

EXPLAINING INTERACTION OF GUILT AND OBSESSIVE-COMPULSIVE SYMPTOMS  
IN NOT JUST RIGHT EXPERIENCESVittoria Zaccari, Guyonne Rogier, Daniela Pulsinelli, Francesco Mancini,  
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## Abstract

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**Objective:** “Not Just Right Experiences” (NJREs) are currently considered a characteristic of Obsessive–Compulsive Disorder (OCD). Significant associations have been found between NJREs and Obsessive–Compulsive (OC) symptoms in nonclinical and clinical populations. Literature support a significant relationship between NJREs, feelings of guilt and OC features. This study aims to clarify the role of the potential interplay between guilt and OC symptomatology in NJREs and verify if high levels of guilt will predict NJREs and OC symptoms and trait guilt levels will positively interact in their prediction of NJREs.

**Method:** One hundred and eighty-nine adults recruited from normal population were assessed with questionnaires of NJREs and OC symptoms and proneness to experience guilt.

**Results:** All the variables involved in the study (NJREs severity, guilt and OCI-R scores) were positively and significantly correlated and showed that guilt and OCI-R scores significantly and positively interact in the prediction of NJREs levels. Guilt predicted NJREs only when levels of OCI-R were high.

**Conclusions:** These results support the association between guilt sensitivity or OC symptoms and NJREs in clinical and nonclinical participants and that a disposition toward high levels of guilt and OC symptoms have a particular sensitivity to NJREs corroborating centrality of guilt in OC symptoms.

**Key words:** not just right experiences (njres), obsessive–compulsive symptoms, obsessive–compulsive disorder (ocd), obsessive–compulsive features, guilt, trait-guilt

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## Introduction

*NJREs and OC symptoms*

The current literature offers different conceptualizations of “Not Just Right Experiences” (NJREs) evidencing the lack of unitary agreement on the definition of the construct. NJREs are frequently defined as subjective experiences characterized by feelings of incompleteness, imperfection, or that the internal or external environment is not as they should be (Coles et al., 2003). Other authors pointed out that NJREs are fundamentally a subjective impression that “something is not just right” or incomplete meaning that some actions, intentions or perceptions would have been incompletely achieved (Sica et al., 2015; Summerfeldt et al., 2014). Some researchers (Coles et al., 2003; Rasmussen and Eisen., 1992; Summerfeldt, 2004)

defined NJREs as sense or feeling that one’s actions, intentions, or experiences have not been adequate or accurate. Specifically, NJREs are uncomfortable sensations that signal a perceived mismatch between the state of the world or of one’s own performance and the individual’s acceptable standards. In that sense, NJREs are characterized by the perception of an experience as “not completely satisfying” (Rasmussen & Eisen, 1992). Who experiences NJREs feels driven to act to change the surrounding environment with the aim of decreasing the discomfort resulting from this sensation. From this perspective, the discomfort experienced would result from the discrepancy between the individual’s performance or the real state of things, and their own standards (Mancini et al., 2008). Because NJREs have primarily defined as a state, of a variable nature and intensity, inter-individual differences regarding the stable propensity to experience

such mental manifestations have not been exhaustively investigated by the scientific community. In the current contribution, we aimed to extend the current knowledge towards the underlying factors accounting for the differences in the stable propensity to experience NJREs defined as "the subjective sense that something isn't just as it should be" or "subjective feeling that one's actions are not exactly as they should be".

NJREs are currently considered a characteristic of Obsessive Compulsive (OC) symptoms (Coles et al., 2003; 2005; Ghisi et al., 2010). Indeed, the currently cognitive conceptualization of Obsessive Compulsive Disorder (OCD) (American Psychiatric Association, APA, 2013) postulates the presence of NJREs (Coles et al., 2003 2005) as a motivator of OC symptoms. Several studies have confirmed the role of NJREs in the OCD phenomenology (Coles et al., 2003, 2005; Belloch et al., 2016; Bottesi et al., 2017; Cogle et al., 2013; Mancini et al., 2008; Summerfeldt et al., 2014), as well as in its genesis and maintenance (Coles et al., 2003, 2005; Ghisi et al., 2010; Sica et al., 2015; Coles & Ravid, 2016). Significant associations have been found between NJREs and OCD/OC symptoms both in nonclinical and clinical populations in studies adopting cross-sectional or longitudinal design of research (Belloch et al., 2016; Ghisi et al., 2010; Sica et al., 2012; Taylor et al., 2014).

