function (response inhibition, complex EF, set shifting)</li> <li>- neuropsychological deficits/abnormalities</li> <li>- cognitive functioning,</li> <li>- “fibro-fog”</li> <li>- neuropsychiatric factors</li> </ul>	Berryman et al. 2014, Rathbone et al. 2016, Mendonca et al. 2021	Lam et al. 2019, Wong et al. 2019	Cockshell et al. 2010, Raanes et al. 2021		Teodoro et al. 2018 [FMS + CFS/ME]
<b>Symptom-related cognitive processes</b>					
<ul style="list-style-type: none"> <li>- cognitive processes</li> <li>- symptom cognitions</li> </ul>	Martinez-Calderon et al. 2019	Windgassen et al. 2017, Creed et al. 2019, Marcuzzi et al. 2019, Chey et al. 2015	Hughes et al. 2016, Lukkahatai et al. 2013	Burton et al. 2003	Douzenis et al. 2013 [FMS + IBS + CFS/ME + SSD],

	<b>Fibromyalgia</b>	<b>Irritable bowel syndrome</b>	<b>Chronic fatigue syndrome / Myalgic Encephalomyelitis</b>	<b>Somatoform disorders/ persistent MUS</b>	<b>Combinations of FSS/SSD*</b>
<ul style="list-style-type: none"> <li>- interpretation bias</li> <li>- catastrophizing</li> <li>- attributions</li> <li>- illness beliefs</li> <li>- misunderstanding of the illness</li> <li>- predictive coding</li> <li>- expectations</li> </ul>					McAndrew et al. 2019 [FMS + IBS + CFS/ME], Malfliet et al. 2017 [FMS + IBS]
<b>Symptom coping</b>					
<ul style="list-style-type: none"> <li>- self-efficacy</li> <li>- pain coping</li> </ul>	Martinez-Calderon et al. 2018				
<b>Somatosensory and attention processes</b>					
<ul style="list-style-type: none"> <li>- somatosensory awareness</li> <li>- health anxiety</li> <li>- hypochondriasis</li> <li>- hypervigilance</li> <li>- attention</li> <li>- interoception</li> <li>- self-directedness</li> <li>- abnormal proprioception</li> </ul>		Chey et al. 2015	Hughes et al. 2016	Burton et al. 2003	DiLernia et al. 2016 [FMS + SSD]
<b>Somatisation</b>					
<ul style="list-style-type: none"> <li>- Increased symptom</li> </ul>		Klem et al. 2017			

	<b>Fibromyalgia</b>	<b>Irritable bowel syndrome</b>	<b>Chronic fatigue syndrome / Myalgic Encephalomyelitis</b>	<b>Somatoform disorders/ persistent MUS</b>	<b>Combinations of FSS/SSD*</b>
reporting/somatization					
<b>Health-related quality of life</b>					
<ul style="list-style-type: none"> <li>- physical functioning</li> <li>- (occupational) disability</li> <li>- health perception</li> </ul>				Hartmann et al. 2009	
<b>Illness behaviors and fear avoidance</b>					
<ul style="list-style-type: none"> <li>- learned illness behavior</li> <li>- illness behaviors</li> <li>- exercise intolerance</li> <li>- physical deconditioning</li> <li>- physical activity avoidance</li> <li>- harm avoidance</li> <li>- inconsistent activity</li> <li>- fear of making symptoms worse</li> <li>- fear of movement</li> <li>- effort perceptions</li> </ul>		Chitkara et al. 2008, Windgassen et al. 2017, Chey et al. 2015, Creed et al. 2019		Hartmann et al. 2009	Malfliet et al. 2017 [FMS + IBS]

	<b>Fibromyalgia</b>	<b>Irritable bowel syndrome</b>	<b>Chronic fatigue syndrome / Myalgic Encephalomyelitis</b>	<b>Somatoform disorders/ persistent MUS</b>	<b>Combinations of FSS/SSD*</b>
- excessive health care utilization					
<b>Conditioning and learning</b>					
<ul style="list-style-type: none"> <li>- classical conditioning</li> <li>- various learning mechanisms</li> <li>- modeling of illness behavior</li> <li>- childhood experiences in general</li> <li>- physical symptoms in childhood</li> <li>- social learning and modeling/ reinforcement of symptoms by significant others</li> <li>- prior inappropriate treatment experience</li> </ul>		Chitkara et al. 2008		Schulte et al. 2011	Harvie et al. 2017 [FMS + IBS], Nahman-Averbuch et al. 2016 [FMS + IBS]
<b>Personality</b>					

