Psychiatry Research 190 (2011) 49–51

Contents lists available at ScienceDirect

Psychiatry Research

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

Alexithymia, social detachment and cognitive processing

Stijn Vanheule *, Reitske Meganck, Mattias Desmet

Department of Psychoanalysis and Clinical Consulting, Ghent University, Ghent, Belgium

ARTICLE INFO

Article history:
Received 1 July 2009
Received in revised form 5 May 2010
Accepted 29 June 2010

Keywords:
Interpersonal
cognition

ABSTRACT

Using lexical content analysis (linguistic inquiry and word count), the hypotheses that social detachment and impaired cognitive processing are typical for alexithymia are investigated. Based on clinical interviews with 32 outpatients (mixed diagnoses), we found support for the hypotheses for the externally oriented thinking facet of alexithymia only.

1. Introduction

Following Taylor et al. (1997, p. 29), alexithymia is usually defined as a combination of (1) difficulties identifying feelings (DIF); (2) difficulties describing feelings to other people (DDF); (3) constricted imaginal processes (CIP); and (4) an externally oriented thinking style (EOT). This definition puts forward the 'salient features' of the construct (Taylor et al., 1997, p. 29). Clinically speaking, alexithymia should be understood within a broader process of affect regulation (Taylor et al., 1997; Vanheule, 2008). This study focusses on two aspects of broader alexithymic functioning: investment in social relationships and cognitive processing.

In terms of social functioning, previous research shows that alexithymic persons show a tendency towards distance taking (Vanheule et al., 2010). This might reflect two different types of social disposition: detachment or avoidance. Working within the framework of psychoanalytic theory, Marty (1980) described individuals with an externally oriented cognitive style as detached, and stated that their relation to others is 'devitalised' and 'decathected' (p. 62). Marty suggested that these individuals show poor investment in relationships and a lack of concern for others (detachment thesis). However, distance taking could also indicate excessive concern for others, leading to the avoidance of painful confrontation. In this case, investment in close relationships has taken place, yet actual interpersonal contact evokes unpleasant affects, eliciting avoidance behaviours (avoidance thesis). In this article, we consider both hypotheses.

Second, we examine cognitive processing. Taylor et al. (1997, p. 31) consider alexithymia as an "inability to modulate emotions through cognitive processing," and as a problem in the cognitive appraisal of events that evoke affects. In alexithymia "linking their inner states with the events causing them" is problematic (Dimaggio et al., 2007, pp. 17–18). If this proposition holds true, we expect less cognitive processing with increasing alexithymia scores. In this article, we present a general test of the relationship between cognitive processing and alexithymia.

Investment in social relationships and cognitive processing are tested implicitly through lexical content analysis. Lexical analysis holds the assumption that natural word use serves as a psychological marker, and that "the words people use convey psychological information over and above their literal meaning and independent of their semantic context" (Pennebaker et al., 2003, p. 550). The method builds on word counts, and maps the number of words from predefined thematic or grammatical categories.

Our lexical analyses use frequency counts (weighted amount of words used from a thematic category), which reflect the degree of preoccupation with a theme (higher-frequency scores indicate more preoccupation or concern), and complexity counts (weighted amount of different words used from a thematic category), which reflect how differentiated the representation of a theme is (higher complexity scores indicate more differentiation).

Investment in social relationships is examined by mapping words referring to social processes, which indicate involvement in social relationships (Pennebaker et al., 2003). We hypothesise that the detachment thesis holds true, and expect (a) less preoccupation with social process word use to be associated with higher alexithymia scores, and (b) less differentiation in social process word use. This would indicate that, with increasing alexithymia scores, mental

* Corresponding author. Ghent University, Faculty of Psychology and Educational Sciences, H. Dunantlaan 2, B-9000 Ghent, Belgium. Tel.: +32 9 264 91 01; fax: +32 9 264 64 88.
E-mail address: Stijn.Vanheule@UGent.be (S. Vanheule).

