Mediterranean Journal of Clinical Psychology

ISSN 2282-1619

MJCP

Volume 9, n 3, 2021

Articles

The Italian version of the Questionnaire for the Assessment of Self-Disgust

Annalisa La Face [1], Albert Wabnegger [1], Anne Schienle [1]*

Abstract

Objectives: While disgust directed at potential disease elicitors constitutes an adaptive mechanism for health protection, disgust directed against the own person is dysfunctional, particularly when it becomes an enduring cognitive-affective orientation toward the self. Self-disgust is associated with several mental disorders, such as depression, borderline personality disorder, eating disorders, obsessive-compulsive and related disorders, and posttraumatic stress disorder. Therefore, the assessment of this construct in the clinical context is very important. Since a Questionnaire for the Assessment of Self-Disgust (QASD) in Italian did not exist, such a scale was developed.

Methods: A total of 1053 individuals (mean age = 32 years; 76% female) participated in an online survey. They completed questionnaires for the assessment of self-disgust (the translated version of the German QASD, Schienle, Ille, & Arendasy, 2014), psychological problems, and overall mental well-being. An exploratory factor analysis (principal axis estimation with oblique (oblimin) rotation; n = 526) and confirmatory factor analysis (n = 527) were computed. Moreover, correlation analyses were carried out to assess the relationship between self-disgust and different indicators of mental wellbeing and psychological disorders.

Results: The QASD has a single factor structure. The questionnaire assesses disgust directed against the own body, personality, and behavior with 12 items. The QASD has very good reliability (McDonald´s omega = .92). The mean self-disgust scores correlated positively with reported symptoms of depression, anxiety, somatization, and body image concerns, and negatively with overall mental wellbeing.

Conclusion: The results point to the association between elevated self-disgust and psychological problems. Therefore, the scale should now be administered in clinical samples.

[1] Department of Clinical Psychology, Universitätsplatz 2, University of Graz, 8010 Graz, Austria

E-mail corresponding author: anne.schienle@uni-graz.at

Keywords:
Self-disgust; Questionnaire; Depression; Anxiety; Somatization; Body image concerns.

Received: 21 September 2021
Accepted: 9 December 2021
Published: 30 December 2021

Citation: La Face A., Wabnegger, A., Schienle, A. (2021). The Italian version of the Questionnaire for the Assessment of Self-Disgust. *Mediterranean Journal of Clinical Psychology, 9*(3). https://doi.org/10.13129/2282-1619/mjcp-3227

1. Introduction

Emotions have an adaptive value in dealing with fundamental life tasks (Ekman, 1992). The primary emotion of disgust has been conceptualized as a disease-avoidance mechanism that originally evolved to protect humans from poisonous food and contagious stimuli (Curtis et al., 2011; Rozin & Fallon, 1987). The protection is achieved through the elicitation of feelings of revulsion, somatic sensations such as nausea, and the initiation of avoidance and rejection behaviors (Schienle et al., 2003).

Neuroscientific research has identified the insular cortex as an important neural substrate of disgust processing (e.g., Calder et al., 2007; Craig, 2009; Wicker et al., 2003). The insula is located in the lateral sulcus of the cerebral cortex and has diverse functions linked to interoception, salience detection, and the regulation of the body's homeostasis (Uddin, 2015). More specifically, the anterior insula serves as the gustatory cortex, which is responsible for the perception of taste (Wicker et al., 2003). Studies with functional magnetic resonance imaging have shown that disgust stimuli (e.g., aversive smells/tastes, repulsive images) lead to changes in insula activity and connectivity (e.g., Schienle et al., 2014b; Schienle & Wabnegger, 2021; Wicker et al., 2003). Moreover, disgust propensity (the tendency of a person to experience feelings of disgust in different situations) is associated with the structure (grey matter volume) of the insula (Scharmüller & Schienle, 2012; Schienle et al., 2020b).

Disgust can be elicited not only by disease-carrying agents (e.g., pathogens in spoiled food, body secretions) but also by violations of social and moral norms (Oaten et al., 2009). In the history of civilization, disgust directed at certain behaviors or beliefs has represented a powerful means of social value transmission (Miller, 2007; Rozin & Fallon, 1987). From a physical conservation mechanism, the role of disgust has broadened to assure preservation of an immaculate conscience and morality, which is the basis of successful interpersonal relationships (Haidt et al., 1994, 1997; Rozin et al., 2008).