	<b>Fibromyalgia</b>	<b>Irritable bowel syndrome</b>	<b>Chronic fatigue syndrome / Myalgic Encephalomyelitis</b>	<b>Somatoform disorders/ persistent MUS</b>	<b>Combinations of FSS/SSD*</b>
<ul style="list-style-type: none"> <li>- personality traits</li> <li>- personality disorder</li> <li>- psychological vulnerability</li> </ul>	Conversano et al. 2018, Novo et al. 2017, Penfold et al. 2016, Rezaei et al. 2020		Penfold et al. 2016	Schmaling et al. 2018, Macina et al. 2021	
<b>Health behaviors</b>					
<ul style="list-style-type: none"> <li>-health literacy</li> <li>-cultural conflict in diet management</li> </ul>		<i>Ahmed et al. 2021</i>			
<b>Symptom-related variables</b>					
<ul style="list-style-type: none"> <li>- duration of symptoms</li> <li>- diversity of pain sites</li> </ul>	Larsson et al. 2012	El-Serag et al. 2004, Janssen et al. 1998			
<b>Social and interpersonal factors</b>					
<ul style="list-style-type: none"> <li>- psychosocial stress</li> <li>- effect of significant other belief</li> <li>- other's response to patients' symptoms</li> </ul>		Chitkara et al. 2008, Zhu et al. 2014, Creed et al. 2019, Janssen et al. 1998, Low et al. 2020	Band et al. 2015, Raanes et al. 2021	Creed et al. 2004, Krivzov et al. 2021	

	<b>Fibromyalgia</b>	<b>Irritable bowel syndrome</b>	<b>Chronic fatigue syndrome / Myalgic Encephalomyelitis</b>	<b>Somatoform disorders/ persistent MUS</b>	<b>Combinations of FSS/SSD*</b>
<ul style="list-style-type: none"> <li>- physician-patient interaction</li> <li>- therapeutic relationship</li> <li>- interpersonal functioning</li> <li>- socioeconomic status (incl. crowded living conditions in low-income families)</li> <li>- marital status</li> <li>- years of education</li> <li>- ethnicity</li> <li>- cultural beliefs</li> <li>- home environment</li> <li>- parental punishment</li> </ul>					

*Note.*

Studies highlighted in **red** indicate reviews examining both biological and psychosocial factors.

CFS/ME=chronic fatigue syndrome/ myalgic encephalomyelitis, FMS=fibromyalgia, FSS=functional somatic syndrome, IBS=irritable bowel syndrome, MUS = medically unexplained symptoms, PTSD=posttraumatic stress disorder, SSD=somatic symptom disorder.



**Supplementary Material 7 (Continued).** Characteristics of systematic reviews with meta-analysis with an overall rating ‘high’ of confidence in the results of the review according to AMSTAR-2 (k=25)<sup>1</sup>.

Review ID <sup>1</sup>	No. of individuals included <sup>2</sup>	Risk factor	Diagnoses covered	Effect measures <sup>2</sup>	Interpretation of effect measure
Albusoda et al. 2018	$N_{\text{IBS}} = 253$ $\text{Range}_{\text{IBS}} = 11-46$ $N_{\text{Control}} = 216$ $\text{Range}_{\text{Control}} = 11-31$	Conditioned pain modulation (CPM)	IBS	<p>Deficient CPM in IBS patients versus in healthy controls:</p> <p>OR = 4.84 (95% CI 2.19 to 10.71; 12 studies, <math>N_{\text{C}}=253</math>, <math>N_{\text{CO}}=216</math>)</p> <p><math>g = 0.85</math> (95% CI 0.42 to 1.28; 12 studies, <math>N_{\text{C}}=253</math>, <math>N_{\text{CO}}=216</math>)</p>	<p>The risk of CPM being diminished is significantly increased in patients with IBS compared with healthy controls.</p> <p>The average CPM (mostly measured with a pain rating scale) was significantly lower in IBS patients. The average CPM in the IBS group was at the 19<sup>th</sup> percentile of the control group, meaning that only <math>\approx 19\%</math> of controls met the average CPM of IBS patients or a lower CPM.</p>
Amiri Esmaili et al. 2021	$N_{\text{FMS}} = 280$ $\text{Range}_{\text{FMS}} = 8-137$ $N_{\text{Control}} = 198$ $\text{Range}_{\text{Control}} = 10-99$	Nociceptive flexion reflex (NFR)	FMS	<p>NFR threshold in FMS patients versus health controls:</p> <p>SMD = -0.80 (95% CI -0.99 to -0.61; 6 studies, <math>N_{\text{C}}=280</math>, <math>N_{\text{CO}}=198</math>)</p>	<p>The average NFR threshold was significantly lower in individuals with fibromyalgia compared to healthy controls. The average NFR threshold in FMS patients was at the 79<sup>th</sup> percentile. Approximately only 21% of controls met the average NFR threshold of FMS patients or a lower threshold.</p>

Andres-Rodriguez et al.  
2020

$N_{\text{FMS}} = 1,597$   
 $\text{Range}_{\text{FMS}} = 7-197$   
  
 $N_{\text{Control}} = 1,183$   
 $\text{Range}_{\text{Control}} = 9-130$

Immune status      FMS

Immune status in FMS  
patients versus healthy  
controls:

IL-1 $\beta$ :  
 $g = -0.08$   
(95% CI -0.37 to 0.21; 6  
studies,  $N_{\text{C}}=290$ ,  $N_{\text{CO}}=291$ )

sIL-1RA:  
 $g = 0.44$   
(95% CI -0.01 to 0.90; 4  
studies,  $N_{\text{C}}=228$ ,  $N_{\text{CO}}=247$ )

