



Being alexithymic: Necessity or convenience. Negative emotionality × avoidant coping interactions and alexithymia

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Objectives. We aimed to clarify the associations between negative emotionality, avoidant coping, and alexithymia. We hypothesized that negative emotionality and avoidance strategies would interact negatively in associating with alexithymia.

Design. We examined, in one study conducted in Italy and another in the US (total $N = 415$), the associations among avoidant coping, negative emotionality, and alexithymia, using cross-sectional designs.

Method. Study 1: Participants completed paper-and-pencil measures of alexithymia, avoidant coping, and negative emotionality. Study 2: Participants completed the above-mentioned measures plus a measure of experiential avoidance (EA), by means of an online questionnaire.

Results. As expected, an antagonistic avoidant coping × negative emotionality interaction was found to relate to alexithymia in both studies. In Study 2, EA mediated the effects of such interaction on alexithymia (mediated moderation). The interaction found implied that alexithymia would be adopted as a defence against negative affect or as a consequence of avoidant strategies.

Conclusions. The studies suggested that two different psychological pathways to alexithymia may be at work: Preference for avoidance and negative emotionality. This result appeared theoretically relevant and may stimulate further research.

Practitioner points

- Alexithymia may develop from habitual avoidance, regardless of negative emotionality.
- Practitioners could consider addressing negative emotional regulation or automatic and habitual avoidant responses in dealing with alexithymic patients.

Alexithymia is a trait or state characterized by deficits in identifying and expressing emotional experiences and inner states, coupled with a generally external- and concrete-oriented mode of thinking and a restricted imaginative ability (e.g., Taylor, Bagby, &

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Parker, 1997; Vorst & Bermond, 2001). Alexithymia is a common correlate of several psychological and psychiatric problems such as anxiety, depression, and psychosomatic symptoms (e.g., Hintikka, 2004; Mattila *et al.*, 2008; Porcelli, Taylor, Bagby, & De Carne, 1999; Taylor *et al.*, 1997). In addition, stronger alexithymia has been related to poor therapeutic outcomes, because it could operate as a barrier to the creation of a therapeutic alliance (e.g., Vanheule, Verhaeghe, & Desmet, 2011). The consistent associations of alexithymia with psychopathology, as well as with less extreme, non-clinical levels of negative affect and psychological discomfort in the general population, make it an interesting concept from the perspectives of clinical and personality psychology.

In the present studies, we focused on the interplay between alexithymia and two of its correlates. The first, negative emotionality (measured as psychological distress in Study 1 and as negative affect in Study 2), has been studied extensively before (e.g., Kang, Namkoong, Yoo, Jung, & Kim, 2012; Nicolò *et al.*, 2011), while the second, avoidant coping, has been less frequently connected with alexithymia, although recent research has found significant associations (e.g., Coriale *et al.*, 2012; Tominaga, Choi, Nagoshi, Wada, & Fukui, 2014). In particular, in the present studies we interpreted alexithymia as the possible outcome of high negative affect/emotional distress or a habitual preference for avoidant coping strategies. This view was compatible with conceptualizations of alexithymia as a response to distress or as a consequence of behavioural and experiential strategies focused on the avoidance of private aversive states (Bailey & Henry, 2007; Marchesi, Brusamonti, & Maggini, 2000). Our novel prediction was that negative emotionality and avoidance coping would interact in association with alexithymia and that their interaction would be *negative*. That is, for stronger individual avoidant tendencies, the association of emotional distress/negative affect with alexithymia would *decrease*, and, vice versa, for higher levels of emotional distress/negative affect, the association of avoidant coping with alexithymia would *decrease*. This prediction was consistent with an interpretation of alexithymia as an emotional posture adopted out of concern for safety and security (i.e., under a prevention focus; Shah & Higgins, 1997), to cope with psychological distress (Elliot, 2006).

Avoidant coping strategies, EA, and alexithymia

It has been widely hypothesized from different perspectives that avoidance has a negative impact on psychological well-being (e.g., Freud, 1915/1958; Kelly, 1955). A rationale for this is that avoidance is cognitively costly, eventually depleting the emotional and cognitive tools needed to down-regulate negative emotionality efficiently (Roskes, Elliot, Nijstad, & De Dreu, 2013). Although avoidant coping has not been extensively investigated as a correlate of alexithymia, recent research has reported its robust associations with alexithymia (e.g., Coriale *et al.*, 2012). In our opinion, the frequent and recurrent activation of avoidant coping behaviours (i.e., strategic attempts to escape stressful experiences, such as behavioural disengagement, or the abuse of alcohol and drugs, etc.) could be highly associated with alexithymia. In particular, we interpreted alexithymia as a functional emotional and cognitive tendency that is reinforced, or possibly initiated, by the behavioural tendency to avoid distressing emotional events (Constantinou, Panayiotou, & Theodorou, 2014).