In line with this, in the last years, it has been documented that NJREs are strongly related to specific OC symptom clusters, as the ordering and arranging, checking, washing, and obsessing ones (see Taylor et al., 2014, for a meta-analysis). For instance, a study conducted by Cogle et al. (2013) shed light on the relationship between NJREs and checking symptoms whereas other studies showed that the presence of NJREs was related to increased frequency and severity of washing compulsions (Ferrão et al., 2012). Finally, some additional research suggested a unique relationship between NJREs and both ordering behavior and the need for symmetry in clinical or nonclinical samples (Coles et al., 2003; Pietrefesa & Coles, 2009; Ecker & Gönner, 2008). In contrast with these results, Sica et al. (2016), suggested that NJREs' proneness should be considered as an underlying vulnerability factor that may transversally account for the clinical and nonclinical expressions of overt symptomatology of OCD. They tested the hypothesis that NJREs may be a putative endophenotype for OCD, by comparing NJREs frequency and severity between individuals with and without OC symptoms. Results showed that symptomatic individuals, compared to non-symptomatic individuals, reported higher scores of NJREs frequency and severity. Moreover, in individuals at-risk for OCD, NJREs were robustly associated with all OC symptomatologic clusters, suggesting the transversal role of NJRE across OC symptomatology types. Consistent with other previous studies (i.e., Coles et al., 2003; Ecker & Gönner, 2008), they found that NJREs were more strongly correlated with symptoms of ordering/arranging than obsessing symptoms. As a whole, empirical investigations of the transversal or unique associations between NJREs' proneness and types of OC symptoms brought contrasting results and call for further research.

Furthermore, van Dis and van den Hout (2016), using an induced checking paradigm, found that perseverative checking behaviors elicits NJREs, suggesting a vicious circle between NJREs and obsessive checking.

Currently what has been highlighted in the literature is that several manifestations of OCD are characterized by NJREs. However, these findings do not demonstrate that NJREs are a vulnerability factor for OCD. In fact, some key ingredients involved in OC symptomatology,

such as the role of the critical and guilt-ridden mental state of OCD patients, might take a part in the association between OCD and NJREs.

### *Guilt feelings, OC symptoms and NJREs*

To date, the nature of the relationships between NJREs and other variables related to the nomological network of OCD is still not clear. Importantly, several theoretical perspectives support the role of guilt and fear of guilt in the genesis and maintenance of OCD. For instance, cognitive models of OCD suggested that the purpose of OC symptoms is to prevent or neutralize the possibility of feeling guilty (Salkovskis, 1985; Rachman, 1993, 2002, 2006; van Oppen & Arntz, 1994; Salkovskis & Forrester, 2002; Mancini & Gangemi, 2004, 2011). Moreover, research found that abnormal feelings of guilt and responsibility are typical cognitive features of the OCD profile.

In line with this conceptualization, recent empirical evidences support the hypothesis that the feeling of guilt underlying OC symptomatology is predominantly deontological in its nature (for a review, see Gangemi & Mancini, 2017; Mancini & Gangemi, 2021). In fact, the literature highlight association between guilt and OC symptomatology in clinical and non-clinical sample (Mancini, 2001; Mancini & Gangemi, 2004; Niler & Beck, 1989; Rachman, 1993; van Oppen & Arntz, 1994) and the predictive role of the induction of deontological guilt related to OC symptomatology (D'Olimpio & Mancini, 2014; D'Olimpio et al., 2013).

Particularly, this conceptualization has been developed within a psychopathological model that supports the centrality of deontological guilt (as opposed to altruistic guilt) in the genesis and maintenance of OCD (Mancini & Gangemi, 2015). Interestingly, it has been documented that guilt increases NJREs feelings. Indeed, some authors advanced and tested hypotheses on the nature and determinants of NJRE documenting that NJRE was induced by fear of guilt (Mancini et al., 2008). Specifically, through two experiments, these authors investigated whether the guilt induction influences NJRE in healthy adults with high vs low trait guilt. Results showed that guilt induction led an increase in NJRE, interacting with trait guilt. Indeed while individuals with high trait guilt reported stronger NJREs after guilt induction (and not after an induction of neutral affect), individuals with low trait guilt did not show this pattern.

Overall, these results provide support for a significant relationship between NJRE and guilt.

In summary, some findings have highlighted the link between guilt and NJREs, others between guilt and OCD or between OCD and NJREs. To date, however, the potential interaction between OC symptomatology and guilt in predicting NJREs has not been empirically explored.