IL-2:  
 $g = 0.25$   
(95% CI -0.38 to 0.87; 4  
studies,  $N_{\text{C}}=245$ ,  $N_{\text{CO}}=237$ )

IL-4:  
 $g = 0.50$   
(95% CI 0.03 to 0.98; 4  
studies,  $N_{\text{C}}=245$ ,  $N_{\text{CO}}=237$ )

IL-6:  
 $g = 0.36$   
(95% CI 0.09 to 0.63; 21  
studies,  $N_{\text{C}}=990$ ,  $N_{\text{CO}}=788$ )

IL-17A:  
 $g = 0.53$   
(95% CI 0.00 to 1.06; 4  
studies,  $N_{\text{C}}=254$ ,  $N_{\text{CO}}=264$ )

CXCL-8:  
 $g = 0.19$   
(95% CI -0.14 to 0.51; 15  
studies,  $N_{\text{C}}=767$ ,  $N_{\text{CO}}=685$ )

CXCL-11:  
 $g = 1.04$

The average concentration of IL-6, IL-4 and IL-17A was significantly higher in FMS patients and met by only  $\approx 35\%$ ,  $\approx 31\%$ , and  $\approx 31\%$  of controls, respectively.

				<p>(95% CI -0.17 to 2.24; 3 studies, <math>N_C=196</math>, <math>N_{CO}=225</math>)</p> <p>IL-10:  <math>g=0.17</math>  (95% CI -0.16 to 0.50; 9 studies, <math>N_C=468</math>, <math>N_{CO}=473</math>)</p> <p>hs-CRP:  <math>g=0.24</math>  (95% CI -0.02 to 0.50; 7 studies, <math>N_C=506</math>, <math>N_{CO}=278</math>)</p> <p>IFN-<math>\gamma</math>:  <math>g=-0.09</math>  (95% CI -0.90 to 0.73; 6 studies, <math>N_C=295</math>, <math>N_{CO}=296</math>)</p> <p>MCP-1:  <math>g=0.03</math>  (95% CI -0.38 to 0.43; 6 studies, <math>N_C=420</math>, <math>N_{CO}=399</math>)</p> <p>MIP-1<math>\beta</math>:  <math>g=0.15</math>  (95% CI -0.49 to 0.78; 3 studies, <math>N_C=178</math>, <math>N_{CO}=182</math>)</p> <p>TNF-<math>\alpha</math>:  <math>g=0.06</math>  (95% CI -0.35 to 0.47; 12 studies, <math>N_C=610</math>, <math>N_{CO}=562</math>)</p>	
Joustra et al. 2017	$N_{CFS/FMS} = 1,379$ $Range_{CFS/FMS} = 5-205$  $N_{Control} = 1,413$ $Range_{Control} = 9-205$	Vitamin and mineral status	CFS/ME, FMS	<p>Vitamin and mineral status in FMS/CFS patients versus controls:</p> <p>Vitamin C concentration:  <math>SMD=-0.55</math>  (95%CI -1.38 to 0.28; 5 studies, <math>N_C=124</math>, <math>N_{CO}=132</math>)</p>	The average concentration of vitamin C, D, calcium and magnesium did not differ between CFS/FMS patients and controls.

				<p>Vitamin D concentration: SMD=-0.17 (95%CI -0.41 to 0.06; 13 studies, N<sub>C</sub>=871, N<sub>CO</sub>=1,039)</p> <p>Vitamin E concentration: SMD=-1.57 (95%CI -3.09 to -0.05; 5 studies, N<sub>C</sub>=147, N<sub>CO</sub>=140)</p> <p>Calcium concentration: SMD=-0.15 (95%CI -0.50 to 0.19; 9 studies, N<sub>C</sub>=620, N<sub>CO</sub>=518)</p> <p>Magnesium concentration: SMD=-0.59 (95%CI -1.33 to 0.15; 6 studies, N<sub>C</sub>=203, N<sub>CO</sub>=148)</p>	The average concentration of Vitamin E in controls was significantly higher and met by only ≈6% of CFS/FMS patients.
Klem et al. 2017	<p>N<sub>IE exposed</sub> = 21,486 Range<sub>IE exposed</sub> = 23-5,894</p> <p>N<sub>IE nonexposed</sub> = 649,496 Range<sub>IE nonexposed</sub> = 27-584,308</p>	Infectious enteritis (foodborne illness and other forms of IE)	IBS	<p>IBS in patients with infectious enteritis versus healthy controls within past 12 month:</p> <p>RR = 4.23 (95%CI 3.15 to 5.69; 23 studies, N<sub>E</sub>=12,831, N<sub>NE</sub>=639,643)</p>	Risk of IBS is significantly, 4.2 times increased in patients with infectious enteritis within past 12 months compared to controls.
Li et al. 2020	<p>N<sub>IBS</sub> = 931 Range<sub>IBS</sub> = 5- 335</p> <p>N<sub>Control</sub> = 930 Range<sub>Control</sub> = 48 - 335</p>	Helicobacter (H) pylori infection	IBS	<p>Frequency of H. pylori infection in patients with IBS versus control participants without IBS (n=7: healthy controls, n=1: abdominal pain+diarrhoea, but no IBS):</p>	The frequency of H pylori infection did not differ between IBS patients and controls.

