

Dimensions of "Emotional Openness", the five personality factors and Alexithymia

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Dimensions of Openness to Emotional experiences (DOE)

The model of "Emotional Openness" ("Ouverture émotionnelle"; Reicherts, 1999, 2001) provides a multidimensional framework to analyze the patterns of emotion processing. The model is based on the subjective representation of the emotional processes according to three levels: *bodily*, *cognitive* and *social* features.

Based on a self-report questionnaire (DOE), the 5 dimensions of emotional openness (see Table 1) – and the additional scale (RESNOR) – are to be considered as the result of a complex interaction between the biological factors and the subject's background.

Table 1. – Dimensions of the DOE

Scale	Description of scale	Alpha mean
REPCON	Cognitive-conceptual representation of mental and bodily states, and process in terms of distinct and differentiated emotions and feelings, relying on concepts, schemata or scripts.	.82
EMOCOM	Expression and communication of emotions toward other people, openness on the social-interactional level (sharing of emotions or self-disclosure).	.82
PERINT	Perception or awareness of internal bodily phenomena or indicators which characterize emotions (e.g. cardiovascular, respiratory or gastro-intestinal activity, etc.).	.77
PEREXT	Perception or awareness of external bodily phenomena of emotions which can become visible externally (e.g. facial expression, motor activity, posture, muscular tension, trembling, etc.).	.72
REGEMO	Regulation and control of emotional process – including also "monitoring" activities – to attenuate or delay emotional impact; the regulation may concern cognitive, bodily and social level.	.76
RESNOR	Normative limitations of emotional openness as perceived by the subject, concerning general affective resonance and exchange in the social context, and the external attribution of this lack.	.73

The five personality factors

The Five-Factor Model (FFM) postulates that five broad factors, described in Table 2, adequately map personality traits and the **NEO-PI-R** (Costa & McCrae, 1992) was specifically designed to assess these five dimensions. Zuckerman's Alternative Five-Factor Model (AFFM) was developed from multiples personality scales used in psychobiological research. The five identified factors can be assessed using the **ZKPQ** (Zuckerman et al., 1993) described in Table 3. Four factors of the FFM and of the AFFM appear quite similar and the difference between these two models is the presence of a single dimension in each model that has no conceptual equivalent counterpart (Rossier, 2005).

Table 2. – Dimensions of the NEO PI-R

Major dimensions	Facet scales
Neuroticism	Anxiety, Angry Hostility, Depression, Self-Consciousness, Impulsiveness, Vulnerability
Extraversion	Warmth, Gregariousness, Assertiveness, Activity, Excitement-Seeking, Positive Emotions
Openness	Fantasy, Aesthetics, Feelings, Actions, Ideas, Values
Agreeableness	Trust, Straightforwardness, Altruism, Compliance, Modesty, Tender-Mindedness
Conscientiousness	Competence, Order, Dutifulness, Achievement-Striving, Self-Discipline, Deliberation

Table 3. – Dimensions of the ZKPQ

Scale	Description of scale
Impulsive Sensation Seeking (ImpSS)	Lack of planning and tendency to act impulsively without thinking
Neuroticism-Anxiety (N-Anx)	Emotional upset, tension, worry, indecision, lack of self-confidence
Aggression-Hostility (Agg-Host)	Readiness to express verbal aggression or antisocial behaviors
Activity (Act)	Need of activity and preference for challenging and hard work
Sociability (Sy)	Interacting with many people / Liking or tolerance for social isolation

Alexithymia

The concept of Alexithymia – originally proposed by Sifneos (1996) as a deficit of affect – is mainly characterized by a marked limitation of emotional expression, by a tendency to act in order to avoid conflicts and to describe in great detail facts and physical symptoms. The Toronto Alexithymia Scale developed by Taylor, Bagby and Parker (2003; **TAS-20**) has 3 factors including: difficulty identifying feelings (DIF), difficulty describing feelings (DDF), and externally oriented thinking (EOT).