The malleability of disgust, though functional, can nonetheless be a cause of maladaptive psychological phenomena. This is the case when disgust becomes directed against aspects of the self. Self-disgust has been defined by Powell and colleagues (2015, p. 5) as 'an enduring disgust reaction elicited by particular aspects of the self, which are deemed significant to an individual's sense of self, and appraised as relatively constant and/or not easily changeable'. Even though self-disgust may seem similar to other self-conscious emotions like shame, guilt, and self-hatred, the visceral nature of the evoked response (i.e., nausea and revulsion) is the distinguishing characteristic (Powell et al., 2013, 2015). In line with this conception, a structural neuroimaging study identified an association between the grey matter volume of the insula and

self-disgust (Schienle & Wabnegger, 2019). Females high (vs. low) in personal self-disgust as assessed with the Questionnaire for the Assessment of Self-Disgust (QASD, Schienle et al., 2014a) had less volume in the bilateral insula. This difference was independent of depressed mood. The reduced insula volume may be a neural correlate of an undifferentiated, negative self-concept.

The distinct, detrimental, abhorrent, and pervasive psychological phenomenon of self-disgust plays a central role in certain mental disorders (Powell et al., 2018). A review by Clarke and collaborators (2019) and recent publications have shown that elevated self-disgust occurs in the context of depression and suicidal ideation (Overton et al., 2008; Powell et al., 2014; Schienle et al., 2020a; Simpson et al., 2010), eating disorders (Espeset et al., 2012; Ille et al., 2014), skin picking disorder (Schienle et al., 2018), insomnia (Ypsilanti et al., 2018), sexual trauma (Jung & Steil, 2012), physical health problems such as chronic venous leg ulceration (Jones et al., 2008) and limb amputation (Burden et al., 2018). The enduring experience of self-disgust is also relevant for body dysmorphic disorder (Ille et al., 2014; Stasik-O'Brien & Schmidt, 2018), obsessive-compulsive disorder (Olatunji et al., 2015), social phobia/anxiety (Amir et al., 2005, 2010), and borderline personality disorder (Ille et al., 2014; Rusch et al., 2011; Schienle et al., 2015).

Despite the high clinical relevance of self-disgust, to date, only two instruments exist that aim at assessing this construct: the 'Self-Disgust Scale' (SDS, Overton et al., 2008) in English, and the 'Questionnaire for the Assessment of Self-Disgust' (QASD, Schienle et al., 2014a) for a German-speaking population. The SDS has been developed in a convenience sample (largely comprising female university students). The questionnaire has two subscales labeled "disgusting self" (disgust targeted at aspects of one's appearance or personality), and "disgusting ways" (disgust directed at one's behavior). The 18-item SDS has evidenced strong internal consistency (Cronbach's alpha = .91).

The QASD has been developed based on the SDS. The items of the SDS were translated, partly modified, and answered by healthy participants and patients with diagnoses of depression. The QASD with 14 items also has a two-dimensional structure, including "personal self-disgust", associated with the dissatisfaction with one's body and personality (e.g., 'I find myself repulsive'), and "behavioral self-disgust", which is directed at one's actions and behavior (e.g., 'Some of my behaviors are repulsive to others'). The two subscales (personal, behavioral) show strong reliability (Cronbach´s alpha: .87, .85). Studies using the SDS or QASD demonstrated the central role of self-disgust for symptoms of depression (Ille et al., 2014; Overton et al., 2008).

Given that beneficial insights could arise from a self-report measure of self-disgust in contexts of psychological assessment and psychotherapy, in the present study the aforementioned 'Questionnaire for the Assessment of Self-Disgust' (QASD, Schienle et al., 2014a) was translated, adapted, and validated in a large Italian non-clinical sample. To the best of our knowledge, this is the first Italian psychometrical instrument for the assessment of self-disgust.

2. Method

2.1 Sample

A total of 1053 individuals (245 males, 805 females, 3 diverse) with a mean age of 32.35 years (SD = 11.68; range = 16-80) participated in an online survey. The total sample was divided into sample 1 (exploratory factor analysis) and sample 2 (confirmatory factor analysis) based on odd/even numbers resulting in comparable samples with respect to age and gender (EFA: 112 males, 412 females, 2 diverse; age: M = 32.33, SD = 11.64; CFA: 133 males, 393 females, 1 diverse, age: M = 32.38 years, SD = 11.74). Half of the participants were married or had a partner (51%). The occupational status was as follows: students (36%), white-collar workers (40%), unemployed/ retired (9%), blue-collar workers (3%). The large majority of the participants had obtained at least a high-school diploma (96%).