Another factor that could play an important role in the relationship between avoidant coping strategies and alexithymia is Experiential Avoidance (EA; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). EA is defined as the unwillingness to remain in contact with aversive private experiences and the taking of action to alter these experiences (Hayes,

Strosahl, & Wilson, 1999). The notion of EA goes beyond preferences for avoidant coping: EA subsumes a behavioural component (taking action to alter the negative states), but also includes motivational and emotional components of distress intolerance, compounded by beliefs in the intrinsic maladaptivity of emotional experiences (Kashdan, Barrios, Forsyth, & Steger, 2006). Following Hayes *et al.* (1996), it could be argued that humans become motivated to avoid not only aversive events, but also the symbolic representations (such as conceptual descriptions and beliefs) of such events. As alexithymia is frequently defined as a cognitive deficit in expressing and identifying emotions, it might appear as a potential outcome of avoidant coping, but also of the beliefs (i.e., EA) associated with avoidant coping (Panayiotou *et al.*, 2015).

For the purposes of this work, we interpreted preferences for avoidant coping as a habitual response style that makes individuals more likely to show alexithymic features. Hence, our first expectation was a main effect connecting avoidant coping and alexithymia (Studies 1 and 2). Moreover, we investigated the associations of EA with alexithymia (Study 2) and focused on the mediating role of EA relating to alexithymia.

Alexithymia and negative affect

Alexithymics appear particularly vulnerable to experiencing negative emotions (e.g., Lundh & Simonsson-Sarnecki, 2001). It is apparent that anomalies in the activation of brain areas and structures dealing with emotional information and stimuli and with emotional cognitive processing are involved in such vulnerability. Ironically, alexithymics appear to suffer from an attention deficit towards negative stimuli (van der Velde *et al.*, 2013). However, alexithymics also show deficits in the cognitive processing of emotional input, which could easily turn into deficits in emotional regulation; if aversive experiences, even if relatively unattended, are inefficiently down-regulated, negative emotional input will trigger discomforting levels of negative affect (Yelsma, 2007).

Neuropsychological evidence shows the presence of neurobiological bases of alexithymic responses (e.g., Wingbermühle, Tjeunissen, Kessels, & Eger, 2012). However, the neuropsychological record (with the exception of studies focusing on head trauma) does not say whether alexithymia is a vulnerability factor for negative affect and psychological discomfort, or whether negative affect and distress could result in increased alexithymic responses (Bailey & Henry, 2007). Taylor *et al.* (1997) interpreted alexithymia as an antecedent of negative affect via poor emotional regulation. However, other researchers considered the possibility that the experience of discomforting levels of negative affect leads to increases in alexithymia (de Vente, Kamphuis, & Emmelkamp, 2006; Marchesi, Bertoni, Cantoni, & Maggini, 2008). In particular, a distinction should be considered between primary and secondary alexithymia: Primary alexithymia is interpreted as a source of negative emotionality stemming from a neurologically based alexithymic trait; secondary alexithymia is conceived as a defensive reaction to aversive emotional states (Bailey & Henry, 2007; Marchesi *et al.*, 2000). Consistently with this strand of alexithymia research, we conceptualized alexithymia as a reaction that might be precipitated by distressing negative emotional states, or as a response acted out to prevent aversive emotional end-states. Given the correlational nature of our studies, we could not hypothesize a causal relationship among the variables, yet we tried to propose a conceptual model of two possible paths for developing alexithymia. First, we expected to detect the well-known main effect connecting negative emotionality with alexithymia. Secondly, this main effect would nonetheless be qualified by an interactive effect with avoidant coping strategies.

