

## Beliefs about the effects of social sharing of emotion in alexithymia

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### Abstract

**Background:** Emotional events are followed by recurrent talking about the event (Social Sharing of Emotion, SSE). Several factors that can account for variations in beliefs about SSE were examined: alexithymia, age and sex among two sample groups, Spanish (n= 388) and Uruguayan (n= 537). **Method:** Both samples completed the 20-item Toronto Alexithymia Scale (TAS-20) and the Beliefs about Social Sharing of Emotion Questionnaire (BSEQ). **Results:** Results indicated that alexithymia was negatively related to beliefs about SSE. Low alexithymia was associated with higher agreement with positive intrapersonal effects of SSE and disagreement with benefits of non-expression or inhibition, and beliefs in positive interpersonal effect of social sharing were unrelated to alexithymia. Cultural and gender differences were found regarding beliefs about SSE. Regression analyses suggest that alexithymia significantly predicted beliefs about SSE. **Conclusions:** The pattern of results suggests that more collectivist and traditional cultures, such as the Uruguayan, attach less value to SSE. Results and implications are discussed.

**Keywords:** Social sharing of emotion, alexithymia, emotion, culture.

### Resumen

**Creencias sobre los efectos del compartimiento social emocional en la alexitimia. Antecedentes:** los acontecimientos emocionales inducen a hablar recurrentemente sobre ellos (Compartimiento Social de la Emoción: CSE). En este trabajo se estudian varios factores que pueden influir sobre las creencias en sus efectos: alexitimia, edad y sexo en dos muestras formadas por participantes españoles (n= 388) y uruguayos (n= 537). **Método:** todos completaron la Escala de Alexitimia de Toronto (TAS-20) y el Cuestionario de Creencias sobre los Efectos del Compartimiento Social de la Emoción (BSEQ). **Resultados:** la alexitimia se asocia negativamente con las creencias sobre el CSE. Los niveles bajos de alexitimia se asocian positivamente a las creencias en sus beneficios intrapersonales, a la vez que negativamente a los beneficios de la no expresión emocional. No se halló relación entre alexitimia y las creencias en los beneficios interpersonales del CSE. Se encontraron diferencias significativas en función del sexo y país en las puntuaciones totales del BSEQ. Los análisis de regresión pusieron de manifiesto la capacidad pronóstica de la alexitimia sobre las creencias en los beneficios del CSE. **Conclusiones:** el patrón de resultados sugiere que una cultura más tradicional y colectivista como la uruguaya valora en menor medida los efectos del CSE. Finalmente se discuten los resultados y sus implicaciones.

**Palabras clave:** compartimiento social de la emoción, alexitimia, emoción, cultura.

In their daily lives, people show a remarkable tendency to talk about the emotional events they have experienced. When registering an emotion, most subjects verbally express that emotion (Rimé, Philippot, Boca, & Mesquita, 1992; Rimé, Finkenauer, Luminet, Zech, & Philippot, 1998) and share it with others with significant regularity: between 88 and 96% of the time. This finding is independent of age, gender or culture and encompasses positive as well as negative emotions, apart from shame and disgust (Finkenauer & Rimé, 1998).

This process is known as Social Sharing of Emotion (SSE) and describes the mechanism whereby people communicate to one or more persons the circumstances, feelings and reactions surrounding emotionally-relevant events. SSE, in its more obvious

form, encompasses a wealth of detail regarding the situation, physiological responses, and feelings experienced by the subject (Rimé, 2007, 2009).

The typical pattern of SSE is initiated soon after feeling an emotion. In 60% of cases, the event and the related feelings are shared the same day that the event occurred. It is known that the magnitude of the SSE depends largely (though not exclusively) on the intensity of the emotional event (Luminet, Bouts, Delie, Manstead, & Rimé, 2000; Martínez-Sánchez, Páez, Pennebaker, & Rimé, 2001), requiring only that a certain emotional threshold should be reached for the SSE to occur.

