



30 ANNI DI OSTEOPATIA IN ITALIA
SVILUPPO, RICERCA E IDENTITÀ
24 - 25 - 26 GIUGNO 2022

VARIABILI DI GENERE NELLA PERCEZIONE DEL DOLORE

Silvia Ratti



FRASES DE SIMONE DE BEAUVOIR

«Maschi e femmine si nasce, ma
uomini e donne si diventa»

Breaking the binary

Diversity of human sexuality and sexual orientation

Gender Identity

How you think about yourself



Gender Expression

How you demonstrate your gender



Biological Sex

Organs, hormones and chromosomes



Sexual Orientation

Physical, spiritual and emotional attraction





PERCHÈ COME OSTEOPATA DOVREI INTERESSARMI A QUESTIONI DI GENERE?



REVIEW

Pain in Women: A Perspective Review on a Relevant Clinical Issue that Deserves Prioritization

Roberto Casale · Fabiola Atzeni · Laura Bazzichi · Giovanna Beretta · Elisabetta Costantini · Paola Sacerdote · Cristina Tassorelli

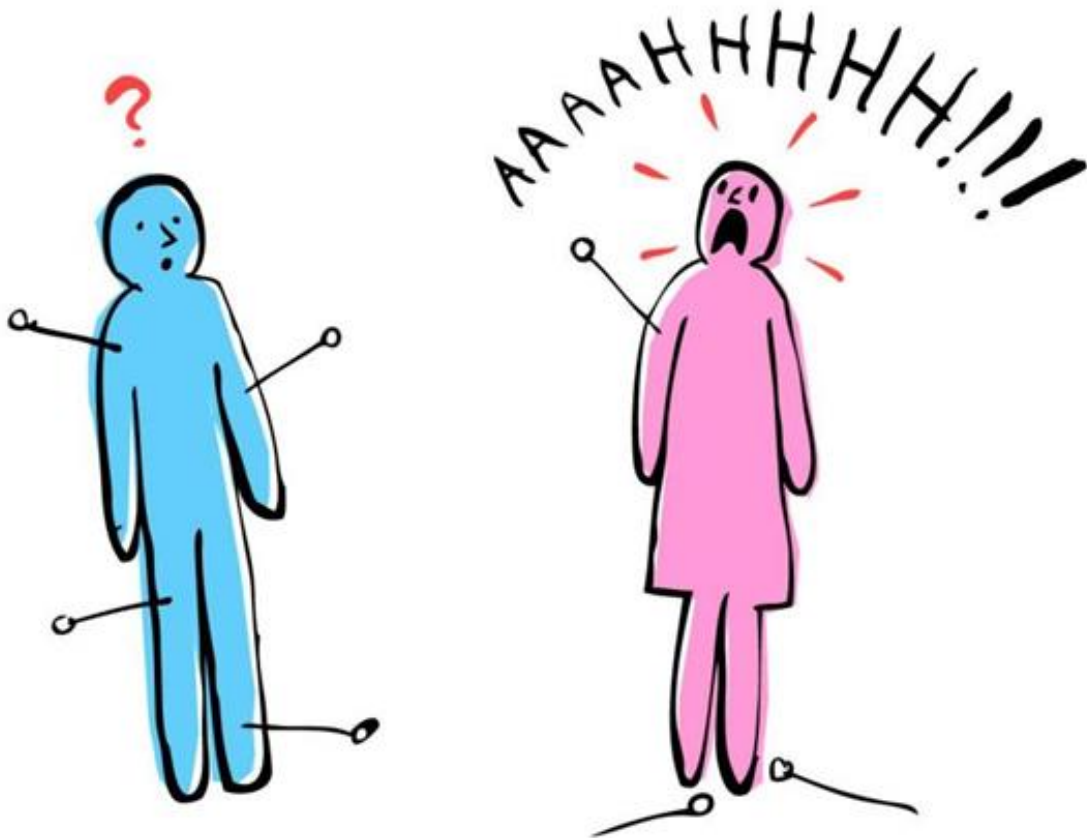


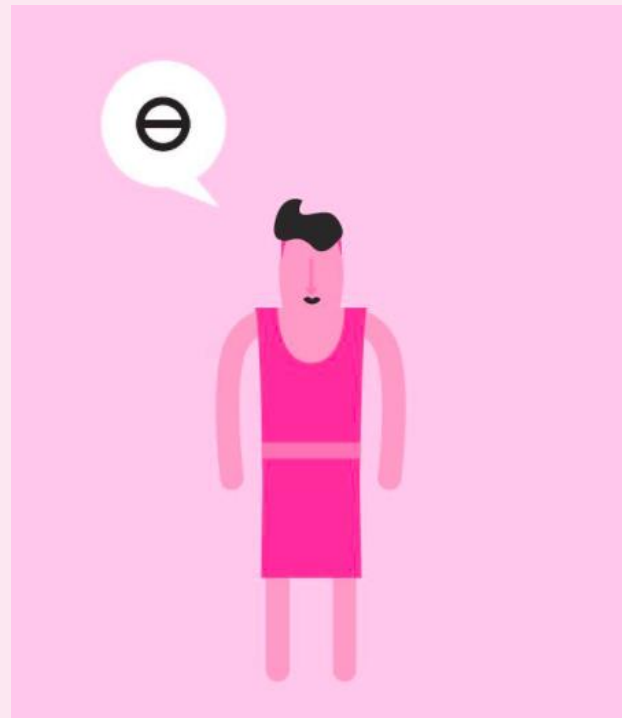
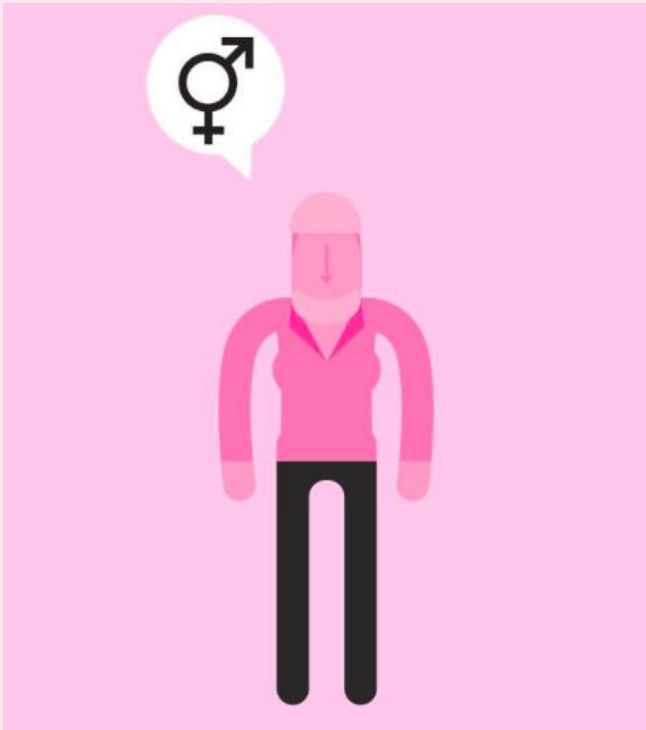
Table 1 Pain conditions showing differential prevalence between men and women [9, 15–17]

<i>Female prevalence</i>	<i>Male prevalence</i>	<i>No sex prevalence</i>
Head and neck	Head and neck	Head and neck
Migraine with and without aura	Cluster headache	Acute tension-type headache
Chronic tension-type headache	Post-traumatic headache	Toothache due to dentin/enamel defects
Chronic paroxysmal hemicrania	SUNCT syndrome (Short-lasting Unilateral Neuralgiform headache attacks with Conjunctival injection and Tearing)	Toothache due to pulpitis
Hemicrania continua		Cracked tooth syndrome
Hypnic headache	Lesions or diseases of the nervous system	Stylohyoid process syndrome
Primary stabbing headache	Brachial plexus avulsion	Lesions or diseases of the nervous system
Post-dural puncture headache	Postherpetic neuralgia	Secondary trigeminal neuralgia
Cervicogenic headache	Meralgia paresthetica	Neuralgia of nervus intermedius