A total of 124 participants (12%) reported a lifetime diagnosis of a mental disorder (mood disorders, anxiety disorders, eating disorders, personality disorders, and obsessive-compulsive disorder), and 137 participants (13%) reported a diagnosis of a chronic physical condition (e.g., multiple sclerosis, diabetes, hypertension). Of the participants, 120 (11,5 %) reported that they had experienced physical, emotional, or sexual abuse.

2.2 Procedure

The Italian version of the QASD was developed based on the original version of the questionnaire (Schienle et al., 2014a; in German). The original questionnaire consists of two subscales: "personal self-disgust" (9 items; disgust elicited by one's physical appearance and personality; e.g., "I find myself repulsive"), and "behavioral self-disgust" (5 items; disgust elicited by one's behavior; e.g., "Some of my behaviors are repulsive to others"). The items are rated on a 5-point scale (0 = totally disagree; 4 = totally agree). Possible mean scores for each subscale range between 0 and 4 (with higher values indicating more self-disgust).

The German questionnaire was first translated, and then back-translated via native Italian speakers (two independent translators) and then provided to the Italian sample. A link to access the online survey (duration: approximately 20 minutes) was shared via email and social media between April 2019 and December 2020. The only requisite for participation was to be an Italian

native speaker. Anonymity was guaranteed and the respondents provided written informed consent.

The first section of the survey presented a brief explanation of the concept of disgust ("a primary emotion evolved to protect humans against potentially harmful stimuli"), and self-disgust ("Disgust can also be directed towards our appearance, behavior or personality"). Demographic information was collected (age, education, profession, marital status, gender, reported physical or mental illness, medications). Additionally, the participants completed the following questionnaires:

1) Brief Symptom Inventory-18 – BSI-18 (Derogatis, 2000)

The BSI-18 is the short version of the BSI, a symptom questionnaire that gives an indication to what extent a person has experienced psychological and/or physical complaints during the last week in the areas of anxiety, depression, and somatic complaints. The items are rated on a scale from 1 (not at all) to 4 (a lot). Cronbach's alpha in the present investigation was .91.

2) Body Image Concern Inventory – BICI (Italian version, Luca et al., 2011)

The BICI (Cronbach's alpha = .94) is a self-report measure designed to assess dysmorphic concerns during the previous week, e.g., body dissatisfaction, checking and camouflaging behavior, or avoidance of social activities. It consists of 19 items rated on a 5-point scale anchored by 1 (never) and 5 (always).

3) Warwick-Edinburgh Mental Well-Being Scale – WEMWBS (Italian version, Gremigni & Stewart-Brown, 2011; Stewart-Brown, 2013)

This instrument (Cronbach's alpha = .92) comprises 14 positively worded items representing both hedonic and eudemonic aspects of well-being (e.g., positive affect, satisfying relationships, and positive functioning) to be rated on a 4-points-scale (totally disagree – totally agree) for the last two weeks.

2.3 Statistical Analysis

We computed exploratory as well as confirmatory factor analyses to investigate the factor structure of the QASD. Moreover, to validate the QASD, we computed Pearson correlations between self-disgust and the other assessed variables (symptoms of depression, anxiety, and somatization, body image concerns, mental well-being, age). The factor analyses were conducted with JASP (version 0.14.1); the remaining analyses with SPSS (version 25).

3. Results

3.1 Factor analyses

Before the exploratory factor analysis (EFA), item 12 was excluded from further analyses due to multicollinearity with item 4 and item 13 (see Table 1). For the remaining 13 items, we used a principal axis estimation with an oblique (oblimin) rotation method. Afterward, item 8 had to be excluded because the shared variance with the other variables was too low (communality: .253). For the remaining 12 items, the conducted parallel analysis, an inspection of the scree plot, as well as the eigenvalues > 1 criterion, indicated a single factor structure (Bartlett's test: $x^2(91) = 475.127$, $p < .001$, Kaiser-Meyer-Olkin test: .948). The fit of the single factor structure was assessed by subsequent confirmatory factor analysis (CFA). For parameter estimation, we used diagonal weighted least squares (DWLS), due to violations of the normality assumption at the item level (Muthén, 1993). Overall, the one factor solution showed a good fit (CFI: .99, TLI .99, RMSEA: .027 (CI .008 - .041), SRMR: .052) and very good internal consistency (McDonald´s omega = .92 [.91 - .93]).

