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Interpersonal guilt, impostor phenomenon, depression, and anxiety

Ramona Fimiani^a, Jessica Leonardi^a, Bernard Gorman^b, Francesco Gazzillo^a

^a*Department of Dynamic and Clinical Psychology, and Health Studies, Sapienza University of Rome, Rome, Italy*

^b*Derner Institute of Advanced Psychology Studies, Adelphi University, Long Island, New York*

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Abstract

Impostor phenomenon (Clance, 1985) refers to the psychological experience of individuals who perceive themselves as intellectual frauds and fear of being exposed as impostors. Previous studies suggest that the fear of failure, the fear of success, and low self-esteem are preconditions that foster the occurrence of impostor feelings (e.g., Neureiter & Traut-Mattausch, 2016). The aim of this study was to investigate the relationship between the impostor phenomenon and interpersonal guilt as conceived in Control-Mastery Theory (Faccini et al., 2020), and their association with anxiety and depression. **Methods.** 343 subjects completed the Interpersonal Guilt Rating Scale-15s (IGRS-15s; Faccini et al, 2020), the Clance Impostor Phenomenon Scale (CIPS; Clance, 1985), the State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983), and the Beck Depression Inventory II (BDI II; Beck et al., 1996). **Results.** As expected, impostor phenomenon was significantly associated with self-hate, survivor guilt and omnipotence guilt. The hypothesis that these kinds of guilt and the impostor phenomenon can contribute to anxiety and depression has also been confirmed. **Conclusions.** This study suggests that people who experience impostor fears struggle with maladaptive feelings of guilt related to pathogenic beliefs about oneself and significant others, favoring depression and anxiety. Therefore, working on these aspects can be essential in treating these patients.

Keywords: Interpersonal guilt; impostor phenomenon; depression; anxiety; Control-Mastery Theory.

*Corresponding author.

Ramona Fimiani
Department of Dynamic and Clinical
Psychology, and Health Studies
Sapienza University of Rome
Via degli Apuli, 1, 00185, Rome, Italy
Phone: + 39 0649917754
E-mail: ramona.fimiani@uniroma1.it
(R. Fimiani)

Introduction

The impostor phenomenon, first described by Clance (Clance & Imes, 1978; Clance, 1985) on the basis of several clinical observations, refers to the psychological experience of intellectual phoniness. People who experience this feeling of fraudulence (Kolligian & Sternberg, 1991), despite outstanding academic and professional recognition and success, may secretly harbor the idea that they do not deserve the success and recognition they have achieved. They believe they are less competent and less intelligent than they appear to be, that they have fooled everyone who thinks otherwise, and live with fear that sooner or later others will discover they are impostors (Clance & O'Toole, 1987; Clance et al., 1995; Harvey & Katz, 1985; Kolligian & Sternberg, 1991; Sakulku & Alexander, 2011). The impostor phenomenon was originally observed among high achieving women, but more recent research has documented impostor fears among men and women, in many professional settings, and across different ethnic and racial groups (for a review see Bravata et al., 2020).

Although one might expect that numerous achievements may provide objective evidence of their abilities and competences, the repetition of success does not seem to affect impostor¹'s cognitions and feelings. When faced with a new achievement-related task, impostors are plagued by self-doubt, anxiety, and fear of failure (e.g., Clance & Imes, 1978; Kolligian & Sternberg, 1991; Thompson et al., 2000). They may react to the anxiety either by extreme over-preparation, or initial procrastination followed by frenzied preparation (Sakulku & Alexander, 2011). If their performance results in success, impostors experience an initial sense of relief and accomplishment, but these feelings are short lived. In fact, although impostors may receive positive feedback about their performance, they deny that their success is related to their own abilities (Harvey & Katz, 1985). Compared to non-impostors, impostors tend to attribute their achievements more frequently to factors other than ability, such as hard work, luck, misjudgment, knowing the right people, or their own interpersonal skills (Cozzarelli & Major, 1990; Thompson et al., 1998; Topping & Kimmel, 1985).

