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Live happily live in hiding (from our affect): Alexithymia Influences affect intensity and affect frequency ratings in men

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ABSTRACT

Alexithymia has been frequently studied in the context of negative affect frequency but rarely in the context of positive affect frequency or in the context of affect intensity. However, affect intensity and frequency, even if they are independent, are generally confounded due to an overlap in items wording (tapping both dimensions). The aim of the study was to examine the incremental validity of alexithymia for predicting both affect intensity and frequency, regarding positive and negative valence. Two hundred and fifty five students fulfilled measurements for alexithymia, affect intensity and affect frequency. Results showed that the factor "Difficulty identifying feelings" is related to higher positive and negative affect intensity, as well as to negative affect frequency. Men were also more sensitive to positive affect intensity and frequency if they scored higher on alexithymia. They experienced less often positive affect, but the intensity of their affect was more intense. Conversely, alexithymia did not influence women's affect intensity or affect frequency. Thus, alexithymia factors are associated with specific patterns of affect intensity and frequency, highlighting an overall deficit in the processing of emotions with contrasting patterns regarding gender.

1. Introduction

Two dimensions may capture the individual affective structure, namely the frequency of affect and the intensity of affect (Diener et al., 1985a, 1985b). Affect intensity refers to individual differences in the intensity with which individuals experience emotional responses (Larsen, 1985), while affect frequency is related to how often mood states are experienced in a particular period. Intuitively, we could think that people who experience frequent positive or negative affect would also experience these affect more intensely. However, many studies have demonstrated that affect frequency and affect intensity are independent (Diener et al., 1985a, 1985b; Larsen and Diener, 1985). To illustrate, one might feel happy very rarely but when it occurs the experience is very intense, while another one might frequently feel angry but each occurrence being of low intensity. Despite this hypothesized independence, there are also reasons to think about a possible overlap between these dimensions. Affective disorders, such as depression or anxiety, have been significantly related to high levels of affect intensity (Flett et al., 1996; Vujanovic et al., 2006) as well as to affect frequency (Howell et al., 2010), both implying emotion regulation processes (Sonnemans and Frijda, 1995), accounting for variations in affective states. When examining normal functioning, there are also personality dimensions to consider as they are related to an impaired emotional regulation of affect intensity and/or frequency. Alexithymia might be a central one. Alexithymia is a multifaceted construct characterized by difficulties identifying and describing feelings and a cognitive style that is literal, utilitarian, and externally oriented (Taylor and Bagby, 2000). Relations with affective disorders, more generally with negative affectivity, are well documented, leading to propose alexithymia as a vulnerability trait, predisposing one to anxiety, depression, and more generally to the frequency of negative affect (Taylor and Bagby, 2004; Tolmunen et al., 2011). Alexithymia has also been related to affect intensity (Engelberg and Sjoberg, 2004; Lee and Guajardo, 2011) and data supports the hypothesis that stressful events are perceived with a greater intensity by higher alexithymia scorers (Connelly and Denney, 2007; Grynberg et al., 2012). Further, a recent study has demonstrated that negative intensity and reactivity predict binge drinking through a lack of emotional clarity (Veilleux et al., 2014). This suggests that a lack of emotional awareness predict maladaptive coping strategies such as substance abuse to cope with stronger negative emotional experiences.

However, the conclusions of these studies are limited. Firstly, they did not examine systematically which alexithymia factors

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would predict independently affect intensity and affect frequency. Secondly, they did not examine if valence would have a moderating impact.

First, in a methodological perspective, it seems difficult to assess the effect of alexithymia on affect intensity without considering affect frequency. The relations between affect frequency and affect intensity are difficult to disentangle because many items are worded in such a way that they contain elements of arousal (scared, excited) leading to ambiguous conclusions, as an effect could not be solely associated to frequency or intensity. There is also an overlap between items related to anxiety and alexithymia, particularly those related to identification skills. Thus, it is important to examine whether alexithymia is related to affect frequency and/or to affect intensity.

