

Studi sperimentali

Higher hopelessness and suicide risk predict lower self-deception among psychiatric patients and non-clinical individuals

Elevati livelli di disperazione e rischio di suicidio predicono un minore autoinganno nei pazienti psichiatrici e nei controlli sani

MAURIZIO POMPILI^{1,2,3}, PAOLO ILICETO¹, DEBORA LUCIANO¹, MARCO INNAMORATI¹,
GIANLUCA SERAFINI^{1,3}, ANTONIO DEL CASALE¹, ROBERTO TATARELLI^{1,3},
PAOLO GIRARDI^{1,3}, DAVID LESTER⁴

¹Department of Neuroscience, Mental Health and Sensory Function, Suicide Prevention Center, Sant'Andrea Hospital, Sapienza University of Rome, Italy

²McLean Hospital, Harvard Medical School, Boston, MA, USA

³Villa Rosa Scientific Research Center, Viterbo, Italy

⁴The Richard Stockton College of New Jersey, Pomona, NJ, USA

SUMMARY. The present study was designed to explore psychopathological correlates of self-deception in clinical and non-clinical individuals to ascertain whether self-deception was associated with higher hopelessness, a proxy of suicide risk. The patients were 58 consecutive psychiatric patients (30 men, 28 women) admitted to the Sant'Andrea Hospital's psychiatric ward in Rome. Controls were composed of a sample recruited from the general population (62 men and 80 women). All the participants completed the Beck Hopelessness Scale (BHS), and the Balanced Inventory of Desirable Responding-6 Form 40A (BIDR). More than 55% of the patients had BHS scores of 9 or higher indicating severe hopelessness, while only 32% of the control subjects reported scores of 9 or higher on the BHS ($p < .01$). Subjects with BHS scores of 9 or higher (compared to subjects with lower scores) had lower scores on the self-deceptive enhancement dimension of the BIDR, and were also more likely to be unemployed or retired. Self-deception may be a coping response to stressful life events. Disruption of such coping mechanism may indeed increase suicide risk as individuals do not want to face self-awareness and get close to a highly negative self.

KEY WORDS: hopelessness, suicide risk, self-deception.

RIASSUNTO. Il presente studio è volto a esplorare i correlati psicopatologici della *self-deception* (autoinganno) in un campione clinico e in soggetti provenienti dalla popolazione non clinica per accertare se tale costrutto è associato con maggiori livelli di hopelessness, un predittore del rischio di suicidio. I partecipanti sono 58 pazienti affetti da un disturbo psichiatrico (30 uomini, 28 donne) ricoverati presso l'SPDC dell'Ospedale Sant'Andrea di Roma. I controlli sono costituiti da un campione estratto dalla popolazione generale (62 uomini e 80 donne). Tutti i partecipanti allo studio hanno completato la Beck Hopelessness Scale (BHS) e il Balanced Inventory of Desirable Responding-6 Form 40A (BIDR). Più del 55% dei pazienti ha ottenuto punteggi alla BHS uguali a 9 punti o superiori, indicando un elevato livello di disperazione, mentre sono solo il 32% dei controlli ad aver ottenuto punteggi uguali o superiori a 9 alla BHS ($p < .01$). I soggetti con punteggi alla BHS di 9 punti o superiori (in confronto a quanti hanno ottenuto punteggi inferiori) hanno punteggi inferiori nella dimensione self-deceptive enhancement del BIDR, e hanno più probabilità di essere disoccupati o pensionati. La self-deception si può considerare come un meccanismo per fronteggiare gli eventi di vita stressanti. L'indebolimento di questo meccanismo può accrescere il rischio di suicidio in quanto l'individuo non riesce a sopportare la consapevolezza di un sé fortemente negativo.

PAROLE CHIAVE: disperazione, rischio di suicidio, autoinganno.

