

# The Relieving Effect of Swearing on Physical Pain and Social Pain

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## Abstract

Swearing often refers to vulgar and taboo language, which generally appears when insulting others and emphasizing opinions. Experimental results suggest that, swearing, as an emotional response to pain, can alleviate physical pain. Compared with not swearing, subjects who repeated swearing words in cold water had higher pain tolerance and lower perceived pain score. Changes in heart rate indicated that emotional response was triggered to reduce pain. Based on the theory of pain overlap, recent evidence shows that swearing can also alleviate the social pain caused by social exclusion. Moreover, the daily frequency of swearing affected the effect of hypoalgesia; the higher the daily frequency of swearing, the lower the physical pain tolerance when swearing. The neural mechanism of swearing to alleviate pain remains to be further studied and explored. This paper aims to review and summarize the literature on this topic.

## Keywords

Swearing, Physical Pain, Social Pain

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# 秽语对生理疼痛和社会疼痛的缓解作用

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## 摘 要

秽语是指粗俗、禁忌的语言,一般在侮辱他人、强调观点等时候出现。实验结果表明,作为疼痛的一种情绪反应,秽语能够缓解生理疼痛,在冷水中重复秽语的被试疼痛忍耐度更高、疼痛感知更低,心率的

变化表明某种情绪反应被引发从而使疼痛得到减轻；基于疼痛重叠理论，研究发现秽语也能够缓解由社会排斥带来的社会疼痛及生理疼痛敏感，秽语频率能影响疼痛减退效应，秽语频率越高的被试生理疼痛忍耐度越低。秽语缓解疼痛的神经机制还有待进一步研究和探索。本文旨在对这一主题的文献进行梳理和总结。

## 关键词

秽语，生理疼痛，社会疼痛

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## 1. 引言

秽语，广义上指使用禁忌、粗俗、亵渎、冒犯或污秽淫秽的语言(Jay & Duncan, 2006)。有研究者根据语言特点将秽语的定义概括为以下三点：指秽语使用者所在的文化中禁忌或侮辱性的事物；不能按照字面意思直接解释；可以用来表达强烈的情绪或态度(Güvendir & Emre, 2015; Vingerhoets et al., 2013)，它与历史、文化密切相关，例如，在西方，秽语的繁荣与宗教的重要性下降有关(Baruch & Jenkins, 2007)；中国文化中的秽语则反映了封建统治给人们带来的尊卑分明的传统观念(周元琳, 2006; 袁焱, 张胜隆, 2014)。

秽语是一种常见的现象，其使用频率占个人每天口头表达词汇的0.3%~0.7% (Jay & Timothy, 2009b)，它或多或少影响了每一个人(Lancker & Cummings, 1999)。秽语能给人带来轻松的感觉(Jay & Timothy, 2009b)，也会给人带来极大的痛苦(Stone, Mcmillan, & Hazelton, 2010; Stone, Mcmillan, Hazelton, & Clayton, 2011)。在语言神经病理学方面，它也发挥着重要作用，临床环境中的秽语行为表现可能与疾病状况有关(Lancker & Cummings, 1999)，如失语症和阿尔茨海默病患者由于大脑功能出现障碍而遗忘了家人的名字，但他们依旧记得如何使用秽语(Jay & Janschewitz, 2008; Jay & Timothy, 2009a)。使用秽语的原因有发泄情绪、强调观点或侮辱他人等，有时甚至只是出于习惯，宣泄则是最常见的理由(Rassin & Muris, 2005; Jay & Timothy, 2009a)。然而，即便被禁止使用，秽语至今没有消失(Rassin & Muris, 2005; Stone & Hazelton, 2008)。那么人为什么说秽语？本文试图通过梳理秽语对疼痛的缓解作用一系列文献，对这一问题进行考察与展望。