### *The current study*

As briefly illustrated above, the literature has shown that NJREs are related to both feelings of guilt and OC symptoms and that OC symptoms are closely related to guilt sensitivity.

As we said, NJREs can be considered as the signal that something is not as it should be and, as such, in OCD could signal the presence of a state of guilt. In other words, it is possible that in OCD the presence of guilt is signaled, by the feeling of NJR. It is possible, therefore, that fear of being guilty plays an important role in the feeling of NJRE.

Despite some inspiring preliminary data currently available in the scientific literature, knowledge towards the nature of predictors involved in NJREs as such as OC symptoms and guilt is still nuclear. In light of the illustrated existing gaps, the present study aims to elucidate the predictive variables of NJREs. In particular, it appears essential to clarify whether these experiences are explained by specific mental states, like feelings of guilt, which play a role in the genesis and maintenance of OC symptomatology.

Clarify the role of the potential interplay between guilt and OC symptomatology in NJREs would bring an important clinical indication that will help to better tailor interventions for individuals experiencing pathological levels of NJREs.

In our opinion, it is plausible that the sensitivity to NJREs depends on the occurrence of frequent and intense feelings of guilt (Mancini & Gangemi, 2015; D'Olimpio, et al., 2013). In fact, patients affected by OCD experience guilt in a chronic fashion, that is they are characterized by high levels of trait guilt (Mancini, 2001; Mancini & Gangemi, 2004; Niler & Beck, 1989; Rachman, 1993; van Oppen & Arntz, 1994). Indeed previous results (Mancini et al., 2008) support that increasing guilt rises NJREs feelings, further showing a relationship of both NJRE and trait guilt to OC characteristics in non-clinical participants.

According to this literature the current study aims to test the following set of hypotheses in a sample of community participants:

- \* High levels of guilt will predict NJREs;
- \* High levels of OC symptoms will positively and significantly predict NJREs;
- \* OC symptoms and trait guilt levels will positively interact in their prediction of NJREs.

## Methods

### Participants and procedures

For this study, we recruited a sample of 189 Italian adults (25 males) from the normal population ( $M = 29.72$ ;  $S.D. = 4.93$ ). Most of them were single (60.3%) and obtained a university diploma or a higher level of education (69.3%).

Participants were recruited via mail or social network. The study was compiled on QuestionPro platform. Before the recruitment in the study, we illustrated the aims and procedure as well as the issues surrounding anonymity and privacy. Who accepted to participate in the study was asked to fulfil a written informed consent and a battery of online self-report questionnaires. No compensation was given for the participation in the study. The whole procedure complied with the guidelines of the Italian Psychological Association and was approved by the Ethical Board of the University Marconi (N. 31320).

### Measures

Several self-report questionnaires were administered, investigating the following constructs:

Demographic information (Age, Gender, socioeconomic level) was investigated using an initial questionnaire created by the authors of the study.

Proneness to experience Not Just Right Experiences was measured throughout the administration of the Not Just Right Experience-Questionnaire-Revised (NJRE-Q-R; Coles et al., 2005). It consists of 19 items asking the participants to refer the emergence of recent specific

NJREs. Then, the participant is asked to indicate the frequency and intensity of the most disturbing NJREs, answering on a 6-points Likert scale ranging from 1 (*none*) to 7 (*extreme*). Examples of items are "I have felt that my clothes weren't on my body right" or "While I was talking to someone, I felt that my words sound not right". The Italian version of the instrument showed good psychometric properties including high internal consistency and good construct validity in both clinical and non-clinical samples (Ghisi et al., 2010). Because the severity scale has been found to be especially associated with clinical variables and to discriminate between individuals with and without OCD (Ghisi et al., 2010), for the purpose of this study, only the severity subscale of the instrument was used that showed a good internal consistency ( $\alpha = .91$ ).

Proneness to experience Guilt was measured throughout the use of the Guilt Inventory (GI; Kugler & Jones, 1992), a self-report consisting of a 45 items questionnaire assessing Trait Guilt, State Guilt and Moral Standards. For instance, items state "Lately, it hasn't been easy being me" (State guilt), "I believe in a strict interpretation of right and wrong" (Moral Standards) or "Guilt and remorse have been a part of my life for as long as I recall" (Trait guilt). The instrument asked the participant to answer on a 5-points Likert type scale ranging from 1 (*Completely disagree/Totally false*) to 5 (*Completely agree/Totally true*). The Italian version of the instrument was administered that has been previously used in past Italian studies, showing a good reliability (e.g. Basile et al., 2014; Di Sarno et al., 2019). For this study, only the total score of the instrument has been used, that showed a good internal consistency with a Cronbach alpha being .85.