Second, one limitation of the previous studies is that they only examined the overall intensity scores, while the distinction between positive and negative affect intensity is essential (e.g., Weinfurt et al., 1994). These limitations contributed to underestimate the possible relations between the positive and the negative affect intensity dimensions and other variables, and to attributing the effect on global affect intensity, while this effect may be mainly due to one particular affect intensity dimension (e.g., Hunt, 1993). Further, as alexithymia has been described as a pervasive deficit in the cognitive processing of emotions, impeding both negative and positive emotions (Luminet et al., 2006), it seems necessary to investigate more precisely its impact regarding affective valence, both for affect intensity and affect frequency.

Third, previous studies did not systematically consider alexithymia factors, but only report results regarding alexithymia total scores. However, some recent studies show that the three factors included in the TAS-20 do not correlate in the same way with variables influencing the subjective experience of emotions. For instance, alexithymia is negatively related to extraversion (Costa and McCrae, 1992) but this was found specifically for the factor "difficulties describing feelings" (Zimmermann et al., 2005). This suggest that difficulties describing feelings should lead to experience less positive emotions as trait and state extraversion has been related to positive but not negative affect (Rusting and Larsen, 1997; McNiel and Fleeson, 2006). A positive correlation was observed with neuroticism (e.g., Picardi et al., 2005) but specifically for the factor "difficulties identifying feelings" (e.g., Elfhag and Lundh, 2007), suggesting that difficulties to identify feelings have more to do with negative but not positive affect as neuroticism has been associated with negative affect but not positive ones (Rusting and Larsen, 1997, McNiel and Fleeson, 2006). These data suggest that alexithymia should evidence contrasted patterns in relation with positive and negative affect intensity and affect frequency, and that these patterns may also be dependent of the alexithymia factors.

In summary, we propose to look at the potentially different predictors of positive versus negative affect intensity and affect frequency dimensions. We aim at clarifying if alexithymia influences the frequency of negative and positive affect over and beyond the intensity with which emotional events are dispositionally experienced or if, alexithymia scores are associated with affect intensity over and beyond the frequency with which people experiences emotional events. Affect frequency and intensity have not been jointly studied in their relation with alexithymia so far. We argue that this distinction is very important. Indeed, focusing mainly on affect frequency (negative and positive affect), obscures the importance of specific aspects of emotional dysfunction such as affect intensity because affect intensity or the temperamental propensity to experience strong reactions to emotional event is not captured independently by current measures. Further, it has been demonstrated that people scoring high on affect intensity tend to use more often cognitive processes such as personalization, generalization or selective abstraction (Larsen et al., 1997), which are cognitive biases frequenlty found in psychopathological disorders. Affect intensity, both negative and positive, appear to be linked to psychopathological issues such as bipolar disorders, borderline personality or substance abuse (Thorberg and Lyvers, 2006; Gratz et al. 2008; Henry et al., 2008).

We hypothesize that alexithymia total and factor scores would be significant predictors for both affect intensity and affect frequency.

2. Method

Participants were recruited through information delivered during teaching classes where they were informed about the studies and the way to complete the online questionnaire. We did not administer the SCID or MINI and participants who did not complete the entire questionnaire were excluded, as well as participants older than 40 years as alexithymia is usually positively related to age. We enrolled 255 student participants (79 men, mean age of 20.52 ± 3.27) recruited in French speaking universities (Belgium and France).

2.1. Measures

The Affect Intensity Measure (Larsen et al., 1985) is a 40-item, self-report questionnaire, using a six-point Likert scale ranging from 1 (never) to 6 (always). We only considered the positive and negative intensity subscales ($\alpha=0.86$ and $\alpha=0.75$, respectively).

The Toronto Alexithymia Scale (TAS-20) (Bagby et al., 1994; Loas et al., 1995) is a 20-item, self-report questionnaire, using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The TAS-20 identifies three factors: difficulty identifying feelings (DIF, $\alpha=0.78$), difficulty describing feelings (DDF, $\alpha=0.76$), and externally-oriented thinking (EOT $\alpha=0.52$).