0165-1781/$ – see front matter © 2010 Elsevier Ireland Ltd. All rights reserved.
doi:10.1016/j.psychres.2010.06.032

Table 1
Regression analysis of TAS-20 subscale scores, BDI-II scores and educational level on LIWC subscales scores for cognitive and social processes: Bootstrapped regression coefficients, *t*-values of regression coefficients and their 95% Tilting confidence intervals.

	TAS-20-DIF	TAS-20-DDF	TAS-20-EOT	BDI-II	Educational level
Frequency social words	$B=8.51$	$B=1.19$	$B=-43.06$	$B=1.77$	$B=26.05$
	$t=0.78$	$t=0.07$	$t=-2.70^*$	$t=0.48$	$t=0.30$
	CI: -13.61 / 22.91	CI: -15.46 / 31.72	CI: -64.63 / -16.80	CI: -4.52 / 8.35	CI: -98.55 / 160.20
Complexity social words	$B=0.65$	$B=-0.41$	$B=-2.27$	$B=0.11$	$B=1.67$
	$t=0.76$	$t=-0.31$	$t=-2.12^*$	$t=0.43$	$t=0.25$
	CI: -1.01 / 2.04	CI: -2.75 / 1.50	CI: -3.96 / -0.24	CI: -0.29 / 0.58	CI: -9.85 / 9.67
Frequency cognitive words	$B=16.99$	$B=-10.42$	$B=-22.68$	$B=1.05$	$B=56.88$
	$t=1.99^*$	$t=-0.70$	$t=-2.00^*$	$t=0.27$	$t=0.77$
	CI: -0.08 / 33.28	CI: -32.95 / 12.31	CI: - 43.41 / 0.85	CI: -4.68 / 7.60	CI: -56.05 / 173.00
Complexity cognitive words	$B=0.35$	$B=-0.42$	$B=-2.24$	$B=0.13$	$B=8.57$
	$t=0.46$	$t=-0.34$	$t=-1.83^*$	$t=0.48$	$t=1.28$
	CI: -1.03 / 1.31	CI: -2.48 / 1.39	CI: -3.96 / -0.26	CI: -0.28 / 0.73	CI: -1.64 / 17.31

B = mean regression coefficient, obtained through 1000 bootstrap samples; t = t-test based on mean regression coefficient; CI = 95% Tilting confidence interval, obtained through 1000 bootstrap samples.
$^*=p<0.05$.

representations of social relationships are less comprehensive. If the opposite is true, the results support the avoidance thesis.

Cognitive processing is examined by mapping cognitive word use indicative of the degree of cognitive processing (Mehl, 2005). We hypothesise weaker cognitive processing, as reflected in less preoccupation and less differentiation, with increasing alexithymia scores.

As it has been documented that both depression and the level of education may affect alexithymia scores (Mattila et al., 2010) and lexical style (Pennebaker et al., 2003), these variables are controlled for in our analyses.

2. Methods

The sample consisted of 32 Belgian mental health outpatients (mean age = 42.69 years; 62.5% female) with mixed Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) diagnoses. The most common axis I diagnosis was mood disorder ($n=20$). Fifteen patients had an axis II personality disorder. In terms of education, 3% attended elementary school only, 7% completed 3 years in high school, 38% completed high school (6 years) and 52% obtained a higher education degree. All participants obtained written information on the study and gave informed consent.

Participants were administered a 2-h clinical interview (transcribed verbatim). Subsequently, they gave demographic details, and filled out the Toronto Alexithymia Scale (TAS-20) and the Beck Depression Inventory-II (BDI-II). The TAS-20 measures three alexithymia facets: DIF, DDF and EOT.