## 2. 秽语对生理疼痛的缓解作用

秽语作为一种情绪性反应，在受到疼痛时也常有体现，如生孩子或者被锤子砸到手指。当个体身体外部或内部遭受到伤害性刺激时，这种生理上的主观感觉、心理上的不愉快情绪体验被称为生理疼痛(Price, 2000; 张天锡, 印其章, 2003)，许多研究者认为杏仁核与疼痛中负性情绪的产生有密切联系(黄进, 康晓征, 罗非, 2005)。Simon 和 Craig 等人(2008)通过给被试呈现动态的基本表情和疼痛表情发现，观看疼痛表情的被试体验到了更强烈的不愉快感觉和唤起。疼痛也是使用秽语的一个原因(Jay, King, & Duncan, 2006)，从进化的角度来看，秽语就像动物的咆哮，属于发声的远古形式，它作为一种本能使情绪得到缓和，能够帮助人们释放愤怒的攻击性情绪，缓解痛苦的压力，并带来愉快的感觉(Patrick, 1901; Montagu & Ashley, 1942)。一些疼痛理论认为(未找到相关证据)秽语是与疼痛有关的灾难化标志，灾难化

是一种放大疼痛感觉的威胁的倾向,使人产生消极和无助的想法,如果这一理论正确,那么使用秽语会使个体的疼痛加剧(Sullivan et al., 2001; Stephens, Atkins, & Kingston, 2009)。

秽语作为疼痛的不适应反应却如此常见,Stephens 等人(2009)出于疑惑设计实验,假设与非秽语相比,秽语会降低疼痛忍耐度、提高疼痛感知,结果却与假设正好相反。实验采用了冷加压范式,需要被试将手浸没在冷水中,直到疼痛无法忍受时停止,每一试验结束后立即测量被试的心率及疼痛感知,在冷水中的浸没时长作为疼痛忍耐度的指标。结果表明,与非秽语相比,重复秽语使被试的疼痛忍耐度升高,同时伴随着心率的提高,疼痛感知的降低。因此 Stephens 认为秽语并不是对疼痛的不适应反应,相反,它产生了疼痛减退效应。在实验开始前测量被试的疼痛灾难化、疼痛恐惧以及特质焦虑分数,这些与疼痛有关的因素作为协变量以控制误差,对数据分析后发现,随着疼痛灾难化分数的提高,疼痛忍耐度逐渐下降,这一结果只在重复秽语的男性被试中出现,即男性秽语的疼痛减退效应的消散与灾难化倾向的提高有关,女性疼痛减退效应与疼痛灾难化倾向无关。Stephens & Umland (2011)的另一项重复实验中,却无证据表明秽语的疼痛减退效应与疼痛灾难化之间存在联系。

疼痛感知会受疼痛恐惧的影响,这可能是导致秽语产生疼痛减退效应的一部分原因(Stephens, Atkins, & Kingston, 2009)。当个体在预期或体验到组织损伤时所产生的紧张、恐惧的情绪反应被称作疼痛恐惧,此时伴随着对疼痛的负性解释,或“疼痛就是伤害”的灾难化信念(Turk & Wilson, 2010),它与疼痛灾难化之间存在显著相关(Stephens, Atkins, & Kingston, 2009; Stephens & Umland, 2011)。有证据表明疼痛恐惧能降低个体对疼痛的敏感(Rhudy & Meagher, 2000),但这一影响似乎与疼痛的诱导方式有关,实验中使用热加压和电刺激诱发疼痛时,被试的疼痛感知受疼痛恐惧的影响;使用冷加压诱发时,疼痛恐惧不影响被试的疼痛感知,疼痛忍耐度却发生显著变化(苏琳等, 2016)。Stephens 的结果证明疼痛恐惧只影响男性被试在冷水中的疼痛忍耐度。在重复非秽语词汇时,被试疼痛感知的升高与疼痛恐惧提高有关,重复秽语词汇时这种关系却不显著,研究者认为是秽语带来的镇痛效果使两者之间的联系消失(Stephens, Atkins, & Kingston, 2009),这一结果在新的实验中也未得到验证,疼痛恐惧对秽语的疼痛减退效应的影响仍然模糊不清(Stephens & Umland, 2011)。

秽语的镇痛效果并不对所有人有效,参与实验的 67 名被试有 9 名未表现出疼痛减退效应(Stephens, Atkins, & Kingston, 2009)。Stephens 等人(2011)基于习惯化的心理现象重复进行先前的实验,习惯化是指个体对重复出现的刺激的反应呈逐渐下降的趋势(Rankin, Abrams, Barry, Bhatnagar, & Thompson, 2008)。实验中新增“每天秽语频率”(“How many times per day do you swear?”)为协变量,假设与每天秽语频率低的被试相比,每天秽语频率高的被试表现出的疼痛减退效应弱。主试在选取词汇材料方面也有所变化,实验开始前安排被试写下“当突然被打到头时可能说出的一个秽语”,以及“描述一个桌子时可能会用到的一个词语”。在先前的实验中,被试在实验开始前需要写下“当被锤子砸到的时候可能会说出的五个词语”,采取列表里的第一个秽语词汇作为其秽语词汇材料,再写下“描述桌子时使用的五个词语”,最后采取与秽语词汇序列位置相同的词汇作为非秽语材料(Stephens, Atkins, & Kingston, 2009; Stephens & Umland, 2011)。