The Positive Affect and Negative Affect Scale (PANAS) (Watson et al., 1988; Gaudreau, et al., 2006) is a 20 adjectives scale with two mood subscales of 10 items each which was designed to measure to what extent people experience positive and negative affect. In the instructions the respondents were asked to indicate if they have experienced all the 20 adjectives during the last weeks, using a five-point scale ranging from "not at all or rarely" (1) to "very often" (5), highlighting the frequency of the affect experience. Reliability of the two subscales was good (positive affect: $\alpha=0.79$; negative affect: $\alpha=0.85$).

2.2. Statistical analyses

We will first present descriptive statistics. Then, gender differences are examined by using student t test. Finally, we performed multiple linear regressions including affect frequency, affect intensity, gender and alexithymia factors (DIF, DDF & EOT). To create the cross-product vector representing the interaction term, the independent variables were first centred (Aiken and West, 1991). To analyze this interaction, the simple slopes at values one standard deviation below and above the mean of alexithymia were tested (Cohen and Cohen, 1983).

3. Results

3.1. Descriptive statistics

Table 1 shows the means, standard deviations, and correlations for all variables. Independent t-tests comparing gender scores showed that women had higher levels of positive and negative

Table 1
Pearson's correlations, gender means (SD) between study variables.

	1	2	3	4	5	6	7	8
1. DIF	–	0.59**	0.13*	0.82**	0.42**	−0.12	0.18**	0.37**
2. DFF		–	0.31**	0.85**	0.23**	−0.17**	−0.08	0.14*
3. EOT			–	0.56**	0.03	−0.07	−0.09	−0.02
4. TAS20				–	0.33**	−0.16**	0.03	0.25**
5.PANAS- NA					–	−0.08	0.14*	0.55**
6. PANAS- PA						–	0.23**	−0.01
7. AIM-PA							–	0.39***
8.AIM-NI								–
Male, mean (SD)	**17.32 (5.48)**	14.18 (4.19)	17.22 (4.39)	48.71 (10.44)	23.15 (8.08)	34.33 (6.26)	**60.78 (11.97)**	**31.06 (8.00)**
Female, mean (SD)	**18.88 (5.69)**	14.76 (4.86)	16.72 (3.70)	50.35 (11.02)	24.83 (6.96)	33.66 (6.69)	**65.64 (9.27)**	**36.85 (6.73)**
Cohen'd	**.28**						0.48	0.81

DIF: difficulty identifying feelings, DDF: difficulty describing feelings, EOT: externally oriented thinking, TAS20: TAS total scores, PANAS-NA: PANAS negative affect, PANAS-PA: PANAS positive affect, AIM-PA: AIM positive affectivity, AIM-NI: AIM negative intensity. Bold values indicate significant gender differences.

* $p \leq 0.05$.
** $p \leq 0.01$.
*** $p \leq 0.0001$.

affect intensity than men did ($t(253) = -3.52$, $p \leq 0.01$, $d = 0.48$; $t(253) = -5.98$, $p \leq 0.01$, and $d = 0.81$, respectively). They also showed greater DIF scores than men did ($t(253) = -2.07$, $p \leq 0.05$, and $d = 0.28$).

3.2. Multiple linear regressions

Hierarchical regressions predicting affect intensity or affect frequency were systematically controlled for gender (dummy-coded as men = 1 and women = 2), for the shared variance with their valence counterparts and for negative and positive frequency when intensity was predicted, or negative and positive intensity when frequency was predicted. These variables were entered in step 1. In step 2, we added alexithymia scores and in step 3 the interaction terms (gender X alexithymia).

3.2.1. Predicting positive affect intensity (Table 2)

Alexithymia total scores did not contribute to positive affect intensity above and beyond the controlled factors. However, the gender–alexithymia interaction term was significant ($\beta = -0.18^{**}$, R^2 Add.: 0.03, $p \leq 0.01$), the overall model explaining 24.2% of the positive affect intensity variance ($F(6, 248) = 13.19$, $p \leq 0.001$) with main effect of PA and NI ($\beta = 0.26$, $p \leq 0.001$, $\beta = 0.41$, $p \leq 0.001$, respectively). The simple slopes analyse evidenced a significant effect for men ($\beta = 0.24$, $p \leq 0.05$) but not for women ($\beta = -0.12$, ns).