The achievement-oriented behaviors of people who experience the impostor feelings are motivated by the need to appear competent and smart to others in order to *get recognition from others and confirmation of their self-worth* (Ferrari & Thompson, 2006; Langford & Clance, 1993; Langford, 1990). For this reason, they closely monitor their behavior and the impressions they produce on others and are particularly vulnerable to shame and humiliation when they make a mistake or fail (Cowman & Ferrari, 2002; Thompson et al., 1998, 2000; Cozzarelli & Major, 1990). Impostors self-impose extremely high and often unrealistic standards for evaluating themselves, criticize themselves and are disappointed when their performance fails to meet their perfectionist standards (Cusack et al., 2013). Impostors, compared to non-impostors, tend to attribute their failures to internal factors and overgeneralize the negative implications of failure to their whole self-concepts

(Thompson et al., 1998). Several studies indicate that impostor fears are associated with perfectionistic cognitions (Ferrari & Thompson, 2006; Thompson et al., 1998; Vergauwe et al., 2015), an exaggerated, perfectionistic concern over making mistakes, less satisfaction with performance (Thompson et al., 2000), perfectionistic self-promotion, avoiding behavioral displays of imperfection, but are unrelated to nondisclosure of imperfection (Ferrari & Thompson, 2006). Although they fear being evaluated negatively and are motivated by the need to gain social approval and recognition (Chrisman et al., 1995), people with the impostor feelings tend to engage in self-deprecatory behaviors. For example, they may dismiss praise, derogate the accuracy of positive evaluations, deny their own competence, externalize their own successes, minimize previous achievements, and report feeling fraudulent.

Leary et al. (2000) suggest that the behaviors associated with impostor phenomenon may be interpreted, in part, as *interpersonal self-presentation strategies* designed to convey a particular social identity to others. Research has shown that people reveal undesirable aspects of themselves, describe themselves in a self-deprecatory fashion rather than favorably, and consciously or unconsciously engage in self-defeating or self-sabotaging behavior when they believe that their negative self-presentation allows them to avoid negative interpersonal consequences (Baumeister et al., 1979; Felson, 1993; Kowalski & Leary, 1990; Leary, 1995). The results of Leary et al.'s (2000) study indicate that impostors expressed more pessimistic expectations about their performance, less satisfaction about the possibility of performing well, less self-confidence and lower state self-esteem than non-impostors only when the evaluation on a bogus intelligence test was public than private. The fact that impostors expressed lower positive evaluations about themselves and their performance in a public rather than in a private context suggests that these behaviors may be used to gain interpersonal benefits, such as avoiding the negative interpersonal implications of potential failure by reducing the expectations of others. If others' expectations are lowered, individuals who experience perceived fraudulence are less likely to fail, in the sense of not living up to others' expectations, and others are less likely to be disappointed.

Consistent with the results of this study, other evidence indicates that the tendency of individuals high in impostor fears to derogate themselves, externalize the causes of their success, dismiss the positive affirmations of others and report feelings of fraudulence may be appropriately characterized as self-diminishing self-presentational behaviors whose purpose is to protect one's self-image by *reducing the negative interpersonal implications of possible failure*. Indeed, impostor phenomenon correlates positively with self-handicapping tendencies (Cowman & Ferrari, 2002; Ferrari & Thompson, 2006; Ross et al., 2001; Want & Kleitman, 2006) and negatively with self-enhancing self-presentation strategies (McElwee & Yurak, 2007). Self-handicapping (SH) describes a group of behaviors used to avoid negative evaluations by others and to protect own self-image, which involves placing an obstacle in the path of an evaluation so that possible failure can be attributed to the

¹ In line with existing literature on the impostor phenomenon, the term impostor is used in this article to refer to individuals who perceive themselves as intellectual frauds and also fear being exposed as impostors.

handicap (Berglas & Jones, 1978). In one study, the impostor phenomenon has been found to be best predicted by fear of failure followed by self-handicapping (Ross et al., 2001).