				<p>OR = 1.32 (95% CI 0.94 to 1.87; 8 studies, N<sub>C</sub>=931, N<sub>Co</sub>=930)</p> <p>Subgroup analysis: Frequency of H pylori infection in</p>	
Martinez-Calderon et al. 2019	<p>N<sub>CFS/FMS</sub> = 1,236 Range<sub>CFS/FMS</sub> =29-409</p>	Pain catastrophizing (PC)	CFS, FMS	<p>Cross-sectional associations between PC and pain outcomes within FMS/CFS patients:</p> <p>Correlation between pain intensity and PC: β=0.40 (95% CI 0.35 to 0.44; 9 studies, N<sub>C</sub>=1,103)</p> <p>Correlation between pain disability and PC: β=0.34 (95% CI 0.28 to 0.41; 4 studies, N<sub>C</sub>=616)</p>	PC is significantly associated with increased pain intensity and disability in patients with a combination of CFS and FMS to a moderate extent. PC explains 16% of the variance of pain intensity and 12% of the variance of pain disability in this sample.
Mozhgani et al. 2021	<p>N<sub>HHV-6 exposed</sub> = 754 Range<sub>HHV-6 exposed</sub> = 1-93</p> <p>N<sub>HHV-6 nonexposed</sub> = 1,174 Range<sub>HHV-6 nonexposed</sub> = 3-145</p>	Human herpes virus 6 (HHV-6) infection	CFS	<p>HHV-6 infection in CFS patients versus healthy controls:</p> <p>Based on PCR test: OR=2.43 (95% CI, 1.28-4.61, 11 studies, N<sub>E</sub>=442, N<sub>NE</sub>=688)</p> <p>Based on serology test: OR=5.89 (95% CI, 1.48-23.45, 6 studies, N<sub>E</sub>=425, N<sub>NE</sub>=486)</p>	<p>Risk of an HHV-6 infection is significantly, 1.7 times (PCR or serology test) increased in individuals with CFS compared to healthy controls.</p> <p>3</p>

Núñez-Fuentes et al. 2021	$N_{FMS} = 1,667$ $Range_{FMS} = 15-487$  $N_{Control} = 1,076$ $Range_{Control} = 15-250$	Postural balance	FMS	<p>Different measures of balance problems in patients with FMS versus healthy controls</p> <p>Static balance  SMD= 1.58 (95% CI, 1.16-1.99, 4 studies, <math>N_c=172</math>, <math>N_{Co}=114</math>)</p> <p>Dynamic balance  SMD=0.95 (95% CI, 0.60-1.30, 5 studies, <math>N_c=771</math>, <math>N_{Co}=412</math>)</p> <p>Functional balance  SMD=1.14 (95% CI, 0.69-1.59, 7 studies, <math>N_c=266</math>, <math>N_{Co}=227</math>)</p> <p>Balance confidence  SMD=1.19 (95% CI, 0.91-1.47, 3 studies, <math>N_c=112</math>, <math>N_{Co}=106</math>)</p> <p>Sensory Organization Test (SOT) – vestibular score  SMD=1.63 (95% CI, 0.47-2.80, 3 studies, <math>N_c=72</math>, <math>N_{Co}=69</math>)</p> <p>SOT – visual score  SMD=1.32 (95% CI, 0.15-2.48, 3 studies, <math>N_c=72</math>, <math>N_{Co}=69</math>)</p> <p>SOT – somatosensory score  SMD=-0.14 (95% CI, -1.29-1.01, 3 studies, <math>N_c=72</math>, <math>N_{Co}=69</math>)</p>	<p>FMS patients show significantly worse scores on all measures of postural balance that were applied in the included studies compared with healthy controls (except of Sensory Orientation Test-Somatosensory Score).</p> <p>Approximately only 6% of controls met the average static balance score of FMS patients or a worse score.</p>
---------------------------	--	------------------	-----	---	--

---

Postural stability in bipedal  
stance (eyes open)-AP Sway  
SMD=0.53 (95% CI, 0.13-  
2.58, 4 studies, N<sub>C</sub>=150,  
N<sub>CO</sub>=100)

Postural stability in bipedal  
stance (eyes open)-ML  
Sway  
SMD=0.71 (95% CI, 0.27-  
1.14, 4 studies, N<sub>C</sub>=150,  
N<sub>CO</sub>=100)

Postural stability in bipedal  
stance (eyes open)-sway  
area  
SMD=0.72 (95% CI, 0.28-  
1.16, 4 studies, N<sub>C</sub>=247,  
N<sub>CO</sub>=184)

Postural stability in bipedal  
stance (eyes closed)-AP  
Sway  
SMD=0.67 (95% CI, 0.37-  
0.96, 3 studies, N<sub>C</sub>=124,  
N<sub>CO</sub>=84)