E-mail: maurizio.pompili@uniroma1.it

INTRODUCTION

Classical conceptions of self-deception are rooted in historical perspectives on human nature. For example, writing in the year 1630 within a Christian worldview, the Reverend Daniel Dyke understood self-deceit as rebellion against God and, in the year 1726, Bishop Joseph Butler condemned it as self-partiality that corrupts our divinely instilled conscience. In the 20th century, Sigmund Freud construed self-deception within a psychoanalytic framework, Jean-Paul Sartre within his existentialist outlook, and Herbert Fingarette within an integrative perspective on personal identity (1). From a more positive point of view, recent psychologists have celebrated self-deception as useful for pursuing happiness, a pursuit that is regarded as a fundamental in human nature (2).

There has been much discussion of self-deception in the philosophical literature, primarily focusing on characterizing the phenomenon in a way that avoids the paradoxes while still making sense of the term *self-deception*. One approach, favored by Davidson (3-5) and Pears (6), is to draw divisions between parts of the mind such that one part can be viewed as deceiving the other part. According to this view, we cannot make sense of what someone's beliefs are unless they are rational, but self-deception is highly irrational. Another approach is to weaken the requirement that self-deception results in a belief and to claim instead that it merely results in something like an "avowal" (roughly, a disposition to affirm something verbally). In this way, one avoids positing two beliefs (*p* and *not-p*) simultaneously. Audi (7,8), Funkhouser (9) and Rey (10) favored this approach. Still another approach is favored by Lazar (11) and Mele (12), according to which self-deception is not intentional, and the contrary of the self-deceptive belief need not also be believed.

According to Trivers (13), self-deception serves two purposes that confer fitness benefits on the organism. First, the ability to self-deceive increases one's ability to lie effectively. Second, self-deception can serve the purpose of helping to orient one positively toward the future. Van Leeuwen (14) sketched a theory to replace that of Trivers. Self-deception is not an adaptation, but a spandrel in the sense that Gould and Lewontin (15) use the term - a product of another feature of human (cognitive) architecture.

Two highly related terms, self-deception and repression, are often used synonymously. Historically, repression has been considered to be a central concept in psychoanalytic theory from Freud's time to the present day (16-18). Johnson (19) argued that re-

pression is a kind of self-deception in which people hide painful information about themselves from themselves.

«Although accounts of self-deception are diverse (see Mele, 1987), they are typically analyzed in terms of the paradox of beliefs, such that *S* believes that *p* but *S* deceives himself or herself that *not-p*. If modeled on *interpersonal* deception, where person *A* deceives person *B* into believing that *p*, when person *A* believes that *not-p*, then the self-deceiver at once believes that *p* is false whilst deceiving himself or herself into believing that *p* is true, which raises the question of how this could be possible. A paradox seems inevitable if we attempt to understand self-deception based on a model of deceiving others (other-deception). Other-deception, as in the ordinary case of lying, requires that the deceiver know the truth while keeping the deceived from knowing it. But in the case of self-deception, the two parties are collapsed into a single person, and the problem arises of how one person can simultaneously know (as he must, if he is to be a deceiver) and not know (as he must, if he is to be deceived) a single thing (Neu, 1988). [...]. Given that any mental act itself is unconscious, the act of self-deception itself would be unconscious (until taken as the object of a second mental act), and if this is prevented (say, due to anxiety and neural inhibition), then there is no logical difficulty with proposing that people could unconsciously deceive themselves. In fact, this is precisely what occurs in repression» (20). Lester (21), proposing a theory of the mind that views the mind as composed of multiple selves, argued that a multiple self might be psychologically more healthy than a single unified mind, depending on the way in which the multiple selves interact, but others (e.g., 22) have argued that a multiple self may result in more irrational decision-making. These considerations pose a serious challenge to the model of repression as a risk factor for maladaptive psychological outcomes, particularly suicide.

How then should we define self-deception? As Fingarette (23) argues, self-deception consists of more than a mere inconsistency in one's beliefs, even if self-induced. Allowing that self-deception is not accidental does not entail that it be intentional and purposeful (24). One's actions may be motivated, yet fall short of being intentional. Accordingly, in their model of self-deception, Sackeim and Gur assert that self-deception consists of holding two contradictory beliefs, one of which is not subject to awareness, and it is this lack of awareness that is motivated.