Periapical periodontitis and abscess	Lateral femoral cutaneous neuropathy	Painful ophthalmoplegia
Atypical odontalgia	Pain associated with Pancoast tumor	Vagus nerve neuralgia
Burning mouth syndrome	Raeder paratrigeminal syndrome	Thoracic outlet syndrome
Carotidynia	Vascular & hematologic origin	Brachial plexus tumors
Temporal arteritis	Thromboangiitis obliterans	Postherpetic neuralgia
Lesions or diseases of the nervous system	Coronary artery disease (before age 65 years)	Maxillary sinusitis
Trigeminal neuralgia (tic douloureux)	Erythromelalgia (over 50 years)	Dry socket
Carpal tunnel syndrome	Gastrointestinal tract & visceral organs	Pain in Parkinson's disease
Causalgia	Pancreatic disease	Gastrointestinal tract & visceral organs
Reflex sympathetic dystrophy	Duodenal disease	Esophageal motility disorders
Pain in multiple sclerosis	Abdominal migraine	Chronic gastric ulcer
Occipital neuralgia	Myofascial and osteoarticular pains	Crohn's disease
Vascular & hematologic origin	Hemophilic arthropathy	Diverticular disease of the colon
Chronic venous insufficiency	Ankylosing spondylitis	Carcinoma of the colon
Acute intermittent porphyria	Gout (after age 60 years)	Pain of vascular & hematologic origin
Raynaud's disease	Osteoarthritis (before age 45 years)	Familial Mediterranean fever
Chilblains/Pernio		Hereditary coproporphria
Livedo reticularis (after age 40 years)		
Gastrointestinal tract & visceral organs		
Esophagitis		
Reflux esophagitis with peptic ulcer		
Gallbladder disease		
Post-cholecystectomy syndrome		
Irritable bowel syndrome		
Bladder pain syndrome		
Proctalgia fugax		
Myofascial and osteoarticular pain		
Piriformis syndrome		
Peroneal muscular atrophy		
Rheumatoid arthritis		
Fibromyalgia and chronic widespread pain		
Gout (before age 60 years)		
Slipping rib syndrome		
Twelfth rib syndrome		
Temporomandibular disorder pain		
Back pain (postmenopausal)		