Table 1. Correlation matrix for the 14 self-disgust items

Variable	I_01	I_02	I_03	I_04	I_05	I_06	I_07	I_08	I_09	I_10	I_11	I_12	I_13	I_14
1. I_01	—													
2. I_02	0.340	—												
3. I_03	0.438	0.427	—											
4. I_04	0.476	0.471	0.582	—										
5. I_05	0.410	0.589	0.549	0.632	—									
6. I_06	0.417	0.461	0.576	0.498	0.586	—								
7. I_07	0.498	0.536	0.649	0.695	0.713	0.684	—							
8. I_08	0.378	0.457	0.372	0.367	0.485	0.340	0.408	—						
9. I_09	0.372	0.499	0.509	0.472	0.653	0.643	0.636	0.386	—					
10. I_10	0.377	0.438	0.500	0.623	0.502	0.516	0.648	0.306	0.482	—				
11. I_11	0.417	0.425	0.488	0.535	0.566	0.591	0.630	0.326	0.598	0.532	—			
12. I_12	0.455	0.464	0.599	0.807	0.634	0.529	0.725	0.382	0.537	0.650	0.595	—		
13. I_13	0.424	0.457	0.549	0.693	0.636	0.536	0.685	0.382	0.533	0.608	0.605	0.795	—	
14. I_14	0.280	0.360	0.383	0.475	0.357	0.420	0.511	0.230	0.358	0.585	0.423	0.460	0.484	—

3.2 Associations of the QASD with other questionnaires

Means and standard deviations for the administered questionnaires are depicted in Table 2. The QASD showed positive correlations with reported symptoms of depression, anxiety, somatization, and body image concerns, as well as a negative correlation with mental well-being. The QASD correlated negatively with age ($r = -.18$, $p < .001$).

Table 2. Mean scores (standard deviations) and intercorrelations for the administered questionnaires (n = 1053)

	Mean (SD)	QASD	BSI Somatization	BSI Depression	BSI Anxiety	BICI
QASD	0.92 (.80)	-				
Somatization	1.68 (.55)	.378	-			
Depression	1.93 (.75)	.674	.458	-		
Anxiety	1.82 (.67)	.526	.557	.704	-	
BICI	2.30 (.85)	.597	.332	.499	.412	-
WEMWBS	1.85 (.59)	-.452	-.258	-.589	-.439	-.273

Note: all $p < .001$; QASD: Scale for the Assessment of Self-disgust; BSI: Brief Symptom Inventory; BICI: Body Image Concern Inventory, WEMWBS: Warwick-Edinburgh Mental Well-Being Scale

4. Discussion

Some people experience self-disgust as an enduring cognitive-affective orientation towards the self, which is associated with considerable psychological and behavioral consequences. Self-disgust is today being recognized as a characteristic feature of a wide range of mental health problems (Powell et al., 2015).

Within the literature, the operationalization of the construct of self-disgust has been done in heterogeneous ways. The use of visual analogue scales has been the most frequently employed measure of self-disgust in the absence of alternative standardized self-disgust scales (Abdul-Hamid et al., 2014). Psychometric measures to assess self-disgust have only recently been developed (Overton et al., 2008; Schienle et al., 2014a) and are not yet available in many languages.

The present study aimed to fill the gap in the Italian literature concerning the assessment of self-disgust. For this purpose, the German QASD developed by Schienle et al. (2014a) was translated, adapted, and validated. The final version of the Italian QASD consists of 12 items to be rated on a 5-points Likert scale (0 - "totally disagree" – 4 - "totally agree"). In contrast to

the original German version (Schienle et al., 2014a) and Overton's "Self-Disgust Scale" (2008), exploratory and confirmatory factor analysis showed that the Italian scale comprises a one-factor structure. A two-factor model (personal and behavioral scales) did not adequately fit our data. Future studies may further inquire about the nature of the differences in the construct in different countries. However, a strong association between the two QASD subscales has been previously observed. In a study by Schienle, Schwab, and collaborators (2020), personal and behavioral self-disgust's scores displayed a very high intercorrelation (r = .79), which led the authors to choose a global measure of self-disgust for their further analyses, instead of the two sub-scores.