Avoidance by negative affect interactions and alexithymia

We proposed that alexithymia, as a defensive cognitive-emotional position, could be acquired for urgently dealing with unbearable emotional distress *or* as the outcome of individual differences in the habitual adoption of avoidance coping strategies. Put differently, on the one hand, negative emotionality could make alexithymia a goal pursued *out of necessity* (to attenuate the intensity of distress); on the other hand, the habit and convenience of adopting avoidant coping could make alexithymia a goal pursued because it is *easily attainable*. This view is consistent with framing the goal of alexithymia as the prevention of negative outcomes (Panayiotou *et al.*, 2015) or alexithymia as having a *prevention focus* (Shah & Higgins, 1997).

One might wonder whether avoidant coping tendencies are always the consequence of experiencing negative affect; if so, negative affect would be the primary antecedent (both necessary and sufficient) of alexithymia, with coping representing a behavioural by-product of negative affect, or an intermediate variable between affect and alexithymic tendencies. However, in our view, alexithymia might stem from subjectively intolerable negative emotionality being above some subjective threshold (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), *or* from avoidant habits being above some subjective threshold (independently of negative emotionality). Alexithymia would occur as long as negative emotionality *or* avoidant coping was strong or sufficiently favoured. Such reasoning could imply that high levels of just one of these two variables would suffice to yield above-the-mean levels of alexithymia. Differently put, such independence of avoidant coping and negative affect would mean that relatively high levels of avoidant coping would weaken the association of negative emotionality with alexithymia, and vice versa, relatively high levels of negative emotionality would attenuate the association of avoidant coping with alexithymia.

STUDY I

We expected that emotional distress and avoidant coping would relate positively to alexithymia, but that their interaction would exert a negative effect. It has to be clarified that the total combined effect on alexithymia should also take into account the *positive* main effects we expected for emotional distress and avoidance coping. However, the total alexithymia score observed for high emotional distress and high avoidant coping should be less than the sum of the positive main effects, because of the negative interaction that regulates defensive postures stemming from a prevention focus on negative end-states (Shah & Higgins, 1997). We investigated these hypotheses on a community sample, focusing intentionally on a non-clinical population, because in clinical samples the associations between the variables investigated herein could materialize only because of spillover effects or could represent collateral products of the clinical condition (Kashdan *et al.*, 2006).

Method

Participants and procedure

One hundred participants (49 female, 51 male, mean age = 25.15, *SD* = 4.08) filled out a questionnaire presented as an ‘investigation on personality and habits’ that included measures of coping preferences, alexithymia, and psychological symptoms. Participants were approached in parks and public places and in the main campus of a large Italian

university. Of the 100 participants, 68 (68%) were undergraduate students; the remaining participants were unemployed (3%), clerks and public servants (11%), teachers (2%), blue-collar employees (3%), and professionals and entrepreneurs (8%), or had other occupations (5%). The sample was not large, but considering a medium effect size for the expected interaction ($f^2 = .15$; e.g., Faul, Erdfelder, Lang, & Buchner, 2007) and a .05 probability of type I error, power reached .90 in this sample.

Measures

Alexithymia was measured using the Italian version of the Toronto Alexithymia Scale (TAS-20; Bressi *et al.*, 1996). The TAS-20 consists of 20 items rated on a 5-point Likert scale (ranging from 1 = *strongly disagree* to 5 = *strongly agree*) and measures three facets: Difficulties Identifying Feelings; Difficulties Describing Feelings; and Externally Oriented Thinking, which refers to a specific tendency to deal with superficial themes and to avoid emotional thinking (Bagby, Parker, & Taylor, 1994). We used the total scale score for the analyses ($\alpha = .87$). The total score ranged from 20 to 100, with a score ≤ 51 classifying an individual as 'non-alexithymic' and a score ≥ 61 classifying the individual as 'alexithymic'; scores between 52 and 60 classify the individual as 'borderline' (Bagby, Parker, *et al.*, 1994; Taylor *et al.*, 1997).

Coping strategies were assessed using the Italian version of the Coping Orientation to Problems Experienced (COPE-NVI; Sica *et al.*, 2008). The COPE-NVI scale measures how often people undertake a specific coping process when facing difficult or stressful situations. The items, with responses ranging from 1 = *I usually don't do this at all* to 4 = *I usually do this a lot*, refer to five large independent dimensions: Social Support, Positive Attitude, Problem Solving, Turning to Religion, and Avoidance Strategies. We only focused on the Avoidance Strategies dimension, which is composed of four subscales – denial, behavioural disengagement, mental disengagement, and drug and alcohol abuse ($\alpha = .80$).