In general, the sharing occurs with several people, including close friends, parents and partners. Cross-cultural studies have concluded that the processes of sharing are very similar in both Western and Eastern cultures (Rimé, Yogo, & Pennebaker, 1996; Singh-Manoux & Finkenauer, 2001; Yogo & Onoe, 1998), and although some cultural idiosyncrasies are observed, they confirm that the process is indeed cross-cultural.

Alexithymia (literally, lack of words for emotions), describes a deficit in emotional regulation, characterized by a marked difficulty

in identifying and expressing emotion, as well as reduced ability to differentiate emotions from their accompanying physiological sensations. Those affected also demonstrate restrictions in symbolic processes, expressed as a reduced capacity for fantasy as well as a pattern of expectations and attributions oriented towards external events and details as opposed to internal emotions or impact (Taylor, 2000). These characteristics are interpreted in terms of emotional regulation disorders or personality traits (Taylor, Bagby, & Parker, 1997), consistent in time (Martínez-Sánchez, Ato, & Ortiz, 2003) and are present in numerous disorders associated with emotional hyperactivity (Neumann, Sollers, Thayer, & Waldstein, 2004).

Recent studies have concluded that subjects with high levels of alexithymia not only show difficulties in identifying and expressing emotions, but also have remarkable difficulty in processing emotional stimuli (Aleman, 2005). Results of neuroimaging studies (Moriguchi et al., 2006), as well as evoked potential investigations (Pollatos & Gramann, 2011), seem to confirm that hypothesis.

Few studies have looked into the personality traits that modulate SSE. It is known that the “Big Five” personality factors do not have predictive value regarding sharing. It has also been found that alexithymia correlates negatively -and significantly- with SSE (Luminet, Zech, Rimé, & Wagner, 2000).

The defining characteristics of alexithymia may be relevant in order to predict the beliefs about SSE. We suspect that the beliefs held regarding the desirability of SSE are related to the level of alexithymia, because the difficulty in identifying and describing emotions seems to have an impact on the process of sharing, making it less intense (i.e. sharing on fewer occasions) and less extensive (reducing the number of persons the subject shares with). Similarly, the pattern of externally oriented thought inhibits the interest in emotions among subjects with high levels of alexithymia. All this, we believe, influences beliefs on the benefits of social sharing.

In this paper, we study beliefs regarding the interpersonal and intrapersonal benefits of SSE in two samples of subjects drawn from Spain and Uruguay. We are assuming that those subjects with high levels of alexithymia will be less probable to believe in the benefits of SSE than those subjects who have low levels of alexithymia. We also examine gender differences associated with sharing. Available data suggests that social stereotypes that consider women in Western societies more “emotional” than men (Timmers, Fischer, & Manstead, 2003). It is expected that women, more so than men, believe in the benefits of SSE.

Finally, we are assuming the existence of significant differences between the two group samples; the Spanish and the Uruguayan. Even though both are Latin cultures, as confirmed by the similarities in cultural values found between Latin America and Southern Europe (Inglehart, Basanez, Diez-Medrano, Halman, & Ruud, 2004), some cultural patterns are different.

## Method

### Participants

The study included 925 subjects (56.7 % were female and 44.3% male). All were university students either at the Universidad de Murcia in Spain (40.7%), with an average age of 19.85 years ( $SD=2.82$ ), and the Universidad Católica in Uruguay (59.3%), whose average age was 20.83 years ( $SD=3.57$ ). All received academic accreditation in exchange for their participation in the study.

### Instruments

Toronto Alexithymia Scale 20 items (TAS-20) (Bagby, Parker, & Taylor, 1994). The scale is comprised of three factors which evaluate difficulty in identifying feelings (factor 1), difficulty in describing feelings (factor 2) and externally oriented thinking (factor 3). The TAS-20 has good internal consistency ( $\alpha=0.81$ ) and test/retest reliability ( $r=0.77$ ) over a three-week period. The stability and replicability of this factorial analysis have been systematically demonstrated in both clinical and non-clinical groups (Taylor, Bagby, & Luminet, 2000). For this study, the Spanish version (Martínez-Sánchez, 1996) of the scale was used. It has shown internal consistency ( $\alpha=.78$ ) and an adequate test/retest reliability measured over a period of 19 weeks ( $r=.71$ ,  $p<.001$ ).