Similar to other results (Ille et al., 2014; Overton et al., 2008; Schienle et al., 2014a; Schienle & Wabnegger, 2019), in our sample the scores of self-reported self-disgust for mentally healthy individuals were very low. Nevertheless, significant correlations with the three subscales of the BSI-18, a measure of psychological and physical distress, were found. In particular, we observed a small but significant correlation between the QASD scores and the BSI's subscale "Somatization". Examples of symptoms include faintness, nausea, and upset stomach, which are associated with parasympathetic activation, typical for the emotion of disgust (Schienle et al., 2003). The BSI subscale "Anxiety" showed a moderate correlation with the QASD mean score. In previous studies, anxiety has been found to be a predictor of behavioral self-disgust for patients with eating disorders (Ille et al., 2004), and significantly correlated with scores on the Self-Disgust Scale in patients suffering from insomnia (Ypsilanti et al., 2018). The authors hypothesized that negative ruminations and maladaptive thought control strategies typical for anxiety may play a role in the development of self-disgust in people with insomnia.

The BSI subscale "Depression" showed a substantial correlation with the QASD scores (r = .67). Evidence of the role of self-disgust in the etiology and maintenance of depressive symptoms is widespread (e.g., Overton et al., 2008*;* Powell et al., 2014*;* Schienle et al., 2014a; Simpson et al., 2010*;* Surguladze et al., 2010). For clinical purposes, it is nonetheless crucial to remember that self-disgust can exist also outside of depressive experience and that therapies for depression do not automatically affect self-disgust. When this residual emotional experience remains unaddressed, the risk for depressive relapse gets higher (Powell et al., 2014).

Self-disgust also correlated positively with a measure of body image concerns (I-BICI). The moderate correlation rules out the possibility that the construct of personal self-disgust (i.e., disgust directed at bodily features perceived as diseased or unattractive by society) simply overlaps with dysmorphic concerns. Empirical studies examining the specific relationship

between self-disgust and body image disturbances (i.e., maladaptive attitudes and behaviors directed toward a disliked aspect of one's own body) are still few, but all found consistent relations between the two constructs (e.g., Cash et al., 2004).

The QASD scores negatively correlated with a measure of well-being. It may be reasonable to identify social withdrawal which typically accompanies the experience of self-disgust as being one of the causes for reduced well-being. Indeed, mental well-being includes the capacity for mutually satisfying and enduring relationships (Tennant et al., 2007). Also, the contrary can be supposed: interpersonal sensitivity can result in a critical position towards one's behavior, thus leading to an internalized feeling of inferiority or self-disgust (Ille et al., 2014).

4.1 Limitations and strengths of the present investigation

Some limitations of the present study have to be acknowledged. Our sample was not representative of the general population because of the predominance of women among the respondents. However, the investigation of gender effects would have been useful. Additionally, our highly educated sample does not match the most recently reported socio-demographic characteristics of the country (ISTAT, 2019).

Even though we investigated a self-selected sample, the sample size was large and the variance in reported self-disgust and the other selected variables was sufficient. Therefore, we can draw solid conclusions from the present data set.

5. Conclusions

Taken together, these and previous results convey the high risk of self-disgust to trigger major consequences for health and social outcomes. We would like to stress the importance of including a measure of trait self-disgust in the psychological assessment (especially for psychopathologies that have an association with self-disgust) to thoughtfully choose the best therapeutic path. The QASD, given its brevity and good psychometric qualities, comprises a reliable and easy-to-administer instrument for this purpose.

To conclude, the Italian version of the QASD captures the trait construct of self-disgust and has sound psychometric properties.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any potential conflict of interest.

References

1. Abdul-Hamid, S., Denman, C., & Dudas, R. B. (2014). Self-relevant disgust and self-harm urges in patients with borderline personality disorder and depression: a pilot study with a newly designed psychological challenge. *PloS one*, 9(6), e99696. https://doi.org/10.1371/journal.pone.0099696

2. Amir, N., Klumpp, H., Elias, J., Bedwell, J. S., Yanasak, N., & Miller, L. S. (2005). Increased activation of the anterior cingulate cortex during processing of disgust faces in individuals with social phobia. *Biological Psychiatry, 57*(9), 975-981. http://doi.org/10.1016/j.biopsych.2005.01.044

3. Amir, N., Najmi, S., Bomyea, J., & Burns, M. (2010). Disgust and anger in social anxiety. *International Journal of Cognitive Therapy, 3*(1), 3-10. https://doi.org/10.1521/ijct.2010.3.1.3

4. Burden, N., Simpson, J., Murray, C., Overton, P. G., & Powell, P. A. (2018). Prosthesis use is associated with reduced physical self-disgust in limb amputees. *Body image*, 27, 109-117. https://doi.org/10.1016/j.bodyim.2018.08.001