In addition to fearing failure, clinical observations (Clance & O'Toole, 1987; Clance & Imes, 1978) and empirical findings (Austin et al., 2009; Fried-Buchalter, 1997; Jöstl et al., 2012; Neureiter & Traut-Mattausch, 2016) suggest that impostors experience *fear and guilt about success*. Clance & Imes (1978), for example, note that in women who experience impostor feelings the fantasy of being outstanding and special, which is often hidden behind self-doubt, causes fear and guilt. Guilt stems from the belief that being successful will result in dislike and resentment by others and thereby loss of affection and approval. In fact, impostor fears are more frequent the more unusual the successes are in the family or among peers (Hirschfeld, 1982). Thus, "to maintain a sense of herself as being an intellectual phony may allow a high achieving woman to live out her achievement orientation to a large degree and at the same time allay some of her fears about the negative consequences of being a successful woman in our society. As long as she maintains the notion that she is not bright, she imagines that she can avoid societal rejection" (Clance & Imes, 1978, pp. 5-6). This suggests that the behaviors exhibited by impostors may reflect interpersonal strategies used to avoid or reduce negative interpersonal consequences of success and not just failure, such as avoiding hostility from others, social rejection, and feelings of loneliness (Neureiter & Traut-Mattausch, 2016). To manage the fear and guilt, impostors deny any evidence that indicates they are in fact successful people (Clance & O'Toole, 1987), or may even handicap themselves (Ross et al., 2001).

One study (Chayer & Bouffard, 2010) reveals that downward identification and upward contrast are the two social comparison processes favored by those who experience the impostor feelings. They tend to identify with less successful individuals and contrast themselves with successful ones. It is possible that the use of these social comparison processes (Smith, 2000) serves to manage feelings of guilt associated with the idea of being successful and contributes to the maintenance of impostor fears and associated psychological biases. Downward identification, in addition to maintaining a poor perception of one's own competence and the feeling that others overestimate one's abilities, engenders feelings of inferiority, shame and depressive symptoms. At the same time, upward contrast can lead to anxiety and fear that one's assumed incompetence may be exposed.

To sum up, research on the impostor phenomenon seems to suggest that fear of failure and fear of success represent two key motivational factors of individuals who experience impostor feelings. Fear of failure leads impostors to avoid anticipated threatening consequences associated with failure (Conroy et al., 2007), such as loss of social approval and collapse of self-esteem, thereby strengthening the motivation to do well and succeed in evaluative situations. However, their fear and guilt about success leads them to avoid the negative consequences which they anticipate following a possible success, such as social rejection (Jöstl et al., 2012; Coe et al., 2014), and may strengthen the motivation to fail, or to maintain a poor perception of one's own competence to protect social

bonds. Thus, impostors seem to be in a dilemma between the motivation to succeed as well as to avoid social rejection due to success (Neureiter & Traut-Mattausch, 2016).

Impostor fears interfere with a individuals' ability to accept and enjoy their abilities and successes, have a negative impact on psychological well-being and are associated with maladaptive behavior. The relationship between the impostor phenomenon and negative affect is well established. Impostor phenomenon correlates with depression (Bernard et al., 2002; Kolligian & Sternberg, 1991; McGregor et al., 2008), self-criticism (Chrisman et al., 1995), low self-esteem (Chrisman et al., 1995; Cozzarelli & Major, 1990; Ghorbanshirodi, 2012; Schubert & Bowker, 2019), and anxiety (Leonhardt et al., 2017; Rohrmann et al., 2016; Topping, 1983). In addition, several studies have found that the impostor phenomenon predicts low job satisfaction (Hutchins et al., 2018), work-related stress and strain (Rohrmann et al., 2016), less career planning, career exploration, occupational self-efficacy, and motivation to lead (Neureiter & Traut-Mattausch, 2016, 2017). Taken together, these findings suggest that individuals who struggle with impostor fears may be limited in their ability to develop their full potential and may give up career goals or important advancement opportunities.