Psychological distress was indexed by the Global Severity Index (GSI) computed on the SCL-90-R scale (Derogatis, 1975). Participants are asked to report how badly (ranging from 1 = *not at all* to 4 = *very much*) they suffer from a series of 90 symptoms ($\alpha = .98$).

Results and discussion

Alexithymics (TAS ≥ 61) were 10% in this sample (score range 21–79). Table 1 reports zero-order correlations and descriptive statistics. Avoidance coping and the GSI were modestly associated, and more strongly related with alexithymia. This pattern was consistent with positive main effects connecting alexithymia with avoidant coping and emotional distress.

Our main hypothesis, however, predicted an interaction. Moderated multiple regression was used for hypothesis testing. Variables were standardized before we computed the multiplicative Avoidant Coping \times GSI indicator. The model accounted for 37% of observed variance in alexithymia, $F(3, 96) = 18.92$, $p < .001$. The regression coefficients revealed two positive main effects for avoidant coping ($b = .37$, $p < .001$) and psychological discomfort (GSI; $b = .44$, $p < .001$). More germane to our novel hypothesis, the coefficient representing the Avoidant Coping \times GSI effect turned out to be significant and negative, as expected ($b = -.22$, $p < .05$). To disentangle the interaction, we explored the effect of one independent variable when the other

Table 1. Zero-order correlations among GSI, avoidance coping strategies, and alexithymia (Study 1)

	1	2	3
GSI	–		
Avoidant coping	.27*	–	
Alexithymia	.43**	.50**	–
Mean (SD)	0.59 (0.58)	43.64 (11.21)	44.82 (12.96)

Note. GSI = Global Severity Index.

* $p < .05$; ** $p < .001$.

independent variable was held constant at low (1 *SD* below the mean) and high (1 *SD* above the mean) levels. Contrasting low versus high avoidant coping levels revealed that the effects of emotional distress decreased from .65 ($p < .001$) when avoidant coping was low to .22 ($p < .05$) when levels of avoidant coping were high. Taking the perspective of GSI as a moderator of the association of avoidant coping with alexithymia analogously revealed that for lower levels of emotional distress, avoidance coping related more strongly to alexithymia (.59, $p < .001$), while for higher emotional distress, the effect of avoidant coping on alexithymia decreased, falling below the significance threshold (.16, *ns*).

The interaction could also be disentangled by inspecting the predicted means (*z*-scores, to make it easy to evaluate above- and below-the-mean estimated scores; Table 2).

One should not overlook the fact that, although avoidance coping and emotional distress interacted negatively in relation to alexithymia scores, their main effects combined additively and positively, as expected; hence, the highest alexithymia scores were found for individuals with both high levels of emotional distress *and* high preferences for avoidance strategies (Table 2). However, the negative interaction effect materialized because individuals with high levels of both predictors showed a level of alexithymia significantly lower than that determined by the sum of the two positive main effects. Also, the means in Table 2 suggested that above-the-mean alexithymia scores could be obtained whether an individual shows high psychological distress *or* a stronger preference for avoidant coping, even with distress levels below the mean, as anticipated by our predicted interaction.

Distress has previously been interpreted as a possible antecedent of alexithymia (e.g., De Vente *et al.*, 2006; Marchesi *et al.*, 2008). Hence, a GSI main effect was not surprising. However, our results suggested two important implications. First, the unique effects of avoidant coping were substantial; secondly, distress and a preference for avoidant coping interacted antagonistically when relating to alexithymia, as hypothesized. This interaction

Table 2. Mean standardized scores of alexithymia in high versus low GSI and avoidance coping

		Avoidant coping	
		High	Low
GSI	High	0.66	0.34
	Low	0.20	–0.97

Note. GSI = Global Severity Index.

suggested that alexithymia showed features that were consistent with the hypothesis of an emotional posture – or processing style – that is acquired out of *necessity* (the presence of psychological distress), *or* because it is the easiest response pattern, reinforced over time in avoidance-prone individuals (Hayes *et al.*, 2004). As the level of one factor increases, the effect of the other decreases relatively (Shah & Higgins, 1997). This finding may be interpreted as supportive of two pathways to alexithymia: One as a reaction to psychological distress or an adaptation of trait-like negative emotionality (e.g., Marchesi *et al.*, 2008), and the other as an acquired characteristic developed from a preferred avoidant coping style.