5. Calder, A. J., Beaver, J. D., Davis, M. H., van Ditzhuijzen, J., Keane, J., & Lawrence, A. D. (2007). Disgust sensitivity predicts the insula and pallidal response to pictures of disgusting foods. *European Journal of Neuroscience, 25*(11), 3422–3428. https://doi.org/10.1111/j.1460-9568.2007.05604.x

6. Cash, T. F., Phillips, K. A., Santos, M. T., & Hrabosky, J. I. (2004). Measuring "negative body image": validation of the Body Image Disturbance Questionnaire in a nonclinical population. *Body image, 1*(4), 363-372. https://doi.org/10.1016/j.bodyim.2004.10.001

7. Clarke, A., Simpson, J., & Varese, F. (2019). A systematic review of the clinical utility of the concept of self-disgust. *Clinical psychology & psychotherapy, 26*(1), 110-134. https://doi.org/10.1002/cpp.2335

8. Craig, A. D. (2009). How do you feel — now? The anterior insula and human awareness. *Nature Reviews Neuroscience, 10*(1), 59–70. https://doi.org/10.1038/nrn2555

9. Curtis, V., De Barra, M., & Aunger, R. (2011). Disgust as an adaptive system for disease avoidance behaviour. *Philosophical Transactions of the Royal Society B: Biological Sciences, 366*(1563), 389-401. https://doi.org/10.1098/rstb.2010.0117

10. Derogatis, L. R. (1992). The brief symptom inventory (BSI): administration, scoring & procedures manual-II. *Clinical Psychometric Research*. https://doi.org/10.1037/t07502-000

11. Ekman, P. (1992). An argument for basic emotions. *Cognition & Emotion, 6*(3-4), 169-200. http://dx.doi.org/10.1080/02699939208411068

12. Espeset, E. M., Gulliksen, K. S., Nordbø, R. H., Skårderud, F., & Holte, A. (2012). The link between negative emotions and eating disorder behaviour in patients with anorexia nervosa. *European Eating Disorders Review*, *20*(6), 451-460. https://doi.org/10.1002/erv.2183

13. Gremigni, P., & Stewart-Brown, S. (2011). Una misura del benessere mentale: validazione italiana della Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) [A measure of mental well-being: Italian validation of the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)]. *Giornale italiano di psicologia*, *38*(2), 485-508. https://doi.org/10.1007/978-94-007-5195-8_7

14. Haidt, J., McCauley, C., & Rozin, P. (1994). Individual differences in sensitivity to disgust: A scale sampling seven domains of disgust elicitors. *Personality and Individual differences, 16*(5), 701-713. https://doi.org/10.1016/0191-8869(94)90212-7

15. Haidt, J., Rozin, P., McCauley, C., & Imada, S. (1997). Body, psyche, and culture: The relationship between disgust and morality. *Psychology and Developing Societies, 9*(1), 107-131. https://doi.org/10.1177%2F097133369700900105

16. Ille, R., Schöggl, H., Kapfhammer, H. P., Arendasy, M., Sommer, M., & Schienle, A. (2014). Self-disgust in mental disorders—symptom-related or disorder-specific? *Comprehensive Psychiatry*, *55*(4), 938-943. https://doi.org/0.1016/j.comppsych.2013.12.020

17. ISTAT (2019). Livelli di istruzione e ritorni occupazionali [Educational levels and employment returns]. *Annuario*, Istat, Roma.

https://www.istat.it/it/files/2020/07/Livelli-di-istruzione-e-ritorni-occupazionali.pdf

18. Jones, J. E., & Carlisle, C. (2008). Impact of exudate and odour from chronic venous leg ulceration. *Nursing standard*, *22*(45). https://doi.org/10.7748/ns2008.07.22.45.53.c6592

19. Jung, K., & Steil, R. (2012). The feeling of being contaminated in adult survivors of childhood sexual abuse and its treatment via a two-session program of cognitive restructuring and imagery modification: A case study. *Behavior modification*, *36*(1), 67-86. https://doi.org/10.1177/0145445511421436

20. Luca, M., Giannini, M., Gori, A., & Littleton, H. (2011). Measuring dysmorphic concern in Italy: psychometric properties of the Italian Body Image Concern Inventory (I-BICI). *Body Image, 8*(3), 301-305. https://doi.org/10.1016/j.bodyim.2011.04.007