Postural stability in bipedal  
stance (eyes closed)-ML  
Sway  
SMD=0.73 (95% CI, 0.43-  
1.02, 3 studies, N<sub>C</sub>=150,  
N<sub>CO</sub>=100)

Postural stability in bipedal  
stance (eyes closed)-sway  
area  
SMD=0.58 (95% CI, 0.28-  
0.87, 3 studies, N<sub>C</sub>=150,  
N<sub>CO</sub>=100)

Paras et al. 2009	$N_{\text{FMS/IBS}} = 648$ $\text{Range}_{\text{FMS/IBS}} = 16-173$  $N_{\text{Controls}} = 1,350$ $\text{Range}_{\text{Controls}} = 31-594$	Sexual abuse	FMS, Functional gastrointestinal disorders (FGD; mainly IBS)	<p>Sexual abuse in FGD (mainly IBS) patients versus controls: OR=2.43 (95% CI, 1.36 to 4.31, 5 studies, <math>N_c=425</math>, <math>N_{co}=1,075</math>)</p> <p>Sexual abuse in FMS patients versus controls: OR=1.61 (95% CI, 0.85 to 3.07, 4 studies, <math>N_c=223</math>, <math>N_{co}=275</math>)</p>	<p>History of sexual abuse in general and a lifetime diagnosis of FMS are not associated.</p> <p>Risk of a history of sexual abuse in general is significantly, 1.7 times increased in patients with FGD compared to controls.<sup>3</sup></p>
Sadowski et al. 2020	$N_{\text{IBS}} = 534$ $\text{Range}_{\text{IBS}} = 25-103$  $N_{\text{Controls}} = 458$ $\text{Range}_{\text{Controls}} = 15-123$	Sympathetic and parasympathetic nervous system (PNS) activity	IBS	<p>High-/Low-frequency (HF/LF) domain heart rate variability (HRV) at rest in patients with IBS compared with healthy controls:</p> <p>Short recording: HF HRV SMD=-0.35 (95% CI -0.63- -0.08, 4 studies, <math>N_c=194</math>, <math>N_{co}=210</math>)</p> <p>Long recording : HF HRV SMD=-0.06 (95% CI -0.31- 0.19, 3 studies, <math>N_c=168</math>, <math>N_{co}=96</math>)</p> <p>Short recording: LF HRV SMD=-0.21 (95% CI -0.49- 0.08, 3 studies, <math>N_c=131</math>, <math>N_{co}=87</math>)</p> <p>Long recording : LF HRV SMD=0.04 (95% CI -0.20- 0.29, 3 studies, <math>N_c=182</math>, <math>N_{co}=101</math>)</p>	Parasympathetic nervous system activity, represented through HF domain HRV (short recording) was significantly lower in people with IBS compared with healthy controls. The average HF domain HRV or a lower HRV was met by approximately only 35% of the control subjects.



Safadi et al. 2021 <sup>1</sup>	N/A	Gut dysbiosis	CFS	N/A	N/A
Saha et al. 2021	N = 1,218 Range <sub>E</sub> = 7-211	Clostridioides Difficile Infection (CDI)	IBS	Pooled prevalence of IBS in individuals with CDI:  21% (95% CI 8.2-35.7%, 13 studies, N=1,218)	Approximately 21% of patients develop IBS after CDI.
Schierhout et al. 2020 <sup>1</sup>	N/A	Human T-cell lymphotropic virus type 1 (HTLV-1) infection	FMS	N/A	N/A
Schwille-Kiuntke et al. 2015	N <sub>GI infection exposed</sub> = 1,598 Range <sub>GI infection exposed</sub> = 61-852  N <sub>GI infection nonexposed</sub> = 2,832 Range <sub>GI infection nonexposed</sub> = 27- 1,624	GI infection during travel	IBS	IBS in patients with travellers' diarrhoea versus in healthy controls within past 6 months: RR=3.35 (95%CI 2.22 to 5.05, 6 studies, N <sub>E</sub> =1,598, N <sub>NE</sub> =2,832).	Risk of IBS is significantly, 3.4 times increased in patients with travellers' diarrhoea within past six months compared to controls.
Svendsen et al. 2019	N <sub>AGE exposed</sub> = 4,199 Range <sub>AGE exposed</sub> = 32 – 1,368  N <sub>AGE nonexposed</sub> = 4,745 Range <sub>AGE nonexposed</sub> = 32 – 1,105	Acute gastroenteritis by specific pathogens	IBS	IBS after acute gastroenteritis (AGE) caused by specific pathogens versus controls without AGE:  Salmonella spp.: OR=5.46 (95% CI 2.34 to 12.77; 2 studies, N <sub>E</sub> =470, N <sub>NE</sub> =414)  Shigella spp.: OR=13.83	Risk of IBS is significantly increased in patients with acute enteritis caused by Salmonella spp. or by Shigella spp., compared with controls.  Risk of IBS is significantly increased in patients with acute enteritis caused by different kinds of bacteria or by