Self-deception seems to be a motivated unawareness of conflicting knowledge (24) in which threatening knowledge is selectively filtered from conscious-

ness as a psychological defense, thereby reducing anxiety and inducing a positive self-bias (25,26). Gur and Sackeim (27) conceptualized four criteria necessary for ascribing self-deception:

1. the individual holds two contradictory beliefs;
2. the two contradictory beliefs are held simultaneously;
3. the individual is not aware of holding one of the beliefs;
4. the act that determines which belief is and is not subject to awareness is a motivated act.

To test these ideas, Gur and Sackeim (27) provided subjects with the motivation to self-deceive by having them fail or succeed on a cognitive test. Afterwards, subjects were asked to discriminate tape recordings of their own and others' voices. Subjects who experienced failure were not only slowest to identify voices as their own, but they denied hearing their own voices more than subjects who experienced success. Earlier recordings of psychophysiological responses to the audio-tapes suggested that recognition did occur. Thus Gur and Sackeim (27) argued that the experience of failure made self-recognition aversive and motivated self-deception. It appears, then, that people who rely on self-deception as a means of coping with life events have a radically different orientation toward success and failure than those who do not typically rely on self-deception. For those who employ self-deception, it appears that maintaining a highly positive view of themselves (and logically also believing that others hold similarly positive view of them) is an important goal that organizes much of their way of perceiving experience.

Sackeim and Gur (28) found evidence that the tendency to self-deceive is a stable personality trait that can be reliably assessed. The studies using the measure they devised appear to support the view of self-deception as adaptive. Self deception has been found to be moderately negatively correlated with a variety of standard measures of psychopathology (28-30), and positively correlated with measures of adjustment that include self-esteem and ego-resiliency (25).

Suicide is a multifaceted phenomenon that has attracted interest from different perspectives (31,32). Suicide is nowadays a major public health issue and the need to better understand it encourages the exploration of a variety of psychological constructs. Hopelessness has been repeatedly reported as a major indicator of suicide risk (33), and it refers to future expectations of the individual. Research indicates that those who report a score higher than the cut-off are at higher risk of suicide.

The present study was designed to explore psychopathological correlates of self-deception in clinical and non-clinical individuals to ascertain whether self-deception was associated with higher hopelessness, a proxy for suicide risk. Our hypothesis is that higher levels of self-deception are associated with lower suicide risk. In other words those who deceive themselves are less likely to be suicidal.

MATERIALS AND METHODS

Participants

The patients were 58 consecutive psychiatric patients (30 men, 28 women) admitted to the Sant'Andrea Hospital's psychiatric ward in Rome between February and July 2009. Exclusion criteria included any condition affecting the ability to take the assessment, including the denial of the informed consent. The mean age was 40.8 years (SD=14.7) and 42.7 years (SD=13.5), respectively, for men and women. The subjects were diagnosed as follows: 22% bipolar disorder I and II, 24% major depressive disorder, 5% schizophrenia, 40% some other specified psychotic disorder, and 9% some other specified diagnosis. Thirty-six percent of the patients reported past suicide attempts that requested medical attention.

Controls were recruited from the general population: 62 males (mean age=37.4; SD=13.3) and 80 females (mean age=36.9; SD=13.4).

Patients participated voluntarily in the study, and each provided written informed consent. The study protocol received ethics approval from the local research ethics review board.

Measures

All the participants completed the Beck Hopelessness Scale (BHS) (34,35), and the Balanced Inventory of Desirable Responding-6 Form 40A (BIDR) (36). Patients were assessed in the first 48 hours after their admission, and the assessment included a clinical diagnostic interview based on DSM-IV-TR criteria.