Sex differences in pain: a brief review of clinical and experimental findings

E. J. Bartley* and R. B. Fillingim

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- Nei test clinici le donne dimostrano una tolleranza al dolore (pain tolerance) e una soglia di dolore (pain threshold) più basse degli uomini

- Tramite l'uso di neuroimaging si sono osservate differenze tra i generi nell'attivazione di aree cerebrali e nei meccanismi endogeni di modulazione del dolore.

- Uomini e donne rispondono in modo diverso all'analgesia suggerendo un diverso meccanismo endogeno di inibizione del dolore.



Gender differences in pain modulation by diffuse noxious inhibitory controls:
A systematic review

Adriana Popescu^a, Linda LeResche^{a,*}, Edmond L. Truelove^a, Mark T. Drangsholt^{a,b}

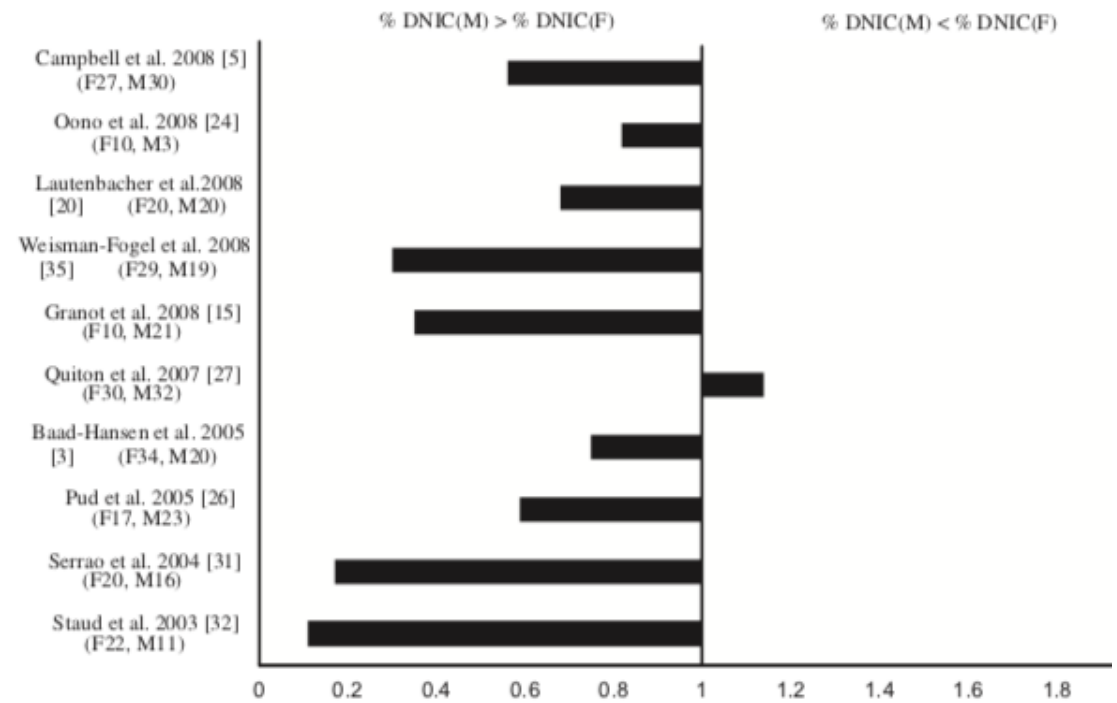


Fig. 3. Female/male ratios of the percent change in pain assessment studies.