				(95% CI 4.21 to 45.40; 2 studies, N <sub>E</sub> =322, N <sub>NE</sub> =332)	different kinds of pathogens, compared to controls.
				All bacteria: OR=5.78 (95% CI 4.04 to 8.25; 9 studies, N <sub>E</sub> =2,772, N <sub>NE</sub> =2,562)	Follow-up intervals ranged between 3 months to 16 years post infection.
				All pathogens: OR=4.90 (95% CI 3.93 to 6.11; 15 studies, N <sub>E</sub> =4,155, N <sub>NE</sub> =4,703)	
Tak et al. 2011	N <sub>CFS/FMS/IBS</sub> = 2,079 Range <sub>CFS/FMS/IBS</sub> = 7-121  N <sub>Control</sub> = 1,803 Range <sub>Control</sub> = 7-110	HPA axis dysfunction (basal cortisol level)	CFS/ME, FMS, IBS	HPA axis dysfunction in CFS/ME patients versus healthy controls:  Basal cortisol level: SMD=-0.14 (95% CI -0.28 to -0.00; 38 studies, N <sub>C</sub> =985, N <sub>CO</sub> =897)  Comparison FMS patients versus controls:  SMD=-0.10 (95% CI -0.30 to 0.11, 26 studies, N <sub>C</sub> =636, N <sub>CO</sub> =583))  Comparison IBS patients versus controls:  SMD=0.14 (95% CI -0.10 to 0.38, 17 studies, N <sub>C</sub> =458, N <sub>CO</sub> =323))	The average basis cortisol level did not differ between FMS or IBS patients and controls.  The average basis cortisol level was significantly higher in controls compared with CFS/ME patients. The average basis cortisol level in CFS/ME patients or a lower cortisol level was met by ≈44% of the control subjects.
Tak et al. 2009	N <sub>CFS/FMS/IBS</sub> = 533 Range <sub>CFS/FMS/IBS</sub> = 8-70	Parasympathetic nervous system	CFS/ME, FMS, IBS	PNS activity in CFS/FMS/IBS patients versus healthy controls:	The average level of HF-HRV was significantly higher in controls

	$N_{\text{Control}} = 440$ $\text{Range}_{\text{Control}} = 8-38$	(PNS) activity (high-frequency heart rate variability [HF-HRV])		HF- HRV: SMD=-0.32 (95%CI -0.63 to -0.01; 14 studies, $N_c=262$ , $N_{co}=254$ )	compared with CFS/FMS/IBS patients. The average basis cortisol level in CFS/FMS/IBS patients or a lower cortisol level was met by $\approx 38\%$ of the control subjects.
Tracy et al. 2016	$N_{\text{FMS/IBS}} = 589$ $\text{Range}_{\text{FMS/IBS}} = 15-106$  $N_{\text{Control}} = 411$ $\text{Range}_{\text{Control}} = 14-49$	Parasympathetic nervous system (PNS) activity as measured by heart rate variability (HRV)	FMS, IBS	PNS activity in FMS patients versus healthy controls:  High-frequency HRV: SMD=-0.80 (95% CI -1.14 to -0.46; 3 studies, $N_c=78$ , $N_{co}=66$ ).  Comparison IBS patients versus controls:  High-frequency HRV: SMD=-0.28 (95% CI -1.01 to 0.44; 3 studies, $N_c=77$ , $N_{co}=48$ ).	The average level of high-frequency HRV was significantly higher in controls compared with FMS patients. The average level of high-frequency HRV in FMS/IBS patients or a lower HRV level was met by $\approx 21\%$ of the control subjects.  The average level of high-frequency HRV did not differ between IBS patients and controls.
van Kerkhoven et al. 2007	$N_{\text{SERT-P gene}^+} = 1,034$ $\text{Range}_{\text{SERT-P gene}^+} = 33-256$  $N_{\text{SERT-P gene}^-} = 1,377$ $\text{Range}_{\text{SERT-P gene}^-} = 53-437$	Functional polymorphism in the gene encoding for activity of the serotonin transporter protein (SERT-P)	IBS	IBS in participants with polymorphism in SERT-P gene versus controls without SERT-P:  OR=1.00 (95%CI 0.80 to 1.20; 8 studies, $N_c=1,034$ , $N_{co}=1,377$ )	IBS and a functional polymorphism in the SERT-P gene are not associated.