Severity of Obsessive symptomatology was investigated with the Obsessive-Compulsive Inventory-Revised (OCI-R; Foa et al., 2002; Huppert et al., 2007). The instrument counts 18 items (e.g. "I check things more often than necessary"; "I find it difficult to control my own thoughts"), with answer being indicated on a Likert type scale ranging from 0 (*Not at all*) to 4 (*Extremely*). The Italian version of the instrument (Sica et al., 2009) demonstrated its factorial structure, its good reliability and its satisfactory construct validity (for a critical overview of the topic see Ghisi et al., 2016). In this study, we used only the total score of the OCI-R. The internal consistency of the scale was good ( $\alpha = .88$ ).

### Statistical Analyses

All the analyses have been carried out using the SPSS software for Windows (v.24). First, preliminary statistical analyses were performed in order to verify the internal consistencies of the instruments used (computation of alpha Cronbach's values) and the normal distribution of the variables (skewness and kurtosis). Then, *r*-Pearson correlations, controlling for age and Gender, were computed to explore the relationships between the variables involved in the study. Finally, we computed a series of regression analyses to test our moderation hypothesis.

## Results

### *r*-Pearson correlations

As fully displayed in Table 1, we found that all the variables involved in the study (NJREs severity, guilt and OCI-R scores) were positively and significantly correlated.

**Table 1.** *r*-Pearson bivariate correlations, controlling for Age and Gender, between the main variables involved in the study

Variables	1	2	3	4
1. Age	-			
2. OCI-R	-.15*	-		
3. Guilt Inventory	.03	.29**	-	
4. NJRE	-.07	.35**	.19*	-

Note: OCI-R: Obsessive Compulsive Inventory Revised; NJRE: Not Just Right Experience Questionnaire, severity subscale; \*  $p < .05$ ; \*\*  $p < .001$ .

### Moderation analysis

Then, we performed a hierarchical multiple regression to test the hypothesis that guilt and OC symptomatology positively interact in the prediction of NJREs levels using the PROCESS (Hayes, 2013) macro for SPSS (5000 bootstraps). These analyses were performed controlling for age and gender. We found that when both Guilt Inventory and OCI-R scores were entered as simultaneous factors predicting NJREs severity, only OCI-R was a significant (and positive) predictor of the outcome. Moreover, results (fully displayed in Table 2) showed that GI and OCI-R scores significantly and positively interact in the prediction of NJREs levels. Specifically, bootstrap analyses showed that Guilt predicted NJREs only when levels of OCI-R were high (CI 95% [.0031 to .0240]) but not when OCI-R scores were moderate (CI 95% [-.0047 to .0126]) or low (CI 95% [-.0178 to .0064]).

### Discussion

The main goal of our study was to shed light on the psychopathological mechanisms underlying OC symptomatology in a non-clinical population. Specifically, our purpose was to verify if high levels of guilt will predict NJREs and OC symptoms and trait guilt levels will positively interact in their prediction of NJREs. Results of our analyses brought insightful data.

First, we aimed to extend the current knowledge towards the relationship between guilt, OC symptoms and NJREs. Our results documented that NJREs severity, guilt and OCI-R scores were positively and significantly correlated. In other words, as both OCI-R and guilt scores increased, so did NJREs levels. These results support a number of theoretical and empirical contributions that highlight the association between

guilt sensitivity or OC symptoms and NJREs in clinical and nonclinical participants (Miguel et al., 2000; Mancini et al., 2008; Belloch et al., 2016; Bottesi et al., 2017; Cogle et al., 2013; Hellriegel et al., 2016; Summerfeldt et al., 2014; Ghisi et al., 2010; Sica et al., 2012; Taylor et al., 2014). Furthermore, our findings support our thesis that those with a disposition toward high levels of guilt and OC symptoms have a particular sensitivity to NJREs. However, the results of the moderation analysis show that when trait guilt and OCD characteristics are considered simultaneously in predicting NJRE score, only OCD characteristics emerge as significant predictors (second step).