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Sex differences in anxiety and depression clinical perspectives

Margaret Altemus^{a,b,*}, Nilofar Sarvaiya^c, and C. Neill Epperson^{d,e,f}

- Depressione Maggiore: Donna: Uomo= 2:1
- Disturbo da attacchi di panico: Donna: Uomo= 3:1
- Le donne hanno una maggiore incidenza di tentati suicidi (per avvelenamento), mentre gli uomini hanno una percentuale di morte per suicidio da 4 a 5 volte superiore (armi)
- Gli uomini con diagnosi di depressione ricorrono meno delle donne a sostegno sanitario

Gender differences in pain and its relief

Stefano Pieretti¹, Amalia Di Giannuario¹, Rita Di Giovannandrea¹, Francesca Marzoli¹, Giovanni Piccaro¹, Paola Minosi¹ and Anna Maria Aloisi²

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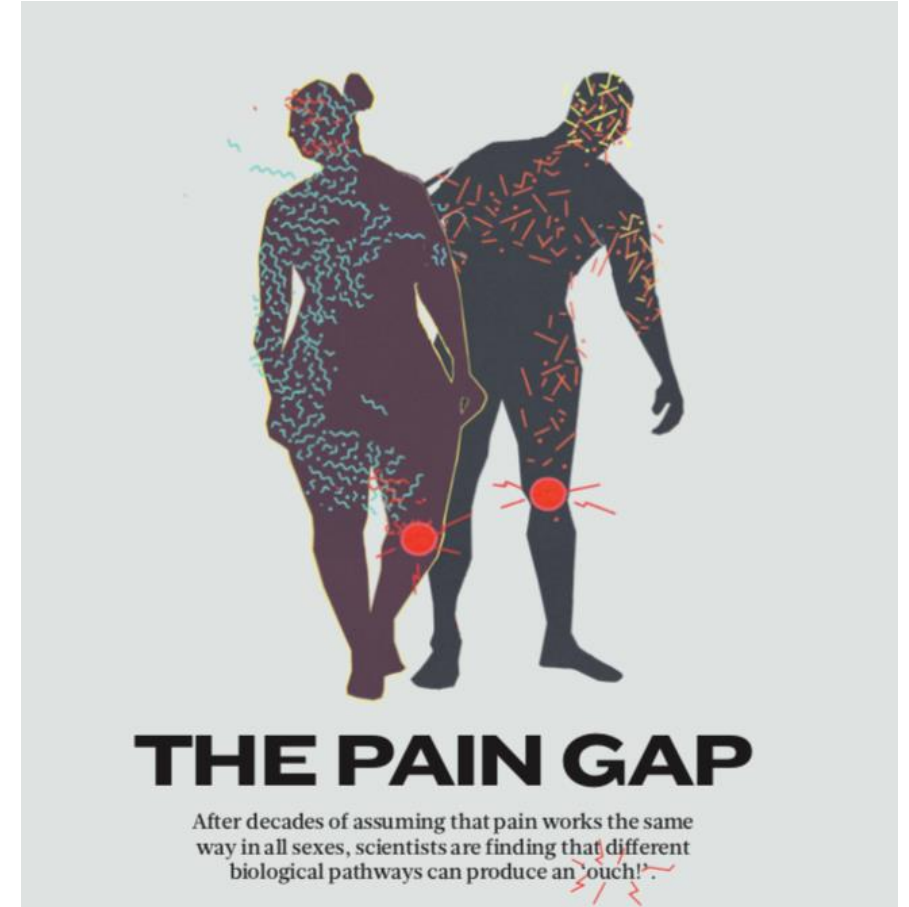
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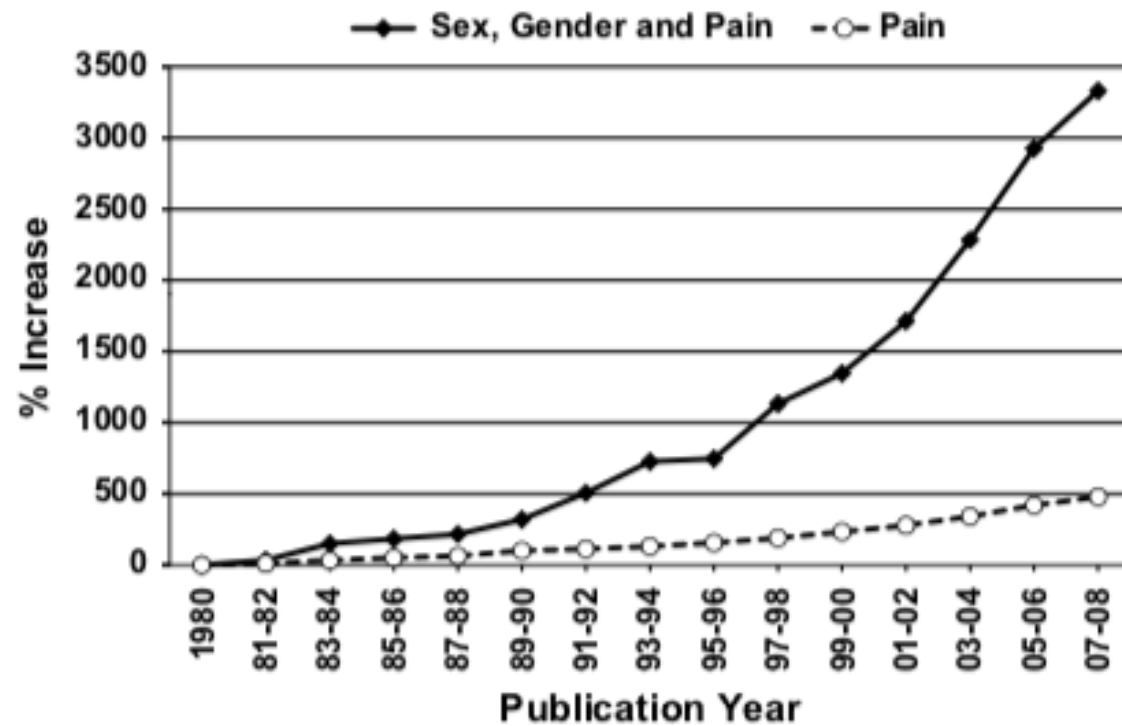
Abstract