STUDY 2

Replication is essential for scientific discourse, and its importance for psychological science was recently stressed (e.g., Asendorpf *et al.*, 2013). Relying on a single study leaves the findings prone to inflated error rates. Therefore, we deemed it crucial to conceptually replicate our findings in a larger sample drafted from a more diverse population, in a different linguistic context (US) and with a somewhat different method and measures (online questionnaire). We also investigated the possibility that the interaction found in Study 1 was mediated by a more proximal correlate of alexithymia, namely EA (Hayes *et al.*, 1996). EA is considered to be a broader concept than avoidant coping (e.g., Kashdan *et al.*, 2006), and it is conceived as a general heading that encompasses cognitive and behavioural strategies aimed at reducing and avoiding negative experience (Venta, Hart, & Sharp, 2013). EA, as measured by the Acceptance and Action Questionnaire (Bond *et al.*, 2011), ‘is placed within the context of valued behaviours, choices, and activities that are forsaken because of the unwillingness to be in contact with unwanted internal events’ (Kashdan *et al.*, 2006, p. 1304). Conversely, avoidant coping is measured more mechanically in terms of the frequency and form of avoidant behaviour (like denial, use of drugs and alcohol, etc.). Therefore, it could be argued that EA should be more proximally conducive to psychological dysfunction, because EA taps directly into what is lost because of an intolerance of private internal events. This could materialize in a mediation of the association of avoidant coping with several criteria through EA, as reported in a handful of studies (Berrocal, Pennato, & Bernini, 2009; Kashdan *et al.*, 2006; Wolgast, Lundh, & Viborg, 2013). We moved a step further, making a more specific prediction and involving not the mediation of a main effect, but the mediation of an interactive effect: That EA would mediate the interaction between avoidant coping and negative emotionality on alexithymia. Such a mediated moderation pattern would represent a novel and interesting finding.

Method

Sample and procedure

Three hundred and fifteen US participants (123 female, 192 male, mean age = 33.42, *SD* = 11.89) filled out an online questionnaire presented as an ‘investigation on emotions and stressful events in life’. Participants were enrolled through Mechanical Turk and received a payment for filling out the questionnaire. Of the 315 participants, 202 (64%) were blue-collar employees; the remaining participants were self-employed (16%), undergraduate students (8%), and unemployed (12%).

Measures

Alexithymia was measured using the TAS-20 (Bagby, Parker, *et al.*, 1994; Bagby, Taylor, & Parker, 1994; $\alpha = .90$). To measure avoidant coping strategies, only the pertinent items of the Coping Orientation to Problems Experienced inventory were included in the online questionnaire (COPE; Carver, Scheier, & Weintraub, 1989; $\alpha = .90$). Negative emotionality was assessed with the 10 adjectives of the Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988; $\alpha = .90$). Participants were asked to rate how much they felt in general (ranging from 1 = *very slightly/not at all* to 5 = *extremely*). EA was measured using the Acceptance and Action Questionnaire (AAQ II; Bond *et al.*, 2011; $\alpha = .85$). Participants were asked to rate the trueness of 10 sentences (ranging from 1 = *never true* to 7 = *always true*) assessing EA and psychological inflexibility.

Results and discussion

Frequency distributions of the TAS-20 revealed that the percentage of alexithymic participants was 27.3% in this sample (score range 20–90). Bivariate correlations (Table 3) showed that alexithymia was positively associated with avoidant coping and negative affect. Furthermore, coping and negative affect were also highly correlated. As previously found (e.g., Venta *et al.*, 2013), EA was positively associated with all the other variables considered in the present research.

Alexithymia

Moderated regression results showed a positive main effect of negative affect on alexithymia ($b = .24$, $t = 4.57$, $p < .001$), indicating that higher scores on the TAS-20 were associated with high negative affect; avoidant coping also had a significant and positive main effect on alexithymia ($b = .57$, $t = 11.99$, $p < .001$). As anticipated, such main effects were qualified by a significant interaction between negative affect and coping ($b = -.10$, $t = -2.38$, $p = .02$). The pattern of predicted means (Figure 1a) suggested that the relationship between coping and alexithymia was stronger for individuals reporting low (vs. high) levels of negative affect. Simple slope analysis corroborated that avoidant coping was more strongly associated with alexithymia under low ($.67$, $t = 11.03$, $p < .001$) rather than high ($.47$, $t = 7.12$, $p < .001$) negative affect. Comparisons within avoidant coping revealed a similar pattern: the association between negative affect and alexithymia was stronger for individuals reporting low ($.33$, $t = 4.28$, $p < .001$) rather than high ($.14$, $t = 2.63$, $p < .001$) levels of avoidant coping.