We then examined if the interaction of gender by alexithymia was also found for the three alexithymia factors considered. We ran multiple regression with the three interaction terms corresponding to each alexithymia's dimension (gender × DIF, gender × DDF and gender × EOT).

In the regression predicting Positive affect intensity, $R^2 = 0.28$, $F(10, 244) = 9.49$, $p \leq 0.001$, the main effects of PA ($\beta = 0.25$, $p \leq 0.001$), NI ($\beta = 0.37$, $p \leq 0.001$), DIF ($\beta = 0.27$, $p \leq 0.001$) and DDF ($\beta = -0.17$, $p \leq 0.05$) were significant as well as the gender × DIF interaction ($\beta = -0.18$, $p \leq 0.05$). The simple slopes showed that the regression of positive affect intensity on DIF was significant for men ($\beta = 0.36$, $p \leq 0.001$) but not for women, ($\beta = -0.00$, ns). See Fig. 1.

3.2.2. Positive affect frequency (Table 2)

The overall model explained 13.8% of the positive affect frequency variance with a main effect of PI and alexithymia total score ($\beta = 0.30$, $p \leq 0.001$, $\beta = -0.25$, $p \leq 0.001$ respectively) as well as a gender × alexithymia interaction ($\beta = 0.24$, $p \leq 0.001$, R^2 Add.: 0.05, $p \leq 0.001$). The simple slopes analyse evidenced a significant effect for men ($\beta = -0.49$, $p \leq 0.001$) but not for women ($\beta = -0.00$, ns). Then, when considering alexithymia factors and their interactions with gender, the overall model explained 15% of the variance with $F(10, 244) = 4.21$, $p \leq 0.001$. The main effect of PI was significant ($\beta = 0.29$, $p \leq 0.001$), as well as the interaction term between gender and DIF ($\beta = 0.18$, $p \leq 0.05$, R^2 Add.: 0.05, $p \leq 0.001$). The regression of positive affect frequency on DIF was significant for men ($\beta = -0.48$, $p \leq 0.001$) but not for women, ($\beta = -0.00$, ns). See Fig. 2.

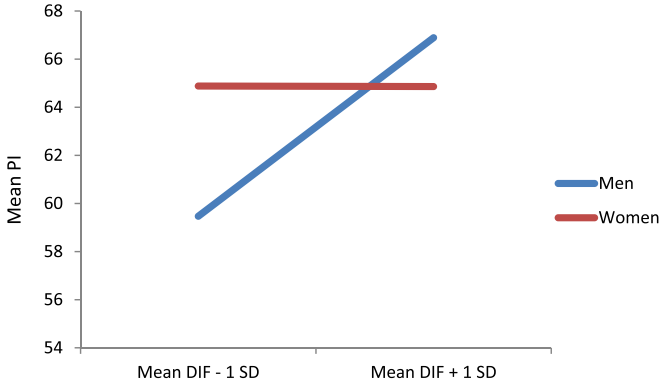

Fig. 1. Moderating effect of "Difficulties identifying feelings" on positive affect intensity controlling for positive and negative affect frequency and negative affect intensity. DIF: difficulty identifying feelings, SD: standard deviation, PI: positive affect intensity.

3.2.3. Negative affect intensity and negative affect frequency.

Negative affect intensity was best predicted ($R^2 = 0.47$, $F(6, 248) = 36.95$, $p \leq 0.001$) by positive affect intensity ($\beta = 0.29$, $p \leq 0.001$), negative affect frequency ($\beta = 0.47$, $p \leq 0.001$) and gender ($\beta = 0.24$, $p \leq 0.001$). Alexithymia and gender × alexithymia were not significant predictors. Considering the alexithymia factors separately lead to the same results (see Table 2).

For negative affect frequency, the overall model explained 36.3% of the variance ($F(6, 248) = 23.58$, $p \leq 0.001$) and showed main effects of NI and alexithymia ($\beta = 0.57$, $p \leq 0.001$ and $\beta = 0.23$, $p \leq 0.001$, respectively). We did not observe any interaction effect between gender and alexithymia.