There is much evidence to suggest that gender is an important factor in the modulation of pain. Literature data strongly suggest that men and women differ in their responses to pain: they are more variable in women than men, with increased pain sensitivity and many more painful diseases commonly reported among women. Gender differences in pharmacological therapy and non-pharmacological pain interventions have also been reported, but these effects appear to depend on the treatment type and characteristics. It is becoming very evident that gender differences in pain and its relief arise from an interaction of genetic, anatomical, physiological, neuronal, hormonal, psychological and social factors which modulate pain differently in the sexes. Experimental data indicate that both a different modulation of the endogenous opioid system and sex hormones are factors influencing pain sensitivity in males and females. This brief review will examine the literature on sex differences in experimental and clinical pain, focusing on several biological mechanisms implicated in the observed gender-related differences.

Key words

- pain
- sex
- gender





(Sex differences
OR Gender
differences)
AND Pain

Sex, Gender and Pain



SEX, GENDER & PAIN
Special Interest Group



Global Year Against Pain in Women real women, real pain

Differences in Pain between Women and Men

” Given the substantially greater prevalence of many clinical pain conditions in women vs. men (...) we recommend that all pain researchers consider testing their hypotheses in both sexes, or if restricted by practical considerations, **only in females** ”

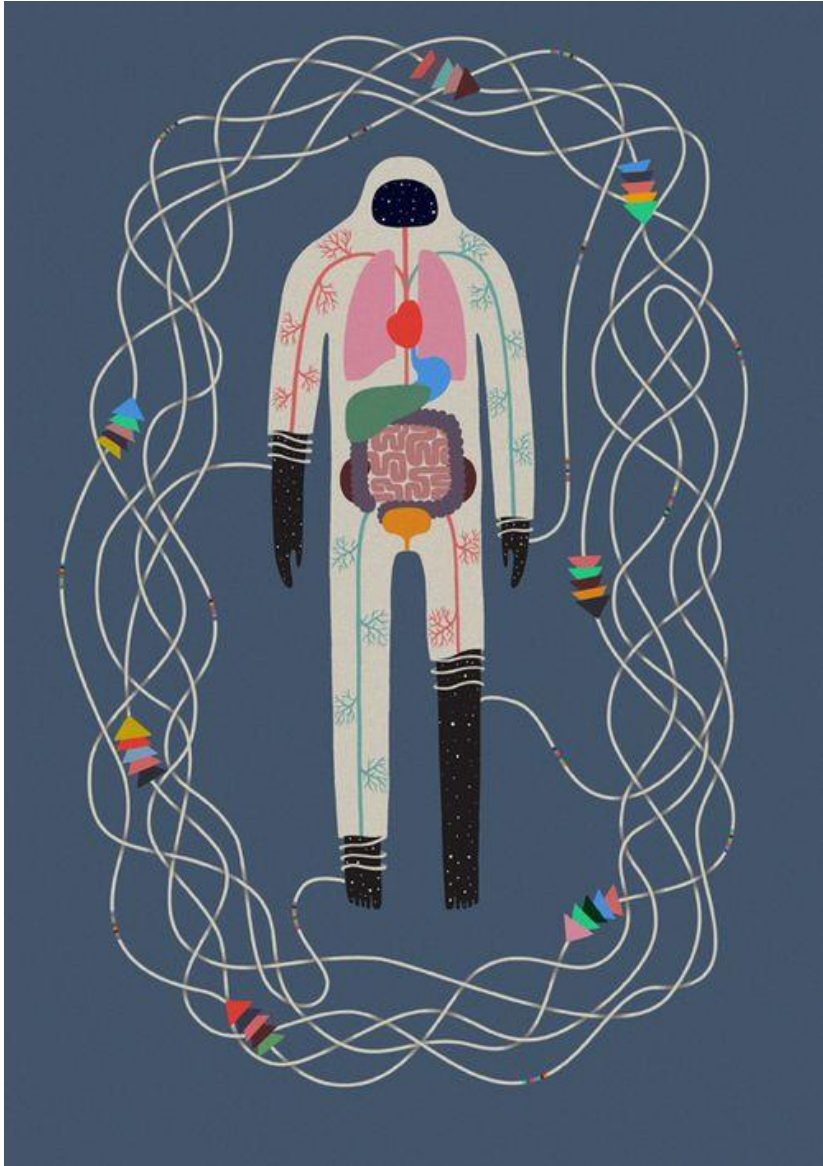
Mechanisms underlying sex differences in pain and its relief

- Circa il 45% delle donne in gravidanza sperimenta lombalgia o dolore al cingolo pelvico.
- La dismenorrea primaria colpisce il 40-90% delle donne in età fertile