Table 3. Zero-order correlations among variables and descriptive statistics (Study 2)

	1	2	3	4
Negative affect	–			
Avoidant coping	.51**	–		
Alexithymia	.48**	.67**	–	
Experiential avoidance	.45**	.55**	.63**	–
Mean (SD)	27.34 (5.30)	31.94 (9.81)	51.57 (13.76)	36.95 (10.36)

Note. ** $p < .0001$.

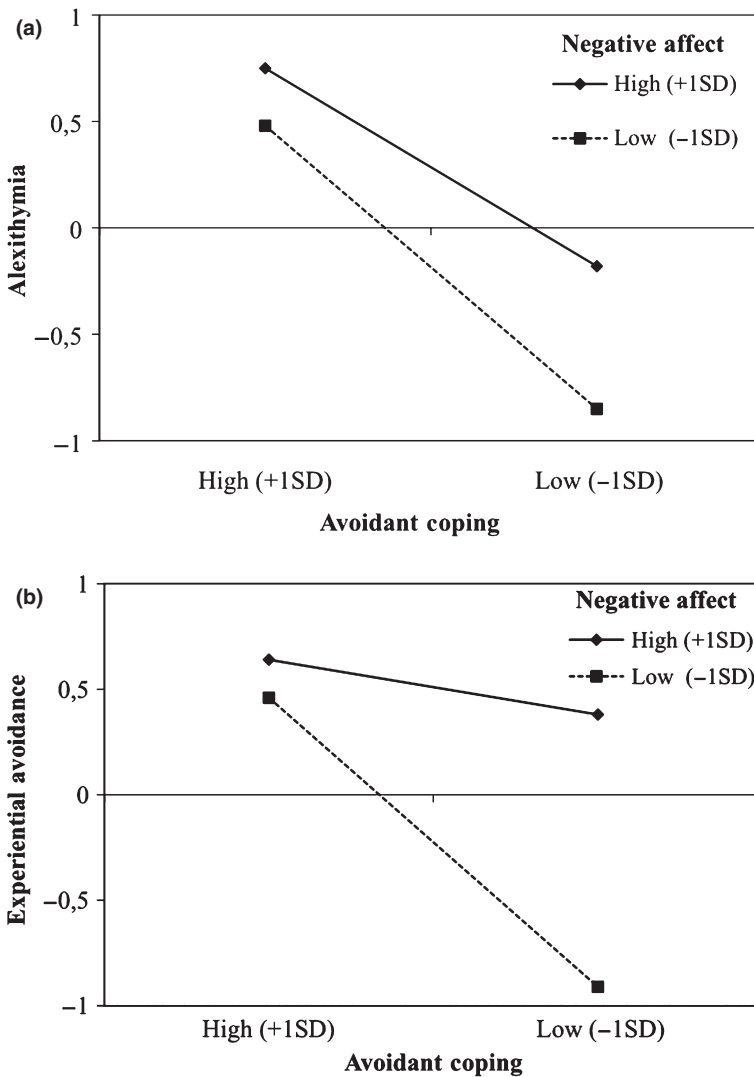


Figure 1. Estimated standardized scores of alexithymia (a) and experiential avoidance (b) as a function of negative affect and avoidant coping (Study 2).

Experiential avoidance

Moderated regression analysis was conducted with EA as the dependent variable. Significant main effects were detected for negative affect ($b = .37, t = 6.73, p < .001$) and avoidant coping ($b = .41, t = 8.06, p < .001$). More importantly, the two-way interaction was also significant ($b = -.28, t = -6.25, p < .001$). As shown in Figure 1b, the pattern of results mirrored those found for alexithymia. Simple slopes revealed that the association between coping and EA was only marginal under high negative affect ($.12, t = 1.83, p = .07$), but it was stronger under low negative affect ($.69, t = 10.33, p < .001$). Similarly, the relationship between EA and negative affect only emerged for individuals reporting low ($b = .65, t = 7.77, p < .001$) rather than high ($b = .09, t = 1.65, p = .10$) levels of avoidant coping.