From a different perspective, such as the one offered by the Control-Mastery Theory (CMT; Gazzillo, 2021; Silberschatz, 2005; Weiss, 1993; Weiss et al., 1986), an integrative, relational, cognitive-dynamic theory of mental functioning, psychopathology, and psychotherapeutic process, the cognitive, emotional, and behavioral aspects associated with the impostor phenomenon would be expressions of pathogenic beliefs. In fact, according to CMT, inhibitions, suffering, and symptoms arise from pathogenic beliefs, derived from adverse and traumatic experiences that occur mainly in childhood, that associate the pursuit of healthy, adaptive goals with dangers to oneself, significant others, or relationship with them (Sampson, 1992). When the pursuit of such goals is believed to be a source of suffering for significant others, they may become for some people the origin of strong conscious and unconscious feelings of guilt (Bush, 2005; Gazzillo et al., 2017, 2018, 2020). CMT conception of guilt (Gazzillo et al., 2020) is compatible with relational psychodynamic perspectives which interpret maladaptive feelings of guilt as function of internalized object relationships with traumatizing caregivers (Fairbairn, 1943; Gazzillo, 2012). On the contrary, CMT conception of maladaptive guilt seems less compatible with the interpretations of this feeling proposed by Freud (1916) and Melanie Klein (1957), which connect it to the sexual and aggressive impulses of the oedipal complex or with the inborn envy and aggressiveness experienced by the baby toward the breast. In disentangling guilt from aggressiveness, CMT is in line with recent development in moral psychology and evolutionary thinking (Haidt, 2012; Tomasello, 2016; Baumeister et al., 1994).

Given the importance attributed in the literature to low self-esteem, feelings of inadequacy, perfectionism, fear of failure, and fear of success as key features and motivational factors of individuals who experience the impostor feelings, it is possible to hypothesize that they may be explained by pathogenic beliefs which in CMT are connected in particular

to self-hate and survivor guilt (Bush, 2005; O'Connor et al., 1997; Weiss, 1986).

The concept of *self-hate*, in CMT, refers to maladaptive pathogenic beliefs about oneself, such as the belief of being inadequate, inferior, or worthless, associated with self-criticism, self-blame and feelings of low efficacy. Self-hate is a self-accusation about what one is, rather than what one has done or might potentially do and arises in the context of abusive or neglectful relationships. Its interpersonal origin derives from the fact that in the presence of neglectful or abusive parents, it is safer for a child to think that s/he deserves the abuse and/or neglect s/he suffers rather than feeling dependent on parents who are actually bad (Fairbairn, 1943). Research reveals that self-hate is the interpersonal guilt most strongly associated with chronic feelings of shame, self-esteem problems, and that it negatively affects well-being and mental health (Faccini et al., 2020). According to hypotheses, the fear that one's own inadequacy may be discovered, frequently found in impostors, leads these individuals, with an unstable sense of personal worth, to experience excessive anxiety when their competences are implicitly or explicitly assessed. Careful monitoring of their behavior and of the impressions they produce on others and perfectionism are thus strategies by which these individuals attempt to deal with feelings of inadequacy, gain recognition from others and confirmation of their self-worth. When they fail or make a mistake, however, their self-esteem plummets and they are particularly vulnerable to shame, humiliation and depressive feelings.

On the other hand, *survivor guilt* is the guilt about sparing from harm that others incurred (Niederland, 1961, 1981), but also, in a wider sense, the feeling of guilt that people may experience when they believe themselves to have any kind of advantage compared to others, such as having more success, higher abilities, better health, greater wealth, a better job, or more satisfying relationships (Exline & Lobel, 1999; Weiss, 1986). Individuals who experience survivor guilt believe that the pursuit of these goals is a source of suffering, humiliation, and resentment for significant others, either because fate was particularly severe with them or because, on the contrary, it was particularly benevolent and favorable with the survivor. Like impostor, the survivor, therefore, does not feel entitled to enjoy his own positive qualities or the good things s/he has because s/he feels that s/he has unfairly taken them away from others equally deserving (Modell, 1965, 1971). Survivor guilt increase the desire to protect the feelings and personal image of the person who fares poorly and to avoid conflicts and relationship breakdowns through behavior designed to appease others (Fimiani et al., in press). Survivor guilt may manifest itself through self-sacrificing behaviors, often unconscious, which have the function of rebalancing the perceived imbalance between one's own fate and that of less fortunate others. Generally, like people with the impostor feelings, people who suffer from survivor guilt may inhibit their motivation for self-realization and self-enhancement, punish themselves by engaging in self-destructive behavior, be unable to enjoy and be satisfied with themselves, and adopt self-lowering strategies designed to convince others that they are not actually superior. For example, they can hide their achievement from the eyes of those who are less successful, play