21. Miller, J. G. (2007). Cultural psychology of moral development. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 477–499). The Guilford Press. https://doi.org/10.1177/0022022108321311

22. Muthén, B.O. (1993). Goodness of fit which categorial and other non-normal variables. In K.A. Bollen & J.S. Long (Eds.), *Testing structural equation models* (pp. 205-243). Newbury Park, CA:Sage. https://doi.org/10.1177/0049124192021002004

23. Oaten, M., Stevenson, R. J., & Case, T. I. (2009). Disgust as a disease-avoidance mechanism. *Psychological bulletin*, *135*(2), 303. https://doi.org/10.1037/a0014823

24. Olatunji, B. O., Cox, R., & Kim, E. H. (2015). Self-disgust mediates the associations between shame and symptoms of bulimia and obsessive-compulsive disorder. *Journal of Social and Clinical Psychology*, *34*(3), 239–258. https://doi.org/10.1521/jscp.2015.34.3.239

25. Overton, P. G., Markland, F. E., Taggart, H. S., Bagshaw, G. L., & Simpson, J. (2008). Self-disgust mediates the relationship between dysfunctional cognitions and depressive symptomatology. *Emotion*, *8*(3), 379. https://doi.org/10.1037/1528-3542.8.3.379

26. Powell, P. A., Overton, P. G., & Simpson, J. (2014). The revolting self: An interpretative phenomenological analysis of the experience of self-disgust in females with depressive symptoms. *Journal of Clinical Psychology*, *70*(6), 562-578. https://doi.org/10.1002/jclp.22049

27. Powell, P. A., Overton, P. G., & Simpson, J. E. (2015). *The revolting self: Perspectives on the psychological, social, and clinical implications of self-directed disgust*. Karnac books. https://doi.org/10.4324/9780429483042

28. Powell, P. A., Simpson, J., & Overton, P. G. (2013). When disgust leads to dysphoria: A three-wave longitudinal study assessing the temporal relationship between self-disgust and depressive symptoms. *Cognition & Emotion, 27*(5), 900-913. https://doi.org/10.1080/02699931.2013.767223

29. Powell, P. A., Simpson, J., & Overton, P. G. (2018). An introduction to the revolting self: Self-disgust as an emotion schema. In *The revolting self* (pp. 1-24). Routledge. https://doi.org/10.4324/9780429483042-1

30. Rozin, P. & Fallon, A. E. (1987) A perspective on disgust. *Psychological Review*, 94, 23–41. https://doi.org/10.1037/0033-295x.94.1.23

31. Rozin, P., Haidt, J., & McCauley, C. R. (2008). *Disgust. Handbook of emotions*, 3rd edition. New York: Guilford Press.

32. Rüsch, N., Schulz, D., Valerius, G., Steil, R., Bohus, M., & Schmahl, C. (2011). Disgust and implicit self-concept in women with borderline personality disorder and posttraumatic stress disorder. *European Archives of Psychiatry and Clinical Neuroscience, 261*(5), 369-376. https://doi.org/10.1007/s00406-010-0174-2

33. Scharmüller, W., & Schienle, A. (2012). Voxel-based morphometry of disgust proneness. *Neuroscience letters*, *529*(2), 172-174. https://doi.org/10.1016/j.neulet.2012.09.004

34. Schienle, A., & Wabnegger, A. (2021). The processing of visual food cues during bitter aftertaste perception in females with high vs. low disgust propensity: an fMRI study. *Brain Imaging Behavior*, 15, 2532-2539. https://doi.org/10.1007/s11682-021-00455-2

35. Schienle, A., Ille, R., & Arendasy, M. (2014a). Diagnostik von Selbstekel im Rahmen der depression. [Diagnostics of self-disgust in the context of depression]. *Verhaltenstherapie*, *24*(1), 15-20. https://doi.org/10.1159/000360189

36. Schienle, A., Leutgeb, V., & Wabnegger, A. (2015). Symptom severity and disgust-related traits in borderline personality disorder: the role of amygdala subdivisions. *Psychiatry Research: Neuroimaging, 232*(3), 203-207. https://doi.org/10.1016/j.pscychresns.2015.04.002

37. Schienle, A., Schäfer, A., Stark, R., Walter, B., Franz, M., & Vaitl, D. (2003). Disgust sensitivity in psychiatric disorders: a questionnaire study. *The Journal of nervous and mental disease, 191*(12), 831-834. https://doi.org/10.1097/01.nmd.0000100928.99910.2d