Mediated moderation

Given the pattern of associations reported above, it appeared sensible to propose that EA could catalyze, at least partially, the effect of the interaction between negative affect and avoidant coping on alexithymia. To test this hypothesis, we conducted a bootstrap (5,000 samples)-mediated moderation analysis (Hayes, 2012; Preacher, Rucker, & Hayes, 2007). The 95% bias-corrected confidence interval for the indirect effect of the interaction did not include zero (lower = .15; upper = .06), indicating that EA was a significant mediator of the association between alexithymia and the negative affect \times avoidant coping interaction. Standardized coefficients are reported in Figure 2.

The overall pattern of results showed that highest levels of alexithymia could be found when an individual was high in negative affect and avoidant coping strategies. More importantly, however, the significant interaction indicated that high levels of just one of the risk factors co-occurred with elevated alexithymic scores, even when the other supposed risk factor was weak or absent. The mediating role of EA may suggest that a broader set of beliefs about avoidance could stem from behavioural tendencies related to avoidance and proneness to negative emotionality; in turn, avoidance beliefs (EA) might be more proximally related to alexithymia (Panayiotou *et al.*, 2015).

GENERAL DISCUSSION

We focused on two correlates of alexithymia, negative emotionality and avoidant coping strategies, and hypothesized that they would interact negatively on alexithymia scores. The results of two independent studies carried out in two different cultural contexts, varying somewhat in the measures and methods of recruitment, were supportive of this novel hypothesis. We derived our hypothesis by conceptualizing alexithymia as a coping response adopted under a prevention focus concerned with negative end-states (Marchesi *et al.*, 2000). As shown for goals adopted out of concerns for security and safety (Shah & Higgins, 1997), in our studies alexithymia appeared to be associated with a subjective *necessity* to cope with high levels of negative emotionality *or* with a *habitual and easy to implement* coping strategy, that is avoidant coping. Although both avoidant coping and negative emotionality could add to alexithymia (positive main effects), if one of these factors was high, the effect of the other factor on adopting the alexithymic posture declined. We believe this is an interesting finding, which might prompt further research.

The notion that alexithymia can be adopted as a reactive defence to cope with intense distress is not new (e.g., Bailey & Henry, 2007; Constantinou *et al.*, 2014; De Vente *et al.*,

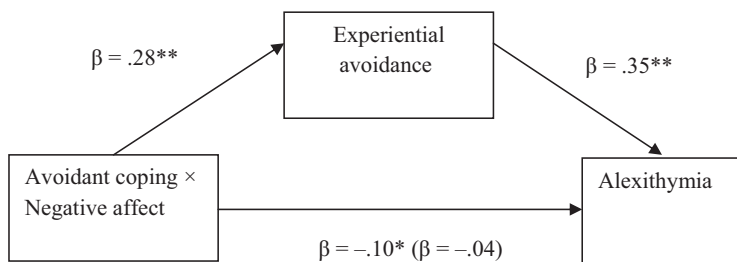


Figure 2. Mediated moderation analysis. The direct effect of the interaction between avoidant coping and negative affect is reported within brackets (Study 2). Note. * $p < .05$; ** $p < .001$.

2006), and is consistent with a clinical perspective that notes how affective states perceived as overwhelming might impair their mental representations (e.g., Fonagy, 1991). The main effects we reported for negative emotionality are consistent with this general perspective. The main novel contribution is the role we ascribe to individual preferences for avoidance as an alternative motive for alexithymia. Thus, although the correlational nature of our studies does not allow any hypothesis of causal relationships among the variables, two pathways to alexithymia could be envisioned from our results: (1) reaction to negative emotionality; (2) acquired posture stemming from habitual avoidant coping. These two pathways to alexithymia may be at work across different individuals, or at different moments in life, depending on the level of negative emotionality one has to endure, or depending on the individual's level of motivation to learn and adopt avoidant coping strategies. A couple of clinical examples could be provided as instantiations of these two hypothetical pathways.