Varju et al. 2019	$N_{\text{IBS}} = 1,608$ $\text{Range}_{\text{IBS}} = 16-503$  $N_{\text{Control}} = 3,382$ $\text{Range}_{\text{Control}} = 18-1,763$	Lactose maldigestion (LM) and intolerance (LI)	IBS	<p>LM and LI in IBS versus in healthy controls:</p> <p>LM:  OR = 1.16  (95% CI: 0.99 to 1.36; 13 studies, <math>N_{\text{C}}=1,393</math>, <math>N_{\text{CO}}=1,619</math>)</p> <p>Objective LI  OR = 2.52  (95% CI 1.28 to 4.97; 3 studies, <math>N_{\text{C}}=672</math>, <math>N_{\text{CO}}=446</math>)</p> <p>Subjective LI:  OR = 3.50  (95% CI 1.62 to 7.55; 4 studies, <math>N_{\text{C}}=420</math>, <math>N_{\text{CO}}=2,292</math>)</p>	<p>Risk of a lactose maldigestion is not increased in patients with IBS compared to healthy controls.</p> <p>Risk of lactose intolerance is significantly increased in individuals with IBS compared to healthy controls, depending on a subjective (self-report) or objective assessment.</p>
Wang et al. 2019	$N_{\text{IBS}} = 786$ $\text{Range}_{\text{IBS}} = 8-61$  $N_{\text{Control}} = 554$ $\text{Range}_{\text{Control}} = 3-60$	Gastrointestinal dysbiosis	IBS	<p>Microbial count in IBS patients versus healthy controls:</p> <p>Lactobacillus:  MD= <math>-0.57 \log_{10}\text{CFU/g}</math>  (95% CI <math>-0.99</math> to <math>-0.16</math>; 17 studies, <math>N_{\text{C}}=656</math>, <math>N_{\text{CO}}=441</math>)</p> <p>Bifidobacterium: MD= <math>-1.04 \log_{10}\text{CFU/g}</math>  (95% CI <math>-1.58</math> to <math>-0.49</math>; 17 studies, <math>N_{\text{C}}=656</math>, <math>N_{\text{CO}}=441</math>)</p> <p>Bacteroides:  MD=<math>0.13 \log_{10}\text{CFU/g}</math>  (95% CI <math>-0.06</math> to <math>0.32</math>; 11 studies, <math>N_{\text{C}}=380</math>, <math>N_{\text{CO}}=274</math>)</p> <p>Enterococcus: MD=<math>0.12 \log_{10}\text{CFU/g}</math></p>	<p>The count of lactobacillus and bifidobacterium is significantly decreased whereas the count of E coli and Enterobacter is significantly increased in individuals with IBS compared to healthy controls.</p> <p>Individuals with IBS do not distinguish from health controls regarding the count of bacteroides or enterococcus.</p>

				(95% CI -0.46 to 0.70; 13 studies, N <sub>C</sub> =508, N <sub>CO</sub> =331)	
				E coli: MD=0.60 log <sub>10</sub> CFU/g (95% CI 0.17 to 1.03; 10 studies, N <sub>C</sub> =367, N <sub>CO</sub> =265)	
				Enterobacter: MD=0.74 log <sub>10</sub> CFU/g (95% CI 0.01 to 1.47; 7 studies, N <sub>C</sub> =262, N <sub>CO</sub> =173)	
Wang Yin et al. 2021	N <sub>HPI exposed</sub> = 7,178 Range <sub>HPI exposed</sub> = 0-2,204  N <sub>HPI nonexposed</sub> = 13,948 Range <sub>HPI nonexposed</sub> = 5-3,001	Helicobacter pylori infection (HPI)	IBS	H. pylori infection in individuals with IBS compared to healthy controls:  OR=1.68 (95% CI 1.29-2.18, 27 studies, N <sub>E</sub> =7,178, N <sub>NE</sub> =13,948)	Risk of H. pylori infection was significantly, 1.7 times increased in individuals with IBS compared with control subjects
Wu et al. 2018 <sup>1</sup>	N/A	Vitamin D concentration	FMS	N/A	N/A
Zhu et al. 2018	N <sub>SERT-P gene+</sub> = 3,409 Range <sub>SERT-P gene+</sub> = 33-267  N <sub>SERT-P gene-</sub> = 3,617 Range <sub>SERT-P gene-</sub> = 39-429	Serotonin transporter (SERT) insertion/deletion polymorphism	IBS	IBS in individuals with SERT insertion/completion polymorphism versus controls:  Total sample (additive comparison): OR = 0.78 (95% CI 0.71 to 0.87; 26 studies, N <sub>C</sub> =3,409, N <sub>CO</sub> =3,617)	Risk of IBS is significantly reduced in patients with SERT insertion/deletion polymorphism.

Note.

<sup>1</sup>We had to exclude 3 reviews rated as ‘high’ quality reviews (see Table 1) from this table: Safadi et al. (2021): This review included two studies that were relevant for this umbrella review. The outcomes used in these two studies could not be integrated within one meta-analysis. Schierhout et

al. 2020: This review included only one study that was relevant for this umbrella review, Wu et al. 2018: this review included test statistics across 10 studies with individuals with FMS but also other studies including patients with other conditions (e.g. statin-induced myalgia) that were not relevant for this umbrella review.

<sup>2</sup>E= exposed / NE= non-exposed or C=Cases / CO = Controls. Values refer to the sample size of all included studies with samples that are eligible according to our inclusion criteria and which were included in the meta-analysis of the original systematic review.

<sup>3</sup>To facilitate the interpretation of the effect measure the OR was transformed into an RR with the risk ( $r_0$ ) of a positive outcome in the control or unexposed group: Mozhgani et al. 2021:  $r_0=0.493$  (PCR test),  $r_0=0.298$  (serology test); Paras et al. 2009:  $r_0=0.291$ ; Wang, Yin et al. 2021:  $r_0=0.329$ .