When considering the alexithymia factors, the overall model was highly significant, $F(10, 244) = 15.31$, $p \leq 0.001$, $R^2 = 0.39$. There were only main effects of NI ($\beta = 0.53$, $p \leq 0.001$) and DIF ($\beta = 0.29$, $p \leq 0.001$).

We also assessed a three way interaction between alexithymia, affect intensity or affect frequency and gender (for both valence)

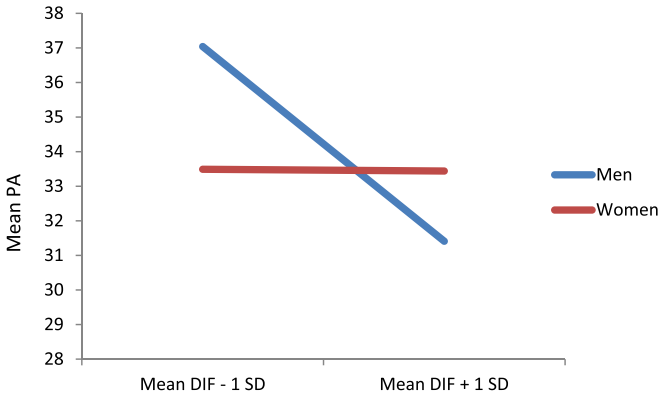

Fig. 2. Moderating effect of "Difficulties identifying feelings" on positive affect frequency, controlling for positive and negative affect intensity and negative affect frequency. DIF: difficulty identifying feelings, SD: standard deviation, PA: positive affect frequency.

and did not found any significant interactions. These results are therefore not reported.

4. Discussion

The present studies explored the relations between alexithymia, affect intensity and affect frequency. First of all, positive affect intensity and negative affect intensity are related to each other. Despite this relation, it does not support a unidimensional construct as suggested by previous research, due to their moderate contribution to each other. Further, positive and negative affect frequency contribute to the perception of the positive affect intensity while negative affect frequency, but not positive affect frequency, contributes to negative affect intensity.

However the results are very contrasted when including valence as we found a very small overlap between positive affect intensity and positive affect frequency, while for negative affect intensity negative affect frequency was the strongest predictor. This result may suggest eventually a psychometric overlap between negative frequency and intensity leading to consider an ambiguous item construction for negative intensity (referring to frequency rather than intensity). However, a closer examination of negative intensity items allows to conclude that they are not at all related to frequency. We could suggest that the confusion between intensity and frequency would be stronger for negative valence than for positive valence. In this perspective, negative intensity has been linked to neuroticism-like variables, as neuroticism represents a broader dimension of a personality trait, reflected through emotionality, arousability, negative affectivity or anxiety (Costa, 1991, Rubin et al., 2012). As such, a strong association of negative intensity with negative affect are neither unexpected nor spurious.

Another argument against a unidimensional perspective for affect intensity is directly linked to our main aim related to the incremental value of alexithymia. We have hypothesized that alexithymia should be related to intensity and frequency evidencing contrasted patterns in relation with positive and negative valence, and that these patterns may also be dependent of the alexithymia dimensions.

Alexithymia was found as a significant predictor of positive affect intensity and negative affect frequency. These results support the idea that alexithymia is related to a deficit in the cognitive

Table 2
Multiple linear regression predicting affect intensity and affect frequency by gender, alexithymia, gender X alexithymia and controlled for affect frequency and affect intensity.

