Neuroscience and Biobehavioral Reviews 71 (2016) 455–471

Contents lists available at ScienceDirect

Neuroscience and Biobehavioral Reviews

journal homepage: www.elsevier.com/locate/neubiorev

Review article

Feelings of shame, embarrassment and guilt and their neural correlates: A systematic review

Coralie Bastin[a], Ben J. Harrison[a], Christopher G. Davey[a,b,c], Jorge Moll[d], Sarah Whittle[a,*]

[a] Melbourne Neuropsychiatry Centre, Department of Psychiatry, The University of Melbourne and Melbourne Health, Melbourne, VIC, Australia
[b] Orygen, The National Centre of Excellence in Youth Mental Health, Melbourne, VIC, Australia
[c] Centre for Youth Mental Health, The University of Melbourne, Melbourne, VIC, Australia
[d] Cognitive and Behavioral Neuroscience Unit, D'Or Institute for Research and Education (IDOR), Rio de Janeiro, Brazil

ARTICLE INFO

Article history:
Received 15 November 2015
Received in revised form 19 August 2016
Accepted 23 September 2016
Available online 26 September 2016

Keywords:
Negative moral emotions
Guilt
Shame
Embarrassment
Neuroimaging
MRI
fMRI
PET

ABSTRACT

This systematic review aimed to provide a comprehensive summary of the current literature on the neurobiological underpinnings of the experience of the negative moral emotions: shame, embarrassment and guilt. PsycINFO, PubMed and MEDLINE were used to identify existing studies. Twenty-one functional and structural magnetic resonance imaging and positron emission tomography studies were reviewed. Although studies differed considerably in methodology, their findings highlight both shared and distinct patterns of brain structure/function associated with these emotions. Shame was more likely to be associated with activity in the dorsolateral prefrontal cortex, posterior cingulate cortex and sensorimotor cortex; embarrassment was more likely to be associated with activity in the ventrolateral prefrontal cortex and amygdala; guilt was more likely to be associated with activity in ventral anterior cingulate cortex, posterior temporal regions and the precuneus. Although results point to some common and some distinct neural underpinnings of these emotions, further research is required to replicate findings.
© 2016 Elsevier Ltd. All rights reserved.

Contents

* Corresponding author at: Melbourne Neuropsychiatry Centre, Department of Psychiatry, The University of Melbourne, Alan Guilbert Building (level 3), 161 Barry Street, Melbourne, VIC 3053, Australia.
E-mail address: swhittle@unimelb.edu.au (S. Whittle).

http://dx.doi.org/10.1016/j.neubiorev.2016.09.019
0149-7634/© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Humans experience moral emotions as early as two years of age (Barrett et al., 1993). The onset of this ability coincides with the development of self-evaluative processing, including being able to distinguish self from others. They can be either positive (e.g., pride and gratitude) or negative (e.g., shame, embarrassment and guilt) and most of these emotions can be considered 'pro-social' as they tend to promote adaptive social behaviors (Bowles and Gintis, 2005; Tangney et al., 2011). Negatively valenced 'self-blaming' moral emotions are particularly important for social functioning. These emotions are crucial for the development and maintenance of interpersonal relationships because they act as important social regulators by encouraging a balance between the individual's urges and the rights and needs of others. Further, dysregulation in the experience of these emotions may lead to poor mental health. For example, it has been suggested that the excessive experience of self-blaming emotions like shame and guilt may have particularly adverse consequences in the realm of mood and anxiety disorders, such as depression (Andrews, 1995; Kim et al., 2011; O'Connor et al., 1999; Tangney et al., 1992a).