Interviews were analysed with the Dutch version of the 2001 Linguistic inquiry and word count (LIWC: Zijlstra et al., 2004) using PROTAN software (http://www.psor.ucl.ac.be/protan/protanae.html) to calculate frequency and complexity scores. The LIWC is a content analytic dictionary that maps a broad range of psychological and basic linguistic characteristics (Pennebaker et al., 2003). The categories used include 'cognitive processes' (e.g., cause, know and ought) and 'social processes' (e.g., talk, us and friend).

Data were analysed with linear regression analysis (all predictors were entered simultaneously). Given the small sample size, confidence intervals were calculated by means of bootstrapping (1000 bootstrap samples). Due to the small sample size, 95% tilting confidence intervals were used (Hesterberg et al., 2003).

3. Results

The mean TAS-20 score of the participants was 56 (S.D. = 11); the mean BDI-II score was 26 (S.D. = 15). Table 1 lists the results of regression models, in which the LIWC frequency and differentiation scores for social and cognitive functioning are explained via TAS-20 subscale scores, BDI-II scores and educational level. Only EOT is significantly related to the LIWC subscales in the expected way. DDF scores are unrelated to the indicators for social and cognitive processes. DIF is positively related to the frequency score for cognitive words, which contradicts the hypothesis, and is unrelated to the other LIWC variables. The confidence intervals for DIF and EOT in relation to the frequency score for cognitive words score contained zero, which makes the significance of this result less reliable.

4. Discussion

In line with Taylor et al. (1997) assumption that different facets make up the alexithymia construct, we hypothesised that all TAS-20 subscales would be similarly related to the variables for social functioning and cognitive processing. However, we only found that EOT is related to a pattern of social detachment and impaired cognitive processing. This could indicate theoretical inaccuracies or a psychometric problem.

First, the result could mean that the assumptions of social detachment and impaired cognitive processing in alexithymia are wrong. The hypothesised relations were observed for only one of the three TAS-20 subscales.

Alternatively, it could be theoretically naive to consider the different alexithymia facets as strictly parallel. Perhaps EOT makes up a component of alexithymic functioning that is substantially different from DIF and DDF and a stronger conceptual distinction between these facets is warranted. Empirical research with the TAS-20, which indicated different nomological correlates for EOT, supports this assumption (Meganck et al., 2008). If this is true, it is possible that EOT relates to social detachment and impaired cognitive processing, while DIF and DDF do not. This is consistent with Marty's (1980) 'operational thinking' theory, which only linked an externally oriented cognitive style to social detachment and impaired cognitive processing.

Psychometric problems with the TAS-20 could further explain the results. Problems with clinical validity and measurement error might have distorted the results.

To our knowledge, this is the first study to use implicit lexical measures for assessing investment in social relationships and cognitive processing; replication is advisable. Limitations to this study are the use of a relatively small and heterogeneous sample and that alexithymia was only measured with a self-report instrument.

References

Dimaggio, G., Semerari, A., Carcione, A., Nicolo, G., Procacci, M., 2007. Psychotherapy of Personality Disorders. Routledge, London and New York.
Hesterberg, T., Moore, D.S., Monaghan, S., Clipson, A., Epstein, R., 2003. Bootstrap methods and permutation tests. In: Moore, D.S., McCabe, G.P. (Eds.), Introduction to the Practice of Statistics. W.H. Freeman and Co, New York, pp. 14-2–14-70.
Marty, P., 1980. L'Ordre Psychosomatique – Volume 2 – Les Mouvements Individuels de Vie et de Mort). Payot, Paris.
Mattila, A.K., Saarni, S.I., Alanen, E., Salminen, J.K., Kronholm, E., Jula, A., Sintonen, H., Joukamaa, M., 2010. Health related quality-of-life profiles in nonalexithymic and alexithymic subjects from general population. Journal of Psychosomatic Research 68, 279–283.
Meganck, R., Vanheule, S., Desmet, M., 2008. Factorial validity and measurement invariance of the 20-item Toronto Alexithymia Scale in clinical and nonclinical samples. Assessment 15, 36–47.