与先前结果相似,大多数被试重复秽语词汇时比重复非秽语词汇时的疼痛忍耐度更高(然而疼痛感知未出现显著变化);心率在冷水中比在室温水中更快,重复秽语词汇使心率变化更大;性别差异同样表现为男性的疼痛忍耐度显著高于女性。秽语频率更高的被试在秽语条件下冷加压额外增加的时长更短,但疼痛感知或心率的变化都与秽语频率无关(Stephens & Umland, 2011)。为了排除文化差异的影响,在对日本学生被试的重复实验中发现秽语同样能够缓解生理疼痛(Robertson, Robinson, & Stephens, 2017)。

研究发现,与中性词或情绪词相比,秽语词汇引起被试更强烈的生理唤醒(Tomash & Reed, 2013)。

秽语可能引发了某种情绪反应从而减轻疼痛,问题在于它引发的是哪种情绪反应,Stephens & Allsop (2012)通过实验证实增加被试的攻击性同样能够提高疼痛忍耐力,因此他认为由情绪而引起的秽语能够提高疼痛忍耐力。

### 3. 秽语对社会疼痛的缓解作用

使用秽语会潜移默化地影响使用者(尤其是女性)得到的社会支持(Bird & Harris, 1990)。研究者通过调查一批乳腺癌女患者,发现当患者独处时,秽语能减少病痛带来的负面效应(如抑郁症状);当他人到场时,使用秽语的患者得到的情感支持更低,秽语带来的积极影响随之减弱,即秽语通过降低社会支持而破坏心理调节(Robbins, Focella, Kasle, Ana María López, Weih, & Mehl, 2011)。研究表示个体的生理疼痛忍耐度和疼痛感知能够通过秽语得到缓解(Stephens, Atkins, & Kingston, 2009; Stephens & Umland, 2011),秽语也被证明能缓解与生理疼痛有关的社会疼痛(Philipp & Lombardo, 2017)。

疼痛一般是指痛苦经验,与实际或潜在的组织损伤有关,包括感觉、情绪、认知成分(Eisenberger, 2012)。与疼痛相似,社会排斥也是一种表示危险的信号,由许多因素导致,如遭到拒绝、爱人的死亡或分离等。排斥能引起社会疼痛,这种主观痛苦感受意味着社会联结受到威胁或断裂(Macdonald & Leary, 2005)。社会排斥将威胁个体的归属感、存在的意义、控制感和自尊等基本需求(Weschke & Niedeggen, 2013),此外,受到重要群体的排斥后,会引发焦虑的情绪(Baumeister & Tice, 1990),Leary (1990)认为社会排斥的出现与社交焦虑、孤独、嫉妒、抑郁等因素有关;在行为层面,排斥使个体的亲社会行为减少,实验中被排斥的被试捐助的金额更少、也更不愿意再次充当被试,研究者认为排斥使被试的情绪调节受到干扰,导致同理心降低(Twenge, Baumeister, DeWal, Ciarocco, & Bartels, 2007)。受到排斥的被试攻击行为的倾向也会有所提高(Twenge, Baumeister, Tice, & Stucke, 2001; DeWall, Twenge, Gitter, & Baumeister, 2009)。实验证明,在自传体书写任务中写自己“被排斥”经历的被试,情绪得分与需要满足得分显著低于“被接纳”的被试(Philipp & Lombardo, 2017)。