While a great deal of research has been conducted investigating the neural correlates of basic emotions (e.g., anger, fear, sadness, happiness), far less research has investigated the neural basis of the experience of the negative moral emotions, shame, embarrassment and guilt. Such research might be particularly useful for refining current conceptualizations of common and distinct features of these emotions. Indeed, shame, embarrassment and guilt have a number of broad characteristics in common; all three emotions occur when the rules, norms or social agreements, defining what is right or wrong, are broken. Conversely, these emotions are suggested to have distinct features. A generally accepted differentiation between shame and guilt, proposed by Tangney and colleagues, is that shame is associated with internal attributions while guilt is associated with behavioral attributions (Tangney et al., 1996). Guilt is generally referred to as 'behavior-focused negative self-conscious emotion' (Tangney et al., 2011). With guilt, the focus is on the 'do' (e.g., "I did something wrong") (Tangney, 1995). Guilt may be associated with attributing a transgression, of social or inner moral norms, to external (rather than intrinsic) factors. Furthermore, the feeling of guilt often generates a sentiment of remorse, a desire to have behaved differently regarding the transgressed social norm, or a need to make up for a fault by confessing, taking reparative action (Tangney et al., 2007), or employing other methods for releasing guilty feelings (Lindsay-Hartz, 1984; Tangney et al., 2011). Guilt, more so than shame, may imply empathy toward others and a real concern about acting badly and hurting someone in the process (Tangney, 1992; Tangney et al., 2007). While a guilty person may feel emotional 'pain', it will unlikely become overwhelming (Tangney et al., 2011).

Shame, on the other hand, is generally referred to as 'self-focused negative emotion' (Tangney et al., 2011), and is experienced when a person believes that their transgression of certain rules defines who they are (Wong and Tsai, 2007). Shame is related to the way we perceive ourselves and how we believe others see us, and our failure or inadequacy to fulfill the desire to be a good person (e.g., "*I am* a bad person for lying to my friend"). People who experience shame may be concerned with their own evaluation and what others might think of them (Tangney et al., 1992b), even when experienced alone. Since shame refers to the entire self's malfunction, negatively judging or questioning oneself as a person will likely directly affect one's core identity (Wong and Tsai, 2007). Thus, feeling ashamed induces the sentiment of worthlessness, inferiority and incompetence, and often leads to a want to escape and withdraw socially (Tangney et al., 2011). As such, by directly affecting the self, shame is thought to generate greater pain and be a more distressing experience than guilt. As alluded to, shame and guilt have a different relationship to empathy, while guilt is associated to "other-oriented empathy", shame's connection to empathy appears to be disrupted and focuses on "self-oriented distress" (Tangney et al., 2007).

While Tangney's operationalization of shame and guilt is popular, the similarities and differences between these emotions remains a topic of debate (Pulcu et al., 2013; Tangney et al., 1996; Wong and Tsai, 2007), especially between different fields (i.e., criminology, social and clinical psychology, philosophy, etc.) (Tangney et al., 2007; Tibbetts, 2003). In contrast to the above definitions, O'Connor (O'Connor et al., 1999) for example defines several classes of guilt as involving characterological self-blame.

Embarrassment has long been conceived as a dimension of shame (Kaufman, 1989; Lewis, 1971), generally assumed to vary on a range of factors including intensity, public exposure, and physical reaction (e.g., blushing). However, in more recent years, embarrassment has been suggested to be considered as a distinct emotional response (Tangney et al., 1996). Compared to shame and guilt, embarrassment appears to be associated with more sudden and accidental violation of social conventions with a motivational response directed towards the preservation of one's social reputation, rather than a concern for others' wellbeing and a need to make amends as in guilt or with a concern for oneself with a need to hide as in shame (Eisenberg, 2000; Tangney et al., 1996). Embarrassment is always directly related to the response of the presence of an "audience" (real or imagined), in which the person worries about their social image as a result of their behavior being directly witnessed. Embarrassment appears to be less negative, generating less emotional pain, only affecting one's presented self, and can therefore be perceived as a less 'damaging' emotion by playing a more adaptive role than shame in social interactions.

As such, although there is some debate about their differences (Tangney et al., 1996), shame, embarrassment and guilt are theoretically separable constructs that can be differentiated on the basis

Download English Version:

https://daneshyari.com/en/article/5043760

Download Persian Version:

https://daneshyari.com/article/5043760

Daneshyari.com