- Il dolore caratterizza il parto e il travaglio in più del 95% delle donne
- L'anatomia dell'apparato urogenitale femminile predispone a infezioni e traumi

- **Estrogeni e androgeni influenzano la nocicezione direttamente a livello sinaptico e indirettamente promuovendo la secrezione di neurotrasmettitori (Maurer *et al.*, 2016)**
- **Nelle donne in età fertile affette da dolore cronico l'intensità dei sintomi ha una ciclicità mensile inversamente proporzionale al livello di estrogeni (emicrania) (Le Resche *et al.*, 2003).**
- **In pazienti male-to-female la somministrazione di estrogeni aumenta l'intensità di disturbi preesistenti la terapia ormonale, mentre in pazienti female-to-male si osserva esattamente il fenomeno contrario (Aloisi *et al.*, 2007)**
- **Le differenze osservate sul dolore sperimentale appaiono nulle o non significative nei bambini, mentre subiscono un picco a sfavore delle ragazze alla pubertà (Fillingim *et al.*, 2009)**

SEX MATTERS





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A systematic literature review of 10 years of research on sex/gender and pain perception – Part 2: Do biopsychosocial factors alter pain sensitivity differently in women and men?

Mélanie Racine^{a,b}, Yannick Tousignant-Laflamme^c, Lorie A. Kloda^d, Dominique Dion^e, Gilles Dupuis^{a,f},
Manon Choinière^{b,g,*}

GENDER ROLES AND PAIN


- La **femminilità** è generalmente associata a maggiori capacità di descrivere il dolore, mentre la mascolinità è associata a una maggior capacità di autocontrollo (Fillingim, 2001)
- La **vulnerabilità emotiva**, associata al genere femminile, risulta il tratto che esercita una interazione più significativa con le variabili sesso e dolore (Dixon et al., 2005)

Gender stereotypes and
unconscious bias



Review Article

“Brave Men” and “Emotional Women”: A Theory-Guided Literature Review on Gender Bias in Health Care and Gendered Norms towards Patients with Chronic Pain