归属的需要导致社会联结在人的生存中占据重要地位(Baumeister & Leary, 1995),许多研究表明,更高级更复杂的社会活动与一些较为基础的神经系统的活动有关,例如,Lamm 等人(2011)发现疼痛共情和疼痛体验的神经网络具有重叠部分。社会疼痛是与社会联结有关的疼痛感觉,它和生理疼痛有着相同的神经生物学基础;研究表明两者共同拥有一个报警系统,威胁社会联结的信号同样会受到机体的重视(Eisenberger, Lieberman, & Williams, 2003; Eisenberger & Lieberman, 2004; Eisenberger, 2012)。有研究者发现社会疼痛也会带来生理上的痛苦感觉(Bernstein & Claypool, 2012)。Eisenberger 认为,在进化初期,社会联结与生存息息相关,人类和其他哺乳动物需要依靠群体的力量来获取食物、哺育下一代以及抵挡天敌的侵害,一旦脱离社群,个体存活的几率将大打折扣,因此经过长期的进化,社会疼痛也具备了警告和保护生命安全的作用。一种名为疼痛重叠的理论认为,生理疼痛是一种心理现象,能够被期望、态度和情绪调节,而社会疼痛由数百万年的进化后融入大脑和身体,变成一种生理现象(Eisenberger, 2012),该理论表示对生理疼痛有效的干预对社会疼痛同样有效(Eisenberger & Lieberman, 2004),这一观点得到许多研究的证实——社会疼痛可以用常见的止痛药缓解,如大麻(Deckman, DeWall, Way, Gilman, & Richman, 2014);社会支持也能使生理疼痛得到缓解(Brown, Sheffield, Leary, & Robinson, 2003)。

基于疼痛重叠理论,研究者假设缓解生理疼痛的秽语同样能够缓解社会疼痛,实验证明,与重复非秽语词汇相比,重复秽语词汇的被试感受到的社会疼痛更少,生理疼痛感知也更低(Philipp & Lombardo, 2017)。社会疼痛虽然比生理疼痛更容易愈合,人们也更容易再次体验到与社会疼痛相关的痛苦,即便伤痛已经过去很久了(Chen, Williams, Fitnes, & Newton, 2008; Meyer, Williams, & Eisenberger, 2015); Philipp 和 Lombardo (2017)在实验中采用自传体书写任务范式操纵社交苦恼,将被试分为接纳组和排斥组,分别



写下一段被接纳(included condition)的经历,或者是一段被排斥(excluded condition)的经历,随后立即将手浸没在室温水中大声重复秽语或非秽语两分钟,填写问卷后通过冷加压任务测量疼痛忍耐度和疼痛感知;被试在冷水中浸没时需要大声重复无意义音节,以避免内隐的秽语行为。结果发现,接纳组的社会疼痛与生理疼痛得分显著低于排斥组——适度的社会排斥会带来疼痛过敏效应,与先前的研究结果一致(Bernstein & Claypool, 2012),而大声重复秽语缓解了排斥组的痛苦(Philipp & Lombardo, 2017)。

Philipp 和 Lombardo 所选取的秽语及非秽语词汇材料的方式与 Stephens 在 2009 年的实验中一致,秽语频率同样只与疼痛忍耐度有关,而与社会疼痛与生理疼痛感知无关,但总的来说,秽语能够缓解社会排斥的后果。研究者对上述结果的解释是,秽语引起了某种应激反应,从而使秽语使用者的疼痛感得到缓解(Philipp & Lombardo, 2017)。

#### 4. 总结与展望

总之,在疼痛刺激下重复秽语能够提高人的疼痛忍耐度,降低疼痛感知,这种疼痛减退效应对平时不经常说秽语的人来说更加明显,在这一过程中,心率的提高意味着某种情绪活动被引发,从而达到缓解疼痛的效果;此外,基于疼痛重叠理论,秽语同样能够减弱社会排斥的后果,即秽语降低了个体的社会疼痛,并减轻了社交苦恼的后果——生理疼痛敏感。

但是先前研究的过程还存在需要细化的地方,如对“每天秽语频率”及秽语词汇的收集、主试性别对被试的秽语疼痛减退效应的影响。有研究表明,不同性别的被试在表达疼痛时会受到主试性别的影响,男性被试在异性主试面前表现出了更高的疼痛忍耐度和更低的生理疼痛感知,而对女性被试来说这种倾向并不显著(胡佩诚,陈冬梅,1998),在 Philipp 和 Lombardo (2017)的实验中,主试一直是一位女性,鉴于此,可以推测秽语产生的部分疼痛减退效应可能是由主试性别导致的。未来研究可进一步改良实验,深入探究秽语疼痛减退效应的作用机制,揭示秽语的神经生物学过程,从而以科学的角度说明其成因及影响。

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