Chapter 12
Relationships Between Self-Serving Attributional Bias and Subjective Well-Being Among Danish and Spanish Women

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Introduction

Self-serving attributional bias (SSAB) is shown when people explain the situations that happen in their lives in the way that is most favorable for them. Thus, SSAB is defined as the tendency of individuals to explain positive situations with *internal* (the cause of positive situations comes from themselves), *stable* (the cause of positive situations will continue in the future), and *global* (the cause of positive situations will arise in lots of different areas) causes and negative situations with *external* (the cause of negative situations comes from someone or something else), *unstable* (the cause of negative situations will not repeat itself in the future), and *specific* (the cause of the negative situation only arises in that specific situation) causes (Mezulis et al. 2004). SSAB is considered as a manifestation of the self-enhancement motive, which is defined as the tendency to see oneself in a positive way (Baumeister 1998).

Research has clearly shown that the different ways of self-enhancement, including SSAB, seek to protect self-esteem (Campbell and Sedikies 1999). However, currently, there is a controversy about the universality of this motive. While some authors consider that all the manifestations of self-enhancement would be the expression of a universal human motive (Sedikides et al. 2003, 2005, 2007), other authors argue that the protection of self-esteem would be an important goal only in individualistic cultures, where competent and successful people are valued (Hamamura and Heine 2008;

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Heine 2005; Heine and Hamamura 2007; Heine et al