Positive intensity		Negative intensity		Positive frequency		Negative frequency	
Step 1: R^2=0.22		Step 1: R^2=0.46		Step 1: R^2=0.07		Step 1: R^2=0.32	
PANAS-NA	−0.07	PANAS-NA	0.49***	PANAS-NA	−0.09	PANAS-PA	−0.06
PANAS-PA	0.23***	PANAS-PA	−0.02	AIM-NI	−0.04	AIM-NI	0.61***
AIM-NI	0.39***	AIM-PI	0.27***	AIM-PI	0.27***	AIM-PI	−0.06
Gender	0.10	Gender	0.24***	Gender	−0.09	Gender	−0.10
Step 2: R^2=0.25 (R^2 Add. 0.03*)		Step 2: R^2=0.47 (R^2 Add. 0.01)		Step 2: R^2=0.09 (R^2 Add. 0.02)		Step 2: R^2=0.38 (R^2 Add. 0.05***)	
PANAS-NA	−0.10	PANAS-NA	0.45***	PANAS-NA	−0.04	PANAS-PA	−0.03
PANAS-PA	0.22***	PANAS-PA	−0.01	AIM-NI	−0.02	AIM-NI	0.52***
AIM-NI	0.35***	AIM-PI	0.25***	AIM-PI	0.27***	AIM-PI	−0.08
Gender	0.10	Gender	0.024***	Gender	−0.09	Gender	−0.10
DIF	0.22**	DIF	0.13*	DIF	−0.08	DIF	0.25***
DDF	−0.19**	DDF	−0.04	DDF	−0.08	DDF	0.00
EOT	−0.03	EOT	0.00	EOT	−0.02	EOT	−0.00
Step 3: R^2=0.28 (R^2 Add. 0.03*)		Step 3: R^2=0.48 (R^2 Add. 0.01)		Step 3: R^2=0.15 (R^2 Add. 0.05**)		Step 3: R^2=0.39 (R^2 Add. 0.01)	
PANAS-NA	−0.12	PANAS-NA	0.45***	PANAS-NA	−0.01	PANAS-PA	−0.00
PANAS-PA	0.25***	PANAS-PA	−0.03	AIM-NI	−0.06	AIM-NI	0.53***
AIM-NI	0.37***	AIM-PI	0.27***	AIM-PI	0.29***	AIM-PI	−0.10
Gender	0.08	Gender	0.24***	Gender	−0.06	Gender	−0.10
DIF	0.27***	DIF	0.09	DIF	−0.15	DIF	0.29***
DDF	−0.17*	DDF	−0.05	DDF	−0.15	DDF	0.00
EOT	−0.03	EOT	−0.00	EOT	−0.01	EOT	−0.01
Gender X DIF	−0.18*	Gender X DIF	0.10	Gender X DIF	0.18*	Gender X DIF	−0.12
Gender X DDF	0.05	Gender X DDF	−0.02	Gender X DDF	0.10	Gender X DDF	0.03
Gender X EOT	−0.10	Gender X EOT	0.06	Gender X EOT	0.03	Gender X EOT	−0.03
F(10, 254)	F= 9.49***		F=10.54		F=4.21		F=15.31

DIF: difficulty identifying feelings, DDF: difficulty describing feelings, EOT: externally oriented thinking, PANAS-NA: PANAS negative affect, PANAS-PA: PANAS positive affect, AIM-PI: AIM positive affectivity, AIM-NI: AIM negative intensity.

* $p \leq 0.05$.
** $p \leq 0.01$.
*** $p \leq 0.0001$.

processing of emotional information. However, this deficit is not systematic as it was found only for two out of four dependent variables. However, as suggested, the patterns of relations are quite different and subtle when considering intensity and frequency more closely.

For negative affect frequency, DIF was a significant predictor above and beyond negative affect intensity. This confirms most studies arguing that alexithymia is related to negative affectivity and psychological distress (Fantini-Hauwel et al., 2011). In contrast, experiencing high level of negative affect intensity was not associated with alexithymia after controlling for positive affect intensity, gender and negative affect frequency. This suggests that people scoring higher on alexithymia and particularly on DIF experience negative affect more often but when these episodes occur they are not experienced as more intense. This study highlights that for negative situations DIF is only related to its frequency and not to its intensity.

Another important result is that positive affect intensity was lower when people experienced greater difficulties describing feelings. High affect intensity scorers have been shown to be more extraverted and more expressive (Blankstein et al., 1989; Flett et al., 1996). Similarly, DDF has also been negatively related to extraversion in a previous study (Zimmermann et al., 2005). It suggests that people with difficulties describing feelings experience their positive affect with a lower intensity. Some studies showed that describing feelings led to re-experiencing affect more deeply (Watson, 1996), facilitating emotional arousal and recollection. This result needs to be further explored, particularly in mood disorders, because depressed people do not report positive experiences and they experience difficulties with the processing of positive emotions (Yoon et al., 2009).