The BHS is a 20-item scale for measuring the cognitive component of the syndrome of depression. This scale assesses three major aspects of hopelessness: feelings about the future, loss of motivation and expectations. Responding to the twenty true or false items on the BHS, individuals have to either endorse a pessimistic statement or deny an optimistic statement. Research consistently supports a positive relationship between BHS scores and measures of depression, suicidal intent and current suicidal ideation. In addition, Beck et al. (33) carried out a prospective study of 1,958 outpatients and found that BHS scores were related significantly to eventual completed suicide. A cutoff score of 9 or above identified 16 (94%) of the 17 patients who

eventually committed suicide. The high-risk group identified by this cutoff score was eleven times more likely to commit suicide than the rest of the outpatients. The BHS may therefore be used as an indicator of suicide potential. In the Italian validation of the scale, CFA (Confirmatory Factor Analysis) evidenced a monofactorial structure, identifying clearly the hopelessness construct (37,38). Kuder-Richardson reliability coefficients were 0.75, 0.78 and 0.89 respectively in the three validation samples.

The BIDR is a 40-item self-report scale that acts as a gauge of socially desirable responding. Using a 7-point Likert-scale answer response, ranging from 1 (totally disagree) to 7 (totally agree), it measures two constructs: self-deceptive enhancement (SDE) and impression management (IM). The first construct captures the extent of self-deception. It measures the tendency of attempting to be honest but still exaggerating positive virtues unconsciously. The second construct concerns the tendency to purposely attempt to manage one's impression by describing oneself in overly positive terms, and represents a deliberate falsification of the self (39). The Italian version of the BIDR was translated from English to Italian for the current study and then back-translated by someone ignorant of the original version. In the current sample, both subscales had Cronbach alphas of 0.70 or higher (0.71 for the SDE, and 0.80 for the IM), with corrected item-total correlations all positive, denoting sufficient internal consistency.

Statistical analyses

Fisher's exact test for 2x2 contingency tables and two-tailed t-tests were used to identify differences between groups. The Benjamini-Hochberg correction procedure was used to control for Type 1 errors. Logistic regression analysis was used to measure multivariate associations between variables. Variables significant in the bivariate analyses were entered in the model as independent variables, with groups of subjects with lower vs. higher BHS scores as dependent variable. Odds ratios (OR) and their p-values were reported as measures of association. Statistical analyses were conducted with SPSS for Windows, version 17.0.

RESULTS

As expected, psychiatric patients (compared to non-clinical controls) had higher scores on the BHS (8.72 ± 3.77 vs. 6.49 ± 4.72 ; $t_{131,32} = 3.53$, $p < .001$). More than 55% of the patients had BHS scores of 9 or higher indicating severe hopelessness and high current suicidal risk, while only 32% of the control subjects reported scores of 9 or higher on the BHS ($p < .01$) (not reported in the tables).

Combining all subjects (patients and controls), three significant differences were found between subjects with BHS scores greater or equal to 9 and those with BHS scores less than 9 (**Table 1**). Patients with BHS scores of 9 or higher had lower scores on the SDE dimension than subjects with lower scores on the BHS (4.22 ± 0.95 vs. 4.88 ± 0.87 ; $t_{198} = 5.03$; $p < .001$). Subjects with BHS scores of 9 or higher were also more likely to be unemployed or retired (37.7% vs. 15.4%; $p < .001$), and were more likely to be members of the clinical sample (41.6% vs. 21.1%) than subjects with lower scores on the BHS.

On the other hand, groups did not differ for IM scores (4.60 ± 1.17 vs. 4.84 ± 1.08 ; $t_{198} = 1.47$; $p = .14$). Thus, while subjects with BHS scores of 9 or higher were less likely to exaggerate positive virtues unconsciously than subjects with lower scores on the BHS, they were not different from subjects with lower scores on the BHS in their tendency to describe oneself in overly positive terms, falsifying deliberately the presentation of the self.

Logistic regression analysis using the significant variables, after correction for multiple testing, as independent variables and high vs. low BHS score as the dependent variable fitted the data well ($\chi^2_4 = 38.27$; $p < .001$; -2 Log likelihood = 228.31; Nagelkerke $R^2 = 0.24$), explaining 24% of the variability of the data. When controlling for the presence of other variables, only working status (unemployed/retired vs. working) and SDE scores were significantly associated with group membership. Subjects with BHS scores of 9 or higher (compared to subjects with lower scores on the BHS) were:

1. 2.8 times more likely to be unemployed or retired ($p < .01$);
2. 2.4 times more likely to have lower scores on the SDE.