38. Schienle, A., Schwab, D., Höfler, C., Freudenthaler, H.H. (2020a). Self-Disgust and Its Relationship with Lifetime Suicidal Ideation and Behavior: Results from a Cross-Sectional, Internet-Based Survey. *Crisis, 41*(5), 344-350 https://doi.org/10.1027/0227-5910/a000645

39. Schienle, A., Übel, S., & Wabnegger, A. (2018). Visual symptom provocation in skin picking disorder: an fMRI study. *Brain imaging and behavior, 12*(5), 1504-1512. https://doi.org/10.1007/s11682-017-9792-x

40. Schienle, A., Übel, S., Schöngaßner, F., Ille, R., & Scharmüller, W. (2014b). Disgust regulation via placebo: an fMRI study. *Social cognitive and affective neuroscience, 9*(7), 985–990. https://doi.org/10.1093/scan/nst072

41. Schienle, A., Wabnegger, A. (2019). The structural neuroanatomy of self-disgust: A VBM analysis with a non-clinical sample. *Personality and Individual Differences*, 149, 174-178. https://doi.org/10.1016/j.paid.2019.06.003

42. Schienle, A., Zorjan, S., & Wabnegger, A. (2020b). A brief measure of disgust propensity. *Current Psychology*, 1-7. http://doi.org/10.1007/s12144-020-00883-1

43. Simpson, J., Hillman, R., Crawford, T., & Overton, P. G. (2010). Self-esteem and self-disgust both mediate the relationship between dysfunctional cognitions and depressive symptoms. *Motivation and Emotion, 34*(4), 399-406. https://doi.org/10.1007/s11031-010-9189-2

44. Stasik-O'Brien, S. M., & Schmidt, J. (2018). The role of disgust in body image disturbance: Incremental predictive power of self-disgust. *Body image*, 27, 128-137. https://doi.org/10.1016/j.bodyim.2018.08.011

45. Stewart-Brown, S. (2013). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): performance in different cultural and geographical groups. In *Mental well-being* (pp. 133-150). Springer, Dordrecht. https://doi.org/10.1007/978-94-007-5195-8_7

46. Surguladze, S. A., El-Hage, W., Dalgleish, T., Radua, J., Gohier, B., & Phillips, M. L. (2010). Depression is associated with increased sensitivity to signals of disgust: a functional magnetic resonance imaging study. *Journal of psychiatric research, 44*(14), 894-902. https://doi.org/10.1016/j.jpsychires.2010.02.010

47. Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh mental well-being scale (WEMWBS): development and UK validation. *Health and Quality of life Outcomes, 5*(1), 1-13. https://doi.org/10.1186/1477-7525-5-63

48. Uddin, L. Q. (2015). Salience processing and insular cortical function and dysfunction. *Nature reviews neuroscience, 16*(1), 55-61. https://doi.org/10.1038/nrn3857

49. Wicker, B., Keysers, C., Plailly, J., Royet, J. P., Gallese, V., & Rizzolatti, G. (2003). Both of us disgusted in My insula: the common neural basis of seeing and feeling disgust. *Neuron, 40*(3), 655–664. https://doi.org/10.1016/s0896-6273(03)00679-2

50. Ypsilanti, A., Lazuras, L., Robson, A., & Akram, U. (2018). Anxiety and depression mediate the relationship between self-disgust and insomnia disorder. *Sleep Health, 4*(4), 349-351. https://doi.org/10.1016/j.sleh.2018.06.001

DOI: 10.13129/2282-1619/mjcp-3227

Appendix

Si prega di indicare il suo grado di accordo con le seguenti affermazioni:		Per niente d'accordo	Poco d'accordo	Né in accordo né in disaccordo	Abbastanza d'accordo	Totalmente d'accordo
		0	1	2	3	4
1.	Non piaccio particolarmente alla maggior parte delle persone.					
2.	Faccio cose che trovo disgustose.					
3.	Mi sento umiliato.					
4.	Mi trovo ripugnante.					
5.	Mi vergogno di come mi comporto.					
6.	Mi sento in colpa.					
7.	Mi vergogno di me stesso.					
8.	Mi pento del mio comportamento.					
9.	Mi infastidisce guardarmi.					
10.	Odio alcuni aspetti della mia personalità.					
11.	Non riesco a sopportarmi.					
12.	Mi sento a disagio nel toccare le parti del mio corpo che non mi piacciono.					