Beliefs about Social Sharing of Emotion Questionnaire (BSEQ) (Martínez-Sánchez, Zech, & Páez, 2004). The BSEQ is made up of 31 items, with a Likert type five-point scale ranging from total disagreement (1) to total agreement (5) with each point clearly defined. The Questionnaire has shown adequate internal confidence ( $\alpha=.77$ ), high test/retest reliability ( $r=.72$ ;  $p<.001$ ), as well as a factorial analysis composed of the three factors based on the features of SSE: intrapersonal benefits, interpersonal benefits, as well as benefits derived from suppressing the expression of social emotion. The total score is obtained adding the score of the two factors which make up the benefits of sharing (interpersonal and intrapersonal) and subtracting the factor which evaluates the value assigned to the suppression of social emotions.

### Procedure

Subjects responded to the questionnaires by marking answers on cards scored by an optical reader in order to facilitate the analysis of responses. Each subject signed a consent form to participate in the study. The format of the consent form had been previously approved by the respective ethics committees of the participating universities.

### Data analysis

Scores were analyzed with SPSS 20 software. Both Levene and Kolmogorov-Smirnov tests were applied to assess respectively the homoscedasticity and normality assumptions on the distribution of scores obtained by the subjects in the questionnaires (TAS-20 and BSEQ), concluding that they did not conform to the normality assumption, with critic value associated with Z being inferior to  $p<.05$ . However, even if neither assumption had been validated, the sample size would have made possible the application of parametric methods (Pardo & Ruiz, 2005).

An analysis was carried out to assess the correlation between the scores obtained in the alexithymia scale (TAS-20) and the Beliefs about Social Sharing of Emotion Questionnaire (BSEQ). A factorial analysis of variance (ANOVA) of three factors (country, gender and alexithymia group) was also performed to assess their potential relation to the beliefs about the effects of SSE (DV). Finally, a predictive analysis used a hierarchical regression method to determine whether the variables used in this study have predictive power over the BSEQ results.

Subjects were divided in three groups according to their level of alexithymia based on their total score on the TAS-20 and following Taylor, Bagby & Parker’s criteria (1997): high level of alexithymia

(TAS-20  $\geq 61$ ;  $n = 112$ ); probable alexithymia ( $\geq 52-60 \leq$ ,  $n = 153$ ); and low alexithymia  $\leq 51$  ( $n = 662$ ).

Results

An initial correlation was observed between TAS-20 and BSEQ total scores ( $r = -.336$ ,  $p \leq .001$ ); this showed that different levels of alexithymia are negatively related to beliefs about the beneficial effects of SSE.

Subsequently, a factorial analysis of variance (ANOVA) was performed, to assess the potential differences in the beliefs about SSE (DV) effects according to three factors: country (Spain – Uruguay); gender (male-female); and alexithymia level (low – probable – high). Table 2 shows the descriptive statistics of total BSEQ scores according to gender, country and alexithymia level.

Results showed a significant effect of the “country” factor,  $F(1, 924) = 17.135$ ;  $p < .001$ ,  $\eta^2 = .018$ , on beliefs about SSE (BSEQ) effects. Levels in the Spanish sample were higher ( $M_{Spain} = 120.35$ ,  $SD = 16.61$ ;  $M_{Uruguay} = 114.24$ ,  $SD = 13.81$ ). The “alexithymia group” variable had also a significant effect,  $F(2, 924) = 24.796$ ,  $p < .001$ ;  $\eta^2 = .052$ . *Post hoc* analysis reveals that scores were significantly higher in the low alexithymia group ( $M_{Low} = 118.87$ ,  $SD = 12.80$ ) compared to both the groups “probable” ( $p < .001$ ) and “high” alexithymia ( $p < .001$ ) ( $M_{Probable} = 113.22$ ,  $SD = 12.50$ ;  $M_{High} = 109.36$ ,  $SD = 16.37$ ). In turn, scores in the “probable” alexithymia group were higher than in the “high” alexithymia group ( $p < .05$ ) (Figure 1). On the contrary, no differences were found regarding “gender”,  $F(1, 924) = .267$ ; *ns*.