dumb, attribute their success to luck rather than taking credit for it, try to balance superior performance with critical and negative statements about themselves, have lower performance than one would be able to have (Zell & Exline, 2014). Several studies reveal significant associations between survivor guilt and a wide range of psychological problems and symptoms, such as depression, anxiety, low self-esteem, shame, pessimism, and submissive behavior (Faccini et al., 2020; O'Connor et al., 1997, 1999, 2000).

However, in addition to these kinds of guilt, we may imagine that omnipotent responsibility guilt may also play a role in the genesis and maintenance of the psychological experience of perceived fraudulence. Omnipotent responsibility guilt is based on the pathogenic belief that one must and have the power to make loved ones happy, so that putting the satisfaction of own needs first means being selfish and hurting them. People affected by this kind of guilt tend to attribute excessive power to themselves in determining the well-being or suffering of significant others. Furthermore, they have also proved to be particularly empathic, probably because they try to understand the perspective of others as deeply as possible (Faccini, 2020). This last point seems to be particularly relevant in relation to the impostor phenomenon: being so sensitive to the feelings of others in fact, can increase the perception that success can be a source of pain for them, so pursuing it means being selfish and uncaring, so that success becomes synonymous with something wrong and undeserved. Finally, research (Faccini, 2020) found that omnipotent responsibility guilt was positively correlated with shame and negatively correlated with self-esteem and mental health.

Hypotheses

In line with what we have said so far, the aim of this study is to investigate the relationship between the impostor phenomenon and interpersonal guilt as conceived by CMT. We hypothesize that:

- 1) There are significant positive correlations between the impostor phenomenon and interpersonal guilt as conceived in CMT.
- 2) There are significant positive correlations between impostor phenomenon, depression, and anxiety.

Method

Participants and Procedure

343 subjects, recruited from both college students and the general population, participated in the study. Their average age was 32.22 years ($SD = 15.67$; ranging from 18 to 68); 211 were female (61.5%) and 132 were male (38.5%). The distribution of educational levels in the sample was as follows: 11 (3.2%) had completed first grade school, 160 (46.6%) had completed middle school, 154 (44.9%) had completed high school, and 18 (5.2%) had completed college. The sample's socioeconomic

status was as follows: 30(8.7%) declared to be poor, 291 (84.8%) working-middle class people, and 21 (6.1%) upper class. Inclusion criteria for participation in this study included being over 18 years old, with no form of addiction, an absence of psychotic syndromes or symptoms, and no history of significant neurological illness or brain injury. All participants included in the sample completed the questionnaire battery, administered in written form. The data for one subject were missing. The anonymity and privacy of participants was ensured by assigning them a code and allowing data access only to researchers involved in data analysis. All the data were collected in Italy before the COVID-19 emergency lockdown, which occurred in the country from March 2020.

Measures

Clance Impostor Phenomenon Scale (CIPS; Clance, 1985) is a 20-item self-report rating scale used to assess the impostor phenomenon. Items are rated on a 5-point Likert scale ranging from 1 (not at all true) to 5 (very true). The CIPS has been shown to reliably differentiate impostors from non-impostors (Holmes et al., 1993) and it has a high level of internal consistency with reported α values ranging from .84 to .96 (Chrisman et al., 1995). Studies comparing scores on this measure with similar impostor scales suggests that Clance's inventory has appropriate construct validity as an impostor scale (Kolligian & Sternberg, 1991; Langford & Clance, 1993). Examples of items are: "I can give the impression that I'm more competent than I really am" and "I avoid evaluations if possible and have a dread of others evaluating me".