**Supplementary Material 8 (Continued).** PRISMA Checklist.

Section/topic	#	Checklist item	Reported on page #
<b>TITLE</b>			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
<b>ABSTRACT</b>			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2-3
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known.	5-6
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	6
<b>METHODS</b>			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	3
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	6-7
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	6
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	See protocol
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	6-8
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	7
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	7

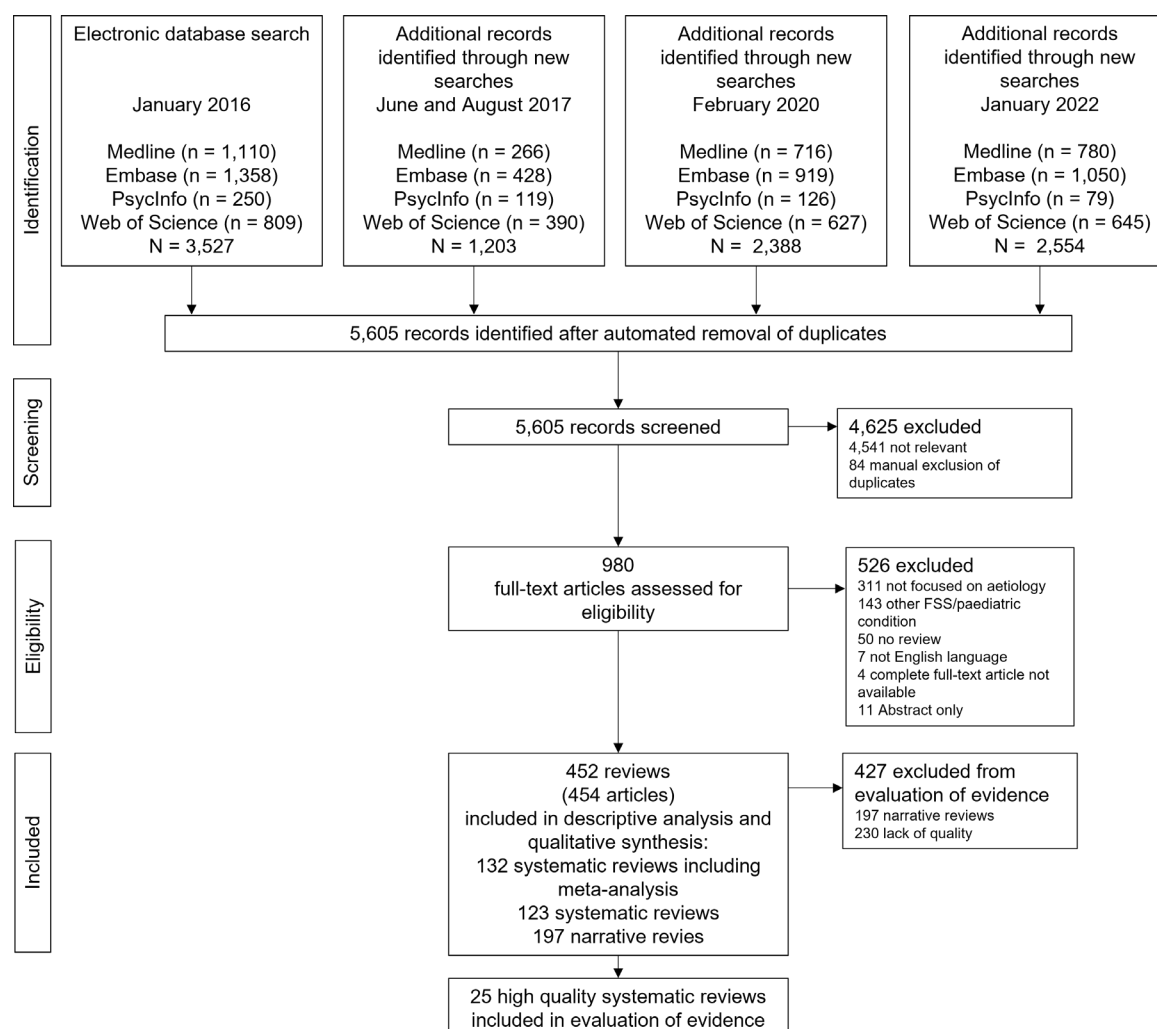
Section/topic	#	Checklist item	Reported on page #
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	7
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	n.a.
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., $I^2$ ) for each meta-analysis.	8
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	7
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	n.a.
<b>RESULTS</b>			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	9, Suppl. Figure S1
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	Table 1 and Suppl. Table 1
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	Table 1 and suppl. Table 1
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	n.a.
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	n.a.
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	n.a.
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	n.a.
<b>DISCUSSION</b>			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	14



Section/topic	#	Checklist item	Reported on page #
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	16-16
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	17
<b>FUNDING</b>			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	18

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

## Supplementary Material 9. Study selection process (PRISMA flow chart).



**Supplementary Material 10.** Frequency of systematic reviews per year of publication since 1990, divided into reviews of critically low, low, moderate and high quality, according to the Assessment of Multiple SysTemATIC Reviews (AMSTAR-2). The grey vertical lines indicate the median (Md) publication year within each quality stratum.