Interaction between “gender” and “country” showed significant results,  $F(1, 924) = 14.431$ ,  $p < .001$ ,  $\eta^2 = .015$ . Levels of belief in the benefits of SSE were higher among Spanish women than Uruguayan women ( $M_{Spain} = 121.49$ ,  $SD = 11.73$ ;  $M_{Uruguay} = 110.95$ ,  $SD = 14.08$ ), but showed no differences when we compared the

men from both countries ( $M_{Spain} = 117.25$ ,  $SD = 14.38$ ;  $M_{Uruguay} = 117.07$ ,  $SD = 12.95$ ) (Figure 2). The remaining pairings showed no significant results: gender and alexithymia level,  $F(2, 974) = 1.35$ , *ns*, country and alexithymia level,  $F(2, 974) = .222$ , *ns*, or country, gender and alexithymia level,  $F(2, 974) = .621$ , *ns*.

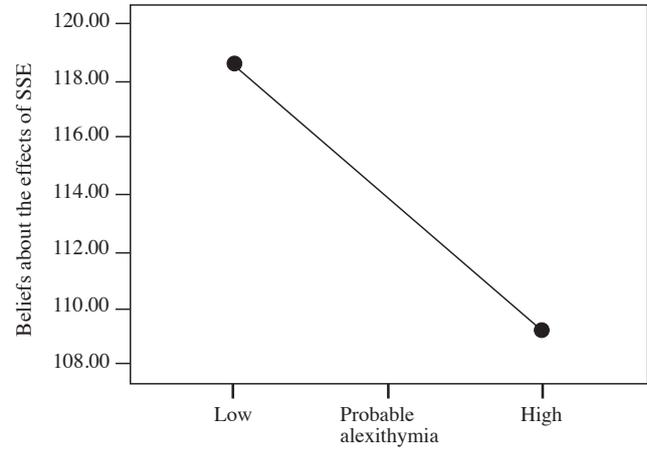


Figure 1. Total scores for beliefs about effects of SSE by alexithymia group

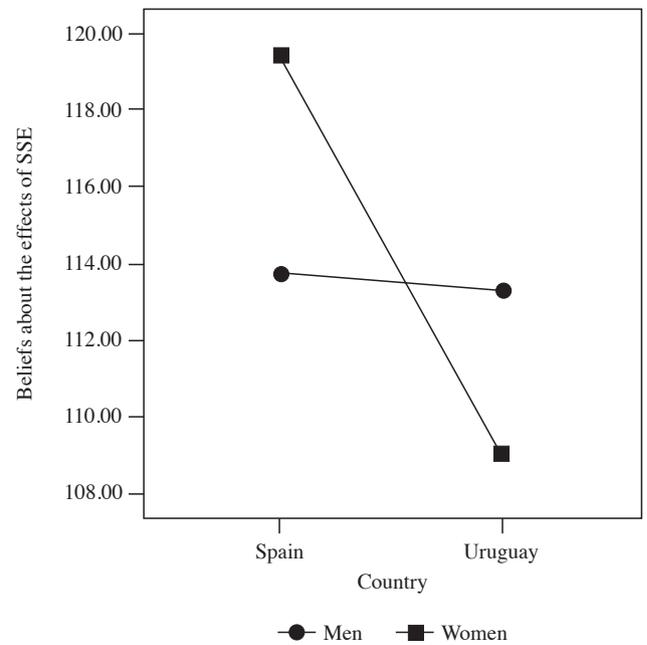


Figure 2. Total scores for beliefs about effects of SSE by gender and country

*Table 1*  
Correlations between Scores obtained on the TAS-20 and BSEQ Scales

	BSEQ F1	BSEQ F2	BSEQ F3	BSEQ total
TAS F1	.030	-.153***	-.421***	-.226***
TAS F2	.251***	.312***	.340***	.411***
TAS F3	.070*	-.038	-.163**	-.053
TAS Total	-.090**	-.247***	-.429***	-.336***