The Interpersonal Guilt Rating Scale-15s (IGRS-15s; Faccini et al., 2020; Gazzillo et al., 2018) is a 15-item self-report rating scale which assesses interpersonal guilt as conceived in CMT. Each item is rated on a five-point rating scale, ranging from 1 (not representative at all) to 5 (completely representative). Earlier factor analyses conducted on two different Italian samples pointed to a three-factor solution differentiating Survivor guilt, Omnipotence guilt, and Self-hate. The concurrent and discriminant validity of the IGRS-15s were determined using as criterion measures the Interpersonal Guilt Questionnaire-67 (IGQ-67; O'Connor et al., 1997) and the Fear of Punishment/Need for Reparation Scales (FPNRS; Caprara et al., 1990). Its construct validity was assessed using the Affective Neuroscience Personality Scale (ANPS; Davis et al., 2003), the Psychological General Well-Being Index (PGWBI; Dupuy, 1984), the Other as Shamer Scale (OAS; Goss et al., 1994) and the Rosenberg's Self-esteem Scale (SES; Rosenberg, 1965). The internal consistency of the three guilt factors (Cronbach's α values) were acceptable to good: Survivor guilt = 0.82; Omnipotence guilt = 0.73; Self-hate = 0.78. The α level of the overall scale was good (0.83). The test-retest reliability at four weeks was good, ranging from $r = 0.70$ to $r = 0.76$ (Faccini et al., 2020).

The revised socio-demographic schedule (Gazzillo & Faccini, 2019) is a brief, ad hoc self-report tool composed of 11 forced choice questions designed to collect data about age, gender,

education, socioeconomic status, and the presence of traumas in early childhood.

The State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983) consists of two 20-item self-report scales that assess state and trait anxiety. The STAI state subscale asks respondents to rate on a four-point scale how they feel "right now" in response to a series of self-descriptive statements. Each item is rated from 1 (not at all) to 4 (very much so). In contrast, the STAI trait subscale asks respondents to rate how they feel "generally" on a four-point scale, from 1 (almost never) to 4 (almost always). Higher scores indicate greater anxiety. Internal consistency coefficients for the scale range from 0.86 to 0.95; test-retest reliability coefficients range from 0.65 to 0.75 over a two-month interval (Spielberger et al., 1983).

The Beck Depression Inventory II (BDI II; Beck et al., 1996) is a widely used 21-item self-report inventory measuring the severity of depression in adolescents and adults. Items assess symptoms corresponding to criteria for diagnosing depressive disorders listed in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; APA, 1994). Each item references a symptom (e.g., sadness) and typically contains four statements from which respondents choose the statement that best reflects the severity of the symptom for them over the past 2 weeks. A higher total score reflects a high level of depressive symptoms. Several studies provide evidence for its reliability and validity across different populations and cultural groups. For example, in the study of Joe et al. (2008) internal consistency coefficient for the scale was .94, for the somatic factor was .89; and for the cognitive-affective factor was .87.

Data Analysis

Data were analysed using JASP 0.12.1.0. Descriptive statistics were used to evaluate sample characteristics (frequency, means and standard deviations). The Spearman rank-order correlations between the variables were initially calculated to analyse the relationships between the variables of interest. Principal components analysis and network analysis were used to further explore the correlation matrices.

Results

Descriptive statistics and associations between the variables of interest

As shown in Table 2, the average score of impostor phenomenon in our sample was 52.40 (SD = 12.88); For the different kinds of guilt the average scores were: survivor guilt 2.30 (SD = 0.72), omnipotence guilt 2.59 (SD = 0.66), and self-hate 1.46 (SD = 0.56)².

The average score of depression, as measured by BDI, was 9.32 (SD = 6.46); the average score of state and trait anxiety, as measured by the STAI-Y, were, respectively, 39.81 (SD = 10.56) and 42.93 (SD = 10.23).

² The levels of interpersonal guilt in this sample are in line with the interpersonal guilt scores individuated in the 50th percentile of a sample of around 500 Italian people collected few years ago (see Faccini et al., 2020).