Higher order interactions among intensity of hopelessness, SDE scores, and group membership (clinical patients vs. controls) were not significant (OR = 1.41; $p = .48$).

Thus, subjects with higher hopelessness were less likely to exaggerate positive virtues unconsciously than subjects with lower hopelessness independent whether they were clinical patients or normal controls.

In the clinical sample, patients with past suicide attempts and patients without past suicide attempts had similar scores on the SDE (4.33 ± 0.72 vs. 4.44 ± 0.60 ; $t_{56} = 0.60$; $p = .55$) and the IM (4.87 ± 0.80 vs. 4.70 ± 1.01 ; $t_{56} = 0.67$; $p = .51$) (not reported in the table). Furthermore, 62% of the attempters versus 51% of the non-attempters had scores on the BHS of 9 or higher ($p = .31$).

Table 1. Differences between subjects with BHS scores of 9 or higher vs. subjects with BHS scores lower than 9

Variables	Subjects with BHS \geq 9 (N=77)	Subjects with BHS<9 (N=123)	Test	Sig.	Odds Ratio	Sig.
Age	40.17 \pm 14.14	37.41 \pm 13.36	$t_{198}=1.39$.17	-	-
Psychiatric patients	41.6%	21.1%		.002**	0.35	.63
Men	50.6%	43.1%		.19	-	-
Unemployed or retired	37.7%	15.4%		.001**	2.79	.01
SDE	4.22 \pm 0.95	4.88 \pm 0.87	$t_{198}=5.03$.001**	0.41	.001
Group*SDE (Non-clinical controls as reference)	-	-	-	-	1.41	.48
IM	4.60 \pm 1.17	4.84 \pm 1.08	$t_{198}=1.47$.14	-	-

One-way Fisher exact tests were not otherwise specified; Benjamini-Hochberg correction for multi-testing: * $p<.05$; ** $p<.01$.

Logistic regression model fitting indices (subjects with BHS scores less than 9 as reference): $\chi^2_4=38.27$; $p<.001$; -2 Log likelihood=228.31; Nagelkerke $R^2=0.24$.

DISCUSSION

This study sought to determine how self-deception may influence hopelessness and suicide risk. Self-deception refers to a coping response to stressful life events. Individuals who rely on self-deception usually manage to cope with adverse events, but there may be instances where this mechanism fails, which leaves them unprepared and unable to deal with the events. Disruption of this coping mechanism may indeed increase suicide risk if individuals do not want to face self-awareness and a highly negative self-concept (40). When self-deception fails, these individuals may face unbearable psychological pain (41). If they were to become conscious of their real state and, therefore, realize that they were not who they thought they were, they might become suicidal as a consequence.

Our results suggest that a greater level of hopelessness was associated with less unconscious self-deception (SDE scores) but not with the tendency to consciously describe oneself in overly positive terms (IM scores), that is, deliberately falsifying the presentation of the self. Subjects with lower hopelessness scores were more likely to exaggerate positive virtues unconsciously, and this was independent of clinical status (patient versus controls). Our results confirm the assumption that those who rely on self-deception are protected from painful awareness of their inadequate self and are also better prepared to deal with adverse events that otherwise would produce unrelieved and intense states of subjective suffering that can be intolerable. Patients suffering mental anguish of this order become desperate and, helpless to escape it, they may

attempt suicide to get out of the emotional trap in which they are caught. Overwhelming mental anguish of this order is in itself traumatic and cumulative in effect. Repeated episodes of traumatic affective overarousal diminish the capacity to maintain hope and erode the ability to sustain relationships with others that are usually life-protective. Repeated and continued affective traumatization undermines mental organization and invites psychotic breakdown and suicide (Maltsberger, 2010 personal communication).