*Note:* \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; BSEQ F1: intrapersonal benefits of SSE; BSEQ F2: benefits derived from suppressing the expression of SSE; BSEQ F3: interpersonal benefits of SSE; TAS-20 F1: difficulty identifying feelings; TAS-20 F2: difficulty describing feelings to others; TAS-20 F3: externally oriented thinking

*Table 2*  
Descriptive statistics of total scores regarding the beliefs about beneficial effects of Social Sharing of Emotion (SSE), by gender, country and alexithymia group

Alexithymia	Country					
	Spain			Uruguay		
	Low	Probable	High	Low	Probable	High
	Mean (SD)					
Men	119.08 (13.07)	115.50 (11.27)	106.61 (19.64)	119.43 (12.32)	111.48 (11.97)	108.89 (13.98)
Women	122.84 (10.76)	118.85 (10.14)	116.54 (17.30)	112.61 (13.70)	109.16 (13.56)	104.78 (14.54)
Total	121.76 (11.58)	118.36 (10.27)	113.61 (18.37)	116.51 (13.35)	110.34 (12.76)	106.53 (14.34)

Finally, we performed a hierarchical regression analysis, where the total BSEQ score was the criterion variable and scores on TAS-20, gender, age and country were the predictor variables. Initially, we introduced the variables “country” (1= Spain, 2= Uruguay), “gender” (1= Male 2= female) and “age”; then we added the scores of the three factors that make up the TAS-20.

The scores obtained in two factors of the TAS-20 (externally oriented thinking,  $R^2 = .190$ ,  $F(1, 924) = 220.70$ ,  $p < .001$ ,  $\beta = -.436$ , and difficulty expressing emotion,  $\Delta R^2 = .026$ ,  $F(1, 924) = 129.28$ ,  $p < .001$ ,  $\beta = -.165$ , predicted a significant proportion of the variance ( $R^2 = .232$ ) of the scores of the BSEQ; the contribution of the country of origin to the prediction was low,  $\Delta R^2 = .016$ ,  $F(1, 924) = 129.28$ ,  $p < .001$ ,  $\beta = -.13$ . The difficulty to identify emotions, gender and age were excluded from the model, because their prediction of the DV was not found to be significant.

### Discussion

This study aimed to assess the impact of alexithymia levels on the beliefs concerning the benefits of SSE, as well as to determine whether this was influenced by gender and cultural differences.

Results confirmed the first hypothesis: alexithymia has an impact on the beliefs concerning the benefits of SSE. Individuals with higher levels of alexithymia believe to a lesser extent in the beneficial effects of SSE when compared to those with probable alexithymia who, in turn, believe to a lesser extent than those who demonstrate low levels of alexithymia. However, these results seem to rule out that beliefs regarding the alleged interpersonal benefits (i.e. social dissemination of one’s emotional state) are related to alexithymia.

The second hypothesis of the study was refuted: Men and women showed no differences in their beliefs concerning the effects of SSE.

Finally, the third hypothesis was confirmed: cross-cultural differences have an impact on the beliefs about the effects of SSE. The results showed that the overall Spanish sample believed more in its beneficial effects than the overall Uruguayan sample and that Spanish women believed more in these beneficial effects than Uruguayan women. No differences were found when comparing men from both samples or when looking into the effect of gender and the level of alexithymia. No significant differences were found either when comparing country of origin and alexithymia or in the interaction between country gender and alexithymia level.

The results also confirm that the scores obtained on two of the factors that make up the TAS-20 (externally oriented thinking and difficulty to express emotion) have predictive power on the scores obtained in the BSEQ.

Regarding the role of alexithymia in the beliefs concerning the beneficial effects of SSE, our results cannot be compared to other research, as to date no similar studies have been published in scientific literature. However, two previous studies do confirm the impact of alexithymia on SSE patterns; Luminet et al. (2000) showed that individuals with high scores on the TAS-20 scales that assess the difficulty to express emotion and the externally oriented thinking do not share emotionally negative events as much, and this would explain 13% and 8% respectively of the variance of SSE in two groups. The results of our research show that these same two factors have predictive power over the beliefs concerning SSE. Similarly, Luminet, Rimé, Bagby, & Taylor (2004) found a negative relation between the capacity to fantasize

(one of the alexithymia dimensions assessed in the Bermond-Vorst Alexithymia Scale) and the externally oriented thinking pattern, with participation in SSE processes.