Tab. 2. Spearman Rank-Order Correlations between impostor phenomenon, interpersonal guilt, depression, and anxiety (n = 343)

	Mean (±SD)	1.	2.	3.	4.	5.	6.	7.
1. Impostor phenomenon	52.40 (12.88)	—						
2. Survivor guilt	2.30 (.72)	0.385**	—					
3. Omnipotence guilt	2.59 (.66)	0.357**	0.458**	—				
4. Self-hate guilt	1.46 (.56)	0.364**	0.171*	0.250**	—			
5. Depression	9.32 (6.46)	0.407**	0.176*	0.266**	0.360**	—		
6. State anxiety	39.81 (10.56)	0.384**	0.251**	0.317**	0.305**	0.620**	—	
7. Trait anxiety	42.93 (10.23)	0.598**	0.251**	0.378**	0.364**	0.678**	0.708**	—

Note: ** The correlation is significant at p < 0.001 (two tailed). * The correlation is significant at p = 0.001 (two tailed).

Moreover, correlation analyses revealed significant associations between all the variables explored. In particular, impostor phenomenon showed significant positive correlations with survivor guilt (r = .385, p < .001), omnipotence guilt (r = .357, p < .001), self-hate (r = .364, p < .001), depression (r = .407, p < .001), state anxiety (r = .384, p < .001), and trait anxiety (r = .598, p < .001).

Furthermore, significant positive correlations emerged between survivor guilt and both depression (r = .176, p = .001) and state/trait anxiety (r = .251, p < .001). There was also an expected significant relationship between self-hate and depression (r = .360, p < .001), state anxiety (r = .305, p < .001), and trait anxiety (r = .364, p < .001). Finally, significant positive correlations emerged also between omnipotence guilt, impostor phenomenon (r = .357, p < .001), depression (r = .266, p < .001) and both state (r = .317, p < .001) and trait anxiety (r = .378, p < .001).

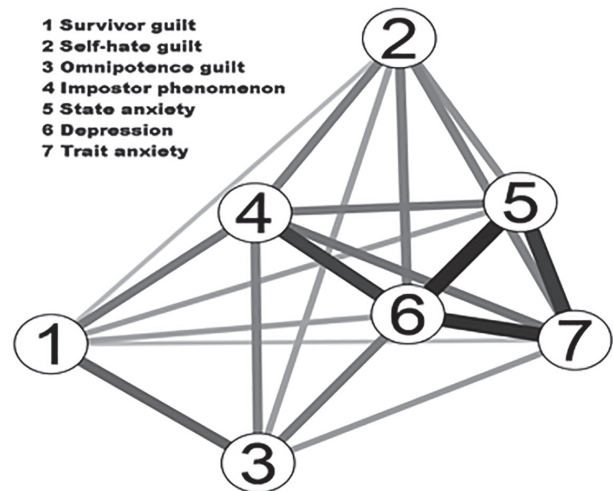
To further explore the correlations shown in Table 2, we conducted a principal components analysis with an oblique (promax) rotation. We selected two factors using Horn's parallel analysis procedure (Hayton et al., 2004). In all, the two factors accounted for 64 percent of the total variance and were correlated 0.49. As can be seen in Table 3, Factor 1 had high loadings from measures of psychopathology or dysphoria and self-hate, while Factor 2's highest loadings came from indicators of survivor and omnipotence guilt. Most important, the Imposter Phenomenon measure loaded on both factors.

Tab. 3. Component Loadings

Measure	Factor 1	Factor 2	Uniqueness
Impostor phenomenon	0.46	0.4	0.45
Survivor guilt	-0.19	0.94	0.25
Omnipotence guilt	0.02	0.79	0.36
Self-hate guilt	0.51	0.1	0.68
Depression	0.93	-0.18	0.27
State anxiety	0.86	-0.06	0.31
Trait anxiety	0.89	0.01	0.19

A network analysis of the correlations in Table 2 using the R package, bootnet (Epskamp et al., 2018) in the JASP program (Love et al., 2019). As shown in Figure 1, progressively darker lines indicate the strength of the correlations. As in the principal components analysis, the impostor phenomenon measure shows a strong connection to members of both factors.