It may also seem paradoxical to find a positive relation between alexithymia, a vulnerability trait predisposing one to various psychopathological conditions, and the strength with which people experience positive affect. But the moderating effect of gender for positive affect intensity and positive affect frequency gives some additional information to the possible processes involved. The interaction of alexithymia by gender predicted positive affect intensity and positive affect frequency with a larger effect (i.e., 3–5% of the variance) than typically observed (1% additional variance is often considered meaningful and important, McClelland and Judd (1993)). Men experienced higher levels of positive affect intensity but lower levels of positive affect frequency if they scored higher on “difficulties identifying feelings” (DIF), while for women, the levels of intensity and frequency remained stable whatever their score on “difficulties identifying feelings”. To our knowledge, such a result has never been described before. It suggests that the perception of positive intensity is not influenced by alexithymia for women, while it is the case for men. More precisely, men experienced lower level of positive affect intensity than women at lower level of DIF but experienced the same level as women for people scoring higher on DIF. We suggest two hypotheses for explaining these results. The first one is that men generally evidence low levels of positive intensity. But when they have a stable tendency for having difficulties identifying feelings, their level of positive intensity increases. The second one suggests that women should exhibit a usually high positive intensity regardless of their feelings identification skills and then, an increasing of positive intensity for men when experiencing such identification difficulties lead to consider a psychopathological view of such increasing level for them. Significant relations between scores of total affect intensity and measure of bipolar disorder has been shown (Diener et al., 1985a, 1985b), as well as a positive relation between alexithymia and hypomania (Taylor et al., 1992). It has also been found that males are at greater risk for manic episodes (Robb et al., 1998), and more likely to show a predominance of hypo(manic) polarity as well as a hypo(manic) illness onset, whilst women are significantly more likely to show depressive predominant polarity (Nivoli et al., 2011). Thus, these arguments together with our results for men invite us to further explore the meaning of high level of positive affect for men when they experience difficulties identifying feelings as related to higher vulnerability for manic episodes.

However, how can we reconcile the finding that men with higher scores on “difficulties identifying feelings” experience higher levels of positive affect intensity but also lower levels of positive affect frequency? A first suggestion may be related to the shift in experienced pleasantness of very high levels of positive affect intensity. Indeed, at highest levels, positive affect intensity – especially if experienced very rarely – should be experienced as unpleasant. Thus, avoiding high positive arousing environments would be a logical regulation strategy for men scoring high on alexithymia. However, there is also an alternative hypothesis. If high alexithymia men experience less frequently positive events, it is possible that they find them very intense when dealing with them. Our data does not allow us to test this hypothesis, which needs to be further explored.

Previous studies never considered together affect intensity and affect frequency in their relation with alexithymia. Our results particularly emphasize the importance of examining alexithymia in relation to positive emotional valence, by considering simultaneously affect frequency and affect intensity. Our results also highlight the distinction between affect intensity and affect frequency is particularly crucial for men.

4.1. Limitations

This study was an exploratory one in order to question the relevance of the relations between alexithymia, affect intensity and affect frequency. As such, our results do not pretend to an overgeneralization and need more studies to replicate such findings in a more diversified population (Henrich et al., 2010).

All questionnaires were self-report measures, which are subject to various biases. Using Ecological Momentary Assessment would allow overcoming the problem of entanglement described between frequency and intensity when self-reports are used, and minimizing recall bias (for a review about EMA, see Shiffman et al., 2008). Second, the AIM gives an estimate of the subjective perception of the intensity with which people experience their emotions, but not of their objective intensity (physiological), limiting the extent of our results. Confirming these results through experimental study, assessing both subjective and objective perception of affect intensity regarding alexithymia requires further attention. As these results were obtained through data gathered on a student sample, they need to be replicated with populations experiencing affective disorders for whom the question of the intensity with which positive and negative affect are experienced is central, such as bipolar or mood disorders.

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