Our results demonstrate that individuals with high levels of alexithymia believe less in the *intrapersonal* benefits of SSE, while believing more in the benefits of *not sharing emotion*. In this sense, their pattern of beliefs differs from the generally accepted belief that SSE induces an emotional discharge that contributes to the recovery from the emotional experience through a regulatory process (Zech, Rimé, & Nils, 2004). If we ask a large group of individuals ( $n = 1204$ ), 89% will answer that talking about an emotional experience makes them feel better (Zech, 2000), meaning that they perceive the beneficial effects of emotional sharing (Zech & Rimé, 2005), even though meta-analytic reviews question the efficacy of one session of debriefing to lessen the symptoms or accelerate recovery after a traumatic event (Rose, Bisson, Churchill, & Wessely, 2009; Van Emmerick, Kamphuis, Hulsbosch, & Emmelkamp, 2002). Similarly, it seems apparent that a mere sharing of emotions does not change the emotional memories of the traumatic event (Rimé, 2007). Our results suggest that the difficulties in expressing emotion and the concrete pattern of thinking, as opposed to emotional introspection, seen in alexithymics can explain why they believe to a lesser extent in the intrapersonal benefits of emotional sharing.

On the contrary, results show that alexithymia does not impact on the beliefs concerning the alleged interpersonal benefits of SSE, including the effects of social support, increased social relations, and affiliation to the group closest to the individual, as well as the strengthening of existing emotional bonds (Omarzu, 2000), that would promote emotional regulation (Niven, Totterdell, & Holman, 2009).

At least for more characteristics present in individuals with high levels of alexithymia (emotional distance, poor empathic abilities, low assertiveness and poor interpersonal relations) (Grynberg, Luminet, Corneille, Grèzes, & Berthoz, 2010; Vanheule, Desmet, Meganck, & Bogaerts, 2007) can also have an impact on the beliefs concerning the benefits of SSE because they influence the quality and quantity of their social relationships.

The absence of gender differences regarding beliefs concerning the effects of SSE found in this study is consistent with other studies that show the absence of differences in sharing patterns. An analysis of six studies on SSE patterns (Rimé, Mesquita, Philippot, & Boca, 1991) did not show any differences based on gender. Available data suggests that social stereotypes that consider women in Western societies more “emotional” than men (Timmers, Fischer, & Manstead, 2003) cannot be applied to beliefs about SSE, even though there is ample evidence to suggest that women give biographical accounts more vividly, in more detail and more emotionally than men (Bauer, Stennes, & Haight, 2003); are more proficient in verbal expression (Vainik, 2006); and generally show more complexity and differentiation in their emotional experiences (Barrett, Lane, Sechrest, & Schwartz, 2000).

Looking at the cultural differences found, they seem to suggest that Uruguayan women believe to a lesser extent than Spanish women in the benefits of SSE. This can be explained by the differences between countries regarding the consideration of expressive individualism (Hofstede, 2001; Inglehart et al., 2004). More traditional and collectivist cultures, such as Uruguayan culture as opposed to Spanish culture, value to a greater extent emotional self-control and to a lesser extent introspection and

emotional verbalization (Matsumoto et al., 2008). The literature is full of numerous studies documenting cultural differences in emotional meanings, including cultural differences in narratives and social sharing of emotions (Matsumoto & Hwang, 2012).

According to our results, this phenomenon would be significantly different between Uruguayan women and Spanish women because the latter come from a culture that is more

individualistic and masculine and has more power-distance, whereas the former would differ more from stereotypes regarding emotional expression.

In conclusion, these results show that alexithymia modulates the beliefs concerning the effects of SSE. They also suggest that the cultural norms that rule emotional expression in men and women have a remarkable impact on these beliefs.

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