Fig. 1. Network analysis of Impostor phenomenon, Depression, Anxiety, and Guilt Measures



Discussion

The primary aim of the present study was to extend our knowledge on the relationship between impostor phenomenon and interpersonal guilt as conceived in CMT (Bush, 2005; Faccini et al., 2020; Gazzillo et al., 2020) in a sample of Italian college students and general population.

Previous studies suggest that the fear of failure, the fear of success, and low self-esteem are preconditions that foster the occurrence of impostor feelings (Neureiter & Traut-Mattausch, 2016; Ross et al., 2001; Austin et al., 2009; Fried-Buchalter, 1997), in line with the concepts of self-hate guilt and survivor guilt put in light by CMT (Weiss, 1986; Gazzillo, 2021).

In the current study we observed that the total CIPS score was positively and significantly related to interpersonal

guilt, and with depression and anxiety, in line with previous researches (Bernard et al., 2002; Kolligian & Sternberg, 1991; Topping & Kimmel, 1985).

In regard to interpersonal guilt, self-hate refers to a particularly maladaptive pathogenic beliefs about oneself, associated with self-criticism, shame, low self-esteem, and feelings of inadequacy (Faccini et al., 2020). We may imagine that, due to these pathogenic beliefs, impostors are unable to think that they deserve their achievements, think they are faking being competent and capable, and that, soon or later, their “true” hidden nature will be revealed. This fear keeps anxiety always active, prompting impostors to implement strategies such as over preparation or procrastination (Sakulku & Alexander, 2011) to cope with constant self-doubt and fear of failure (e.g., Clance & Imes, 1978; Kolligian & Sternberg, 1991; Thompson et al., 2000). In fact, impostors fear that their inadequacy may be exposed publicly when their competence or abilities are evaluated (Clance & O’Toole, 1987; Sakulku & Alexander, 2011), probably as a consequence of the fact that they consider failure as evidence of the unworthiness of their whole self and as a confirmation of their pathogenic beliefs thus becoming particularly vulnerable to shame, humiliation and depressive feelings (Thompson et al., 1998, 2000).

On the other hand, survivor guilt, i.e., the feeling of guilt that people may experience when they believe themselves to have any kind of advantages compared to others, leads individual to avoid the negative consequences anticipated by success, such as the loss of social support, and increase the need to spare outperformed others the negative outcomes of upward social comparison (Bush, 2005). In fact, they may inhibit their motivation for self-realization, be unable to enjoy and be satisfied with themselves, and adopt self-lowering strategies designed to convince others that they are not actually superior (Zell & Exline, 2014). The downward identifications with less successful people and the upward contrast with successful one may contribute to the maintenance of impostor fears and negatively affect mood (Chayer & Bouffard, 2010). The use of these social comparison processes could also be associated with a self-punishing dimension related to the desire for success that impostors feel as unfair, thus engaging, consciously or unconsciously, in self-defeating and self-sabotaging behaviors to avoid the negative interpersonal consequences associated with success (Baumeister et al., 1979; Felson, 1993; Kowalski & Leary, 1990; Leary, 1995).

About the correlation between omnipotence guilt and the impostor phenomenon, we suppose that people with this kind of guilt may feel that focusing on their own success means being selfish and neglecting their duty to make other people feel happy and at ease, so that success becomes something wrong and undeserved.

Unfortunately, the measures of the present study were gathered in a cross-sectional manner, so that a more comprehensive causal formulation is not yet possible. However, we hypothesize that further longitudinal research, accompanied by mediation analyses, might disentangle the relationships among negative guilt, the impostor phenomenon, and negative affects.

To conclude, our findings shed light on correlates of the impostor phenomenon and associated clinical conditions,

emphasising the importance of working on them in clinical settings, helping the patients understanding the great dilemmas in which they feel stuck due to their pathogenic beliefs about themselves and their relationships with significant others, and the correlated feelings of guilt.

Author Contributions

The authors contributed equally to this manuscript.

Compliance with Ethical Standards

Conflict of interest

The authors declare that they have no competing interests.

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Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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