Vincent was a 35-year-old man with an addiction to alcohol. He was also suffering from a series of somatic symptoms. Vincent had a lifelong pattern of social anxiety; however, the level of his symptoms did not fulfil the criteria for a diagnosis of social phobia. Vincent had tried alcohol for the first time at the age of 12. His parents never consumed alcohol, but his grandfathers (both maternal and paternal) and two uncles were alcoholics. It is arguable that Vincent started drinking to avoid feeling uncomfortable in public situations. He had lost his job because of his alcohol problems, and getting back his job was the main motivation for treatment. At the first evaluation, his TAS score was 81, which indicated strong alexithymia; his GSI score of SCL-90 was 0.65 (cut-off > 1), which indicated an absence of severe emotional distress. The total COPE score, which measures avoidant coping strategies, was 50 (max 64), showing Vincent's strong reliance on avoidant strategies when facing stressful situations in his daily life. Vincent seemed familiar with experiencing avoidance throughout his life. Vincent's profile (i.e., high avoidance, but emotional distress below the cut-off) may suggest that his alexithymia stemmed mainly from habitual avoidant coping.

Maria was a 39-year-old single mother of one. She suffered from social phobia. Although her disorder should have pushed her into avoidant behaviour, she was a highly committed person, and she was convinced that to get something good in life 'you must not let your fears guide you'. So, although she reported high levels of anxiety and worry, she appeared strongly motivated to interact with people. However, she used to spend a lot of time ruminating on her performance and worrying, in particular, about other people noticing her embarrassment through somatic manifestations (e.g., blushing and sweating). Her father and sister had histories of major depressive episodes. When Maria started the therapy, her TAS score was 66, which indicated alexithymia; her GSI score of SCL-90 indicated high emotional distress (1.60; cut-off > 1). Her COPE score, measuring avoidant coping, was 22 (max 64), indicating that Maria did not rely much on avoidant coping strategies when facing stressful situations in her daily life. She had a lifelong experience of anxiety and somatic symptoms, but her tendency to use avoidant coping strategies was not particularly high. Maria's profile appeared consistent with alexithymia stemming mainly from emotional distress.

Of course, we are aware that our theoretical position, clinically instantiated in the two vignettes sketched above, is one among other theoretical outlooks on alexithymia. Our stance is not at odds with the notion that overwhelming emotional distress impairs mentalization (Fonagy, 1991) eventually hampering affect regulation. Also, our perspective does not contradict an interpretation of alexithymia as tightly intertwined with

interpersonal difficulties and attachment style (e.g., Bourne, Berry, & Jones, 2014; Vanheule, Desmet, Meganck, & Bogaerts, 2007). This position could be elaborated further, interpreting alexithymia *and* interpersonal problems as part of a single inefficient affect regulatory system (Vanheule, Vandenberghe, Verhaeghe, & Desmet, 2010). Future studies could replicate our results shifting attention to specific interpersonal avoidant behaviours (Vanheule *et al.*, 2007), or to specific interpersonal patterns that eventually translate into EA (e.g., Fossati *et al.*, 2009).

Limitations

Some limitations should be acknowledged. First, we relied exclusively on self-reported measures. The literature suggests that multi-method assessments (e.g., self-reporting, interviews and observation) should be used when measuring alexithymia, to minimize measurement errors (e.g., Meganck, Inslegers, Vanheule, & Desmet, 2011; Taylor & Bagby, 2004; Waller & Scheidt, 2004). Moreover, it is arguable that the way people represent and regulate emotions is, to an important extent, implicit (e.g., Westen & Blagov, 2007). Alexithymia and emotion-regulation research could also make use of implicit methods of measurement to tap into uncharted functions and correlates of alexithymia, and/or to reduce the biases that are typical of self-reporting measurement methods (Vanheule, 2008). Secondly, Study 1 relied mainly on student respondents, which of course limits the generalizability of the results. However, the Study 2 participants represented a significantly more diverse set of respondents, so issues of generalizability could to some extent be assuaged. Thirdly, we limited our studies to community, non-clinical samples. We investigated community samples by design, to avoid any confusing correlations that could have emerged in clinical samples from spillover effects or collateral by-products (Kashdan *et al.*, 2006). Finally, we focused on broad indicators of negative emotionality. More specific forms of negative emotionality may be investigated in the future, connecting specific emotions with increased alexithymia vulnerability. To summarize, future research should refine our findings with more diverse or clinical samples, and use implicit or multiple methods of measurement varying in generality/specificity. Another limit of the studies was their correlational nature, which did not allow us to search for causal relationships among the variables. Manipulating accessibility of avoidance habits and beliefs and negative emotionality could also be pursued, to test our model in a more controlled setting.

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Received 11 July 2014; revised version received 3 August 2015