It is generally believed that individuals with severe hopelessness have maladaptive cognitive distortions that may threaten their life by increasing the likelihood that they will engage in suicidal behavior. For example, in a sample of 52 depressed and/or suicidal drug abusers, Chabon and Robins (42) found that the degree of cognitive distortion was positively related to the levels of depression, hopelessness and suicidality. This was *not* the case in the present study since higher levels of hopelessness were associated with lower levels of unconscious self-deception. Unconscious self-deception may, therefore, be a protective mechanism.

Since the level of hopelessness was not associated with *conscious* self-deception, it would appear that simple cognitive therapy may not be sufficient to help patients with high levels of hopelessness since the possible protective mechanisms are operating at the unconscious level. However, more psychodynamically-oriented psychotherapy may be harmful for patients with high levels of hopelessness because psychodynamically-oriented psychotherapists are hardly likely to *encourage* unconscious self-deception since the goal

Higher hopelessness and suicide risk predict lower self-deception

of such psychotherapy is to make unconscious processes conscious (43).

The present study has several limitations, including the small sample size for the clinical group and the use of only a simple self-report measure of self-deception. Furthermore, we used the measurement of hopelessness as a proxy for suicide risk. Although this is an important variable in the determination of suicide risk, other suicide-related instruments could have been involved, as well as a clinical judgment of suicide risk. Despite these caveats, this study provides the first contribution devoted to the exploration of suicide risk measured through hopelessness and self-deception in two well-defined populations. This suggests that suicide must be understood phenomenologically and that tailor-made treatment is needed for suicidal individuals. The present study is provocative in suggesting that not all cognitive distortions are maladaptive.