Subjects

- 435 young adults (258 females / 178 males), mean age 24 (SD=8.3), see Verardi and colleagues (2004).
- 93 adults (49 females / 44 males) between 21 and 55 years, mean age 39, see Ciulavu (in prep.).
- 25 adults (15 females / 10 males), mean age 41 (SD=12.5), see Zbinden (in prep.).

The three studies were carried out separately with the French versions of the various questionnaires.

Results

Previous exploratory research report systematic patterns of correlations between dimensions of Emotional Openness and some personality traits (e.g. Reicherts, 1999). In particular, the correlations between *Neuroticism* and emotion regulation (REGEMO), conceptual representation (REPCON), and perception of bodily indicators (PERINT and PEREXT), as well as correlations between *Extraversion* (or *Sociability*) and communication and expression of emotions (EMOCOM) were expected.

Table 4. – DOE and NEO PI-R

	N	E	O	A	C
REPCON	-.20	.32*	.23*	-.04	.43*
EMOCOM	-.19	.23*	.18	-.27*	-.11
PERINT	.11	.08	.13	-.05	.06
PEREXT	.24*	-.17	-.06	.05	-.15
REGEMO	-.24*	.16	.12	-.09	.23*
RESNOR	.06	-.01	.11	.18	.13

Table 5. – DOE and ZKPQ

	ImpSS	N-Anx	Agg-Host	Act	Sy
REPCON	-.02	-.27*	.04	.13	.07
EMOCOM	-.02	.12	.12	.05	.30*
PERINT	.04	.31*	.15	.09	-.05
PEREXT	.06	.35*	.26*	.09	.15
REGEMO	.00	-.63*	-.20*	.03	-.05
RESNOR	.08	.17*	.03	.09	.32*

All the expected correlations were in the right direction (see Tables 4 and 5), but two of them were not significant in the first study. The correlations calculated on the same subjects (N=93) with the EPI (Eysenck & Eysenck, 1971) indicated also significant values between *Neuroticism* and PERINT ($r = .38$), PEREXT ($r = .37$) and REGEMO ($r = -.36$). The EPI *Extraversion* scale correlates significantly with EMOCOM ($r = .32$).

The exploratory results (Table 6) indicated meaningful correlations between Emotional Openness and Alexithymia. These correlations were stronger with the difficulty identifying feelings (DIF) although we could expect more pronounced ones with the difficulty describing feelings (DDF) (e.g. between DDF and REPCON). These results suggest a (splitting) apparently not very obvious splitting between the "identifying" and the "describing" TAS scales.

Table 6. – DOE and TAS-20

	DIF	DDF	EOT	Total
REPCON	-.62*	-.25	.04	-.45*
EMOCOM	-.10	-.14	.03	-.02
PERINT	.74*	.52*	-.22	.55*
PEREXT	.56*	.35	-.06	.44*
REGEMO	-.66*	-.50*	-.10	-.61*
RESNOR	.28	.27	.19	.33

Discussion

The results confirm to a large extent the expected associations between « Emotional Openness » and global personality factors, in particular the associations between *Neuroticism* and *Extraversion*. However, only one correlation (REGEMO and N-Anx; $r = -.63$) is substantially high; the other correlations are significant but of low effect sizes (between .23 and .35). Dimensions of Emotional Openness therefore comprise quite large an amount of specific variance, not related with global personality traits.

Alexithymia, as a more domain-specific concept, seems more strongly associated with the DOE: Identifying emotions (DIF) and Describing emotions (DDF) show a highly similar correlation pattern over 4 of the DOE-scales. However, the lack of significant correlations with EMOCOM provides another understanding of "Alexithymia": not as a problem to communicate feelings, but as a difficulty to regulate and control emotional process, whereas bodily emotion phenomena (sensations) are strongly perceived without being "conceptualized" or "mentalized" on a cognitive level.

Taken together, the factorial dimensions of the DOE provide a highly plausible approach to assess processing of emotion and affective states, in line with modern emotion theory (Davidson, Scherer & Goldsmith, 2003).

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