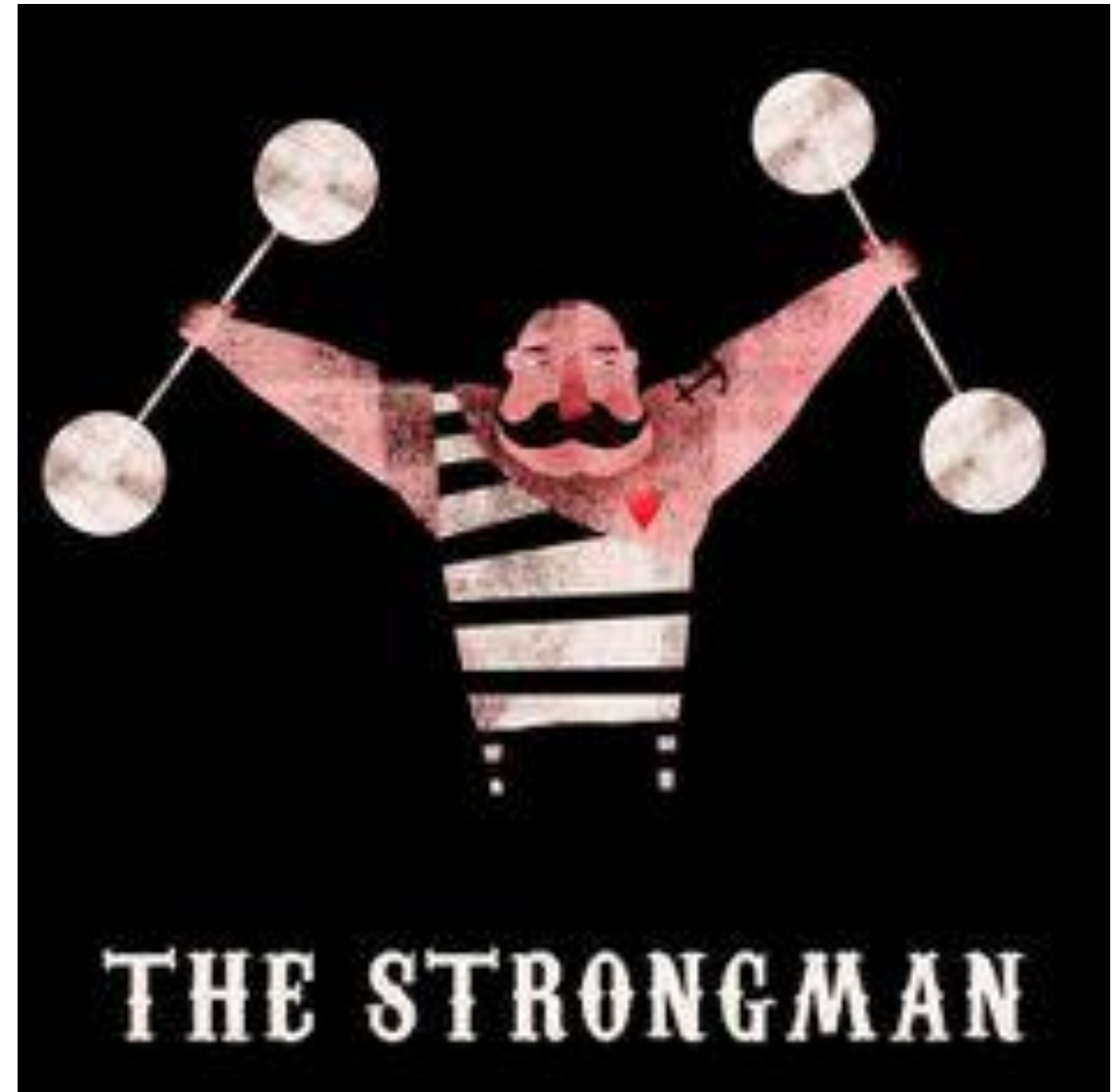
Anke Samulowitz ¹, Ida Gremyr,² Erik Eriksson,² and Gunnel Hensing¹