BIBLIOGRAFIA

- Martin MW. Self-deception and morality. Lawrence: University Press of Kansas, 1986.
- Baumeister RF. Meanings of life. New York: Guilford Press, 1991.
- Davidson D. Paradoxes of irrationality. In: Wollheim R, Hopkins J (eds). Philosophical essays on Freud. Cambridge, UK: Cambridge University Press, 1982.
- Davidson D. Deception and division. In: LePore E, McLaughlin BP (eds). Actions and events: perspectives on the philosophy of Donald Davidson. Oxford, UK: Blackwell, 1985.
- Davidson D. Who is fooled? In: Dupuy JP (ed). Self-Deception and paradoxes of rationality. Stanford: CSLI, 1998.
- Pears D. Motivated irrationality. Oxford: Oxford University Press, 1984.
- Audi R. Self-deception, action, and will. Erkenntnis 1982; 18: 133-58.
- Audi R. Self-deception, rationalization, and reasons for acting. In: Rorty AO, McLaughlin BP (eds). Perspectives on self-deception. Berkeley: University of California Press, 1988.
- Funkhouser E. Do the self-deceived get what they want? Pacific Philosophical Quarterly 2005; 86: 295-312.
- Rey G. Toward a computational account of akrasia and self-deception. In: Wollheim R, Hopkins J (eds). Philosophical essays on Freud. Cambridge, UK: Cambridge University Press, 1988.
- Lazar A. Deceiving oneself or self-deceived? On the formation of beliefs under the influence. Mind 1999; 108: 263-90.
- Mele AR. Self-deception unmasked. Princeton: Princeton University Press, 2001.
- Trivers R. The elements of a scientific theory of self-deception. Ann N Y Acad Sci 2000; 907: 114-31.
- Van Leeuwen DS. The spandrel of self-deception: prospect for a biological theory of a mental phenomenon. Philosophical Psychology 2007; 20: 329-48.
- Gould SJ, Lewontin R. The Spandrel of San Marco and the Panglossian paradigm. Proceedings of the Royal Society of London, Series B 1979; 205.
- Freud S. On the history of the psycho-analytic movement. In: Strachey J (ed). The standard edition of the complete psychological works of Sigmund Freud. London: Hogarth, 1957.
- Freud S. An autobiographical study. In: Strachey J (ed). The standard edition of the complete psychological works of Sigmund Freud. London: Hogarth, 1959.
- Slavin MO, Grief D. The evolved function of repression and the adaptive design of the human psyche. In: Conte HR, Plutchik R (eds). Ego defenses: theory and measurement. New York: Wiley, 1995.
- Johnson A. Repression: a reexamination of the concept as applied to folktales. Ethos 1998; 26: 295-313.
- Boag S. Realism, self-deception and the logical paradox of repression. Theory Psychol 2007; 17: 421-47.
- Lester D. A multiple self theory of personality. Hauppauge, NY: Nova Science, 2010.
- Moldoveanu M, Stevenson H. The self as a problem. J Socio Econ 2001; 30: 295-330.
- Fingarette H. Self-deception. London: Routledge & Kegan Paul, 1969.
- Sackeim HA, Gur RC. Self-deception, self-confrontation, and consciousness. In: Schwartz GE, Shapiro D (eds). Consciousness and self-regulation, advances in research. New York: Plenum Press, 1978.
- Paulhus DL. Self-deception and impression management in test responses. In: Angleitner A, Wiggins JS (eds). Personality assessment via questionnaire. New York: Springer-Verlag, 1986.
- Paulhus DL, Suedfeld P. A dynamic complexity model of self-deception. In: Lockard JS, Paulhus DL (eds). Self-deception: an adaptive mechanism. Englewood Cliffs, NJ: Prentice-Hall, 1988.
- Gur RC, Sackeim HA. Self-deception: a concept in search of a phenomenon. J Pers Soc Psychol 1979; 37: 147-69.
- Sackeim HA, Gur RC. Self-deception, other-deception, and self-reported psychopathology. J Consult Clin Psychol 1979; 47: 213-5.
- Roth DL, Ingram RE. Factor in the Self-Deception Questionnaire: association with depression. J Pers Soc Psychol 1985; 48: 243-51.
- Sackeim HA. Self-deception, self-esteem, and depression: the adaptive value of lying to oneself. In: Masling J (ed). Empirical studies of psychoanalytical theories. Hillsdale: Analytic Press, 1983.
- Lester D. Making sense of suicide: an in-depth look at why people kill themselves. Philadelphia: The Charles Press Publishers, 1997.
- Pompili M, Tatarelli R (eds). Evidence-based practice in suicidology. Göttingen: Hogrefe, 2010.
- Beck AT, Brown G, Berchick RJ, Stewart BL, Steer RA. Relationship between hopelessness and ultimate suicide: a replication with psychiatric outpatients. Am J Psychiatry 1990; 147: 190-5.
- Beck AT, Weissman A, Lester D, Trexler L. The measurement of pessimism: the hopelessness scale. J Consult Clin Psychol 1974; 42: 861-5.
- Beck AT, Brown G, Steer RA. Prediction of eventual suicide in psychiatric inpatients by clinical ratings of hopelessness. J Consult Clin Psychol 1989; 57: 309-10.
- Paulhus DL. Manual for the Balanced Inventory of Desirable Responding (BIDR-6). 1988.
- Pompili M, Iliceto P, Lester D, Innamorati M, Girardi P, Tatarelli R. BHS Beck Hopelessness Scale: manuale. Firenze: Giunti O.S. Organizzazioni Speciali, 2009.
- Pompili M, Tatarelli R, Rogers JR, Lester D. The Hopelessness Scale: a factor analysis. Psychol Rep 2007; 100: 375-8.

Pompili M et al.

39. Paulhus DL. Measurement and control of response bias. In: Robinson JP, Shaver P, Wrightsman LS (eds). Measures of personality and social psychological attitudes. San Diego: Academic Press, 1991.
40. Kral MJ, Hohnson EA. Suicide, self-deception, and the cognitive unconscious. In: Leenaars A, Lester D (eds). Suicide and the unconscious. Northvale: Jason Aronson, 1996.
41. Shneidman ES. The suicidal mind. New York: Oxford University Press, 1996.
42. Chabon B, Robins CJ. Cognitive distortions among depressed and suicidal drug abusers. *Int J Addict* 1986; 21: 1313-29.
43. Pompili M, Tatarelli R. La prevenzione del suicidio in psicoterapia. Roma: Alpes, 2010.