In other words, if we consider obsessive characteristics or feeling guilty as trait guilt, only the former seems to account for the feeling of NJR. However, looking at the results of the third step of the moderation analysis, we found that GI and OCI-R scores significantly and positively interacted in the prediction of NJREs levels. This result suggests that Guilt may predict NJREs only when levels of OCI-R are high but not when OCI-R scores are moderate or low. Therefore, we found that non-clinical subjects with a tendency to OC symptoms (high OCI-R scores) with low trait guilt, do not show sensitivity to NJREs. Although the level of OCI-R appears to significantly predict the score at the NJREs (step two), results (step three) show that trait guilt interacts with OCI-R in predicting NJRE feelings. In other words, in the absence of other indicators, we can say that people with higher OCD scores are more prone to NJREs, but that this phenomenon occurs especially in people with high trait guilt. In other words, the presence of only OC symptoms associated with low levels of trait guilt does not favor experiencing NJREs. Only high levels of guilt and OC symptoms lead to experiencing NJREs. These results could be argued in the direction of the primary role of guilt in the phenomenology of OCD and support the perspective arguing for the centrality of

**Table 2.** Hierarchical regression analysis predicting NJREs levels with obsessive compulsive symptomatology, guilt and their interaction, controlling by age and gender

	Model 1			Model 2			Model 3		
	$R^2 = .16; p = .099$			$R^2 \text{ change} = .12; p < .001$			$R^2 \text{ change} = .03; p = .009$		
	$\beta$	SE	$p$	$\beta$	SE	$p$	$\beta$	SE	$p$
Constant	28.34	5.89	<.001	17.63	6.75	.010	29.80	8.90	<.001
Age	-.17	.15	.256	-.12	.14	.404	-.12	.14	.378
Gender	-3.54	1.76	.048	-2.77	1.68	.102	-2.75	1.65	.098
OCI-R				.30	.07	<.001	-.81	.43	.061
GI				.01	<.01	.205	-.01	.01	.258
GI * OCI-R							<.001	<.001	.009

Note: NJREs: Not Just Right Experiences; SE: Standard Error; OCI-R: Obsessive Compulsive Inventory Revised; GI: Guilt Inventory

the role of guilt in OC symptoms. Specifically, this may suggest that a high propensity to guilt in OCD would favor NJRE, being associated with the subjective need to restore the feeling that something is “just right”, seeking for the achievement of a sense of accuracy (Coles et al., 2003). Therefore, high guilt sensitivity in people with OCD would lead to high levels of NJRE to avoid the feeling that one's actions, intentions, or experiences are not adequate. In that sense it may argue that, NJREs, by definition, refer to duty and internal -and moral-standards being related to the sensation that things are not as they should be (Mancini et al., 2008). This reflection is further supported by the observation that the pattern of correlations between the NJREs' proneness and the guilt's dimensions perfectly overlaps with the associations between the OCI-R's scores. This converges with theoretical perspective asserting that NJREs would be elicited by feeling of guilt.

Anyway, these preliminary results regarding the complex interplay between NJREs, guilt feelings and OC symptoms may have important clinical implications. Indeed, proneness to NJREs are difficult to treat in Cognitive Behavioral Therapy because of the difficulty to identify a cognitive aspect that may be targeted with cognitive strategic interventions (e.g. Summerfeldt, 2004). From this perspective, the identification of guilt proneness as a central piece of the puzzle in these mechanisms may orientate therapeutic strategies, for instance, targeting the cognitive contents related to guilt feelings to reduce the occurrence of NJREs that, in turn, would reduce OC symptomatology.

### Limitations and future directions

Despite our study brought interesting results, our conclusions should be considered with caution, keeping in mind some important limitations. First, our design of research was cross-sectional and conclusions towards the causal nature of relationships between our variables are only speculative. This is especially true for the causal relationship between guilt and NJREs. Therefore, future studies may want to use longitudinal or experimental designs of research to replicate our results. Moreover, a conceptual limitation may be identified in the conceptualization of NJRE as a free-harm avoidance variable. Indeed, it may be argued that this conceptualization is arbitrary and that, in some proportion, NJREs may include a fear of harm. Finally, we conducted a study on non-clinical population and this is likely to limit the generalization of our findings to a clinical sample. However, from the perspectives that consider psychopathology as a continuum between normal and pathological functioning, the use of a non-clinical population may also be considered a strength of our study that aimed to identify risk factors for OC symptomatology. In that sense, future studies may want to test our hypotheses in a clinical sample of individuals suffering from OCD.

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