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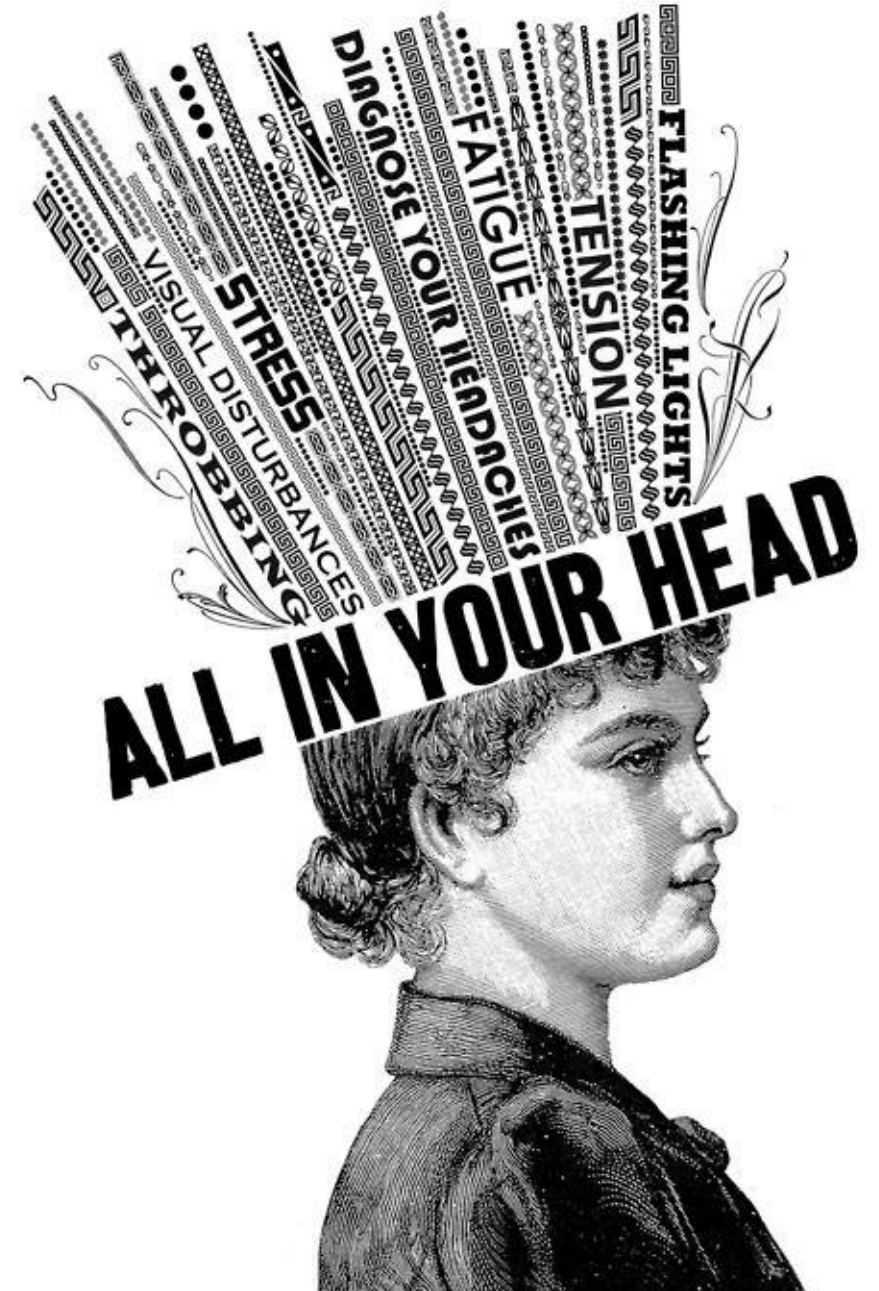
- Quando a entrambi i generi è data una stessa aspettativa di tolleranza al dolore (The typical man/woman lasts 30 seconds) la soglia di dolore si alza (Alabas et al., 2012)
- Gli uomini hanno una soglia di sensibilità al dolore più alta quando stimolati da una donna (Gijsbers and Nicholson, 2005)
- In presenza di una persona cara sia in uomini che in donne la soglia del dolore si alza (Racine et al., 2012)



Gender Differences in Emotional Response: Inconsistency between Experience and Expressivity

Yaling Deng^{1,2,3}, Lei Chang⁴, Meng Yang³, Meng Huo⁵, Renlai Zhou^{1,2,3*}

- Le donne esprimono una maggiore tendenza a **discutere** della propria salute psichica con i medici, i quali sono più orientati a emettere diagnosi di disturbi del tono dell'umore nelle donne rispetto agli uomini (Sleath and Rubin, 2002)
- Gli uomini affetti da depressione sono più inclini a **descrivere** gli aspetti somatici rispetto a quelli psicologici (Borowsky et al, 2000)
- A parità di espressione (triste) le donne vengono definite **“emotional”**, mentre degli uomini viene detto **“having a bad day”** (Barrett, 2009)





**HOUSTON
WE HAVE A
PROBLEM!**



GRAZIE



DOCENTE DI OSTEOPATIA
E OSTEOPATA PEDIATRICA

VIOLA FRYMANN

18 luglio 1921 - ENGLAND

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FONDA A SAN DIEGO L'OSTEOPATHIC CENTER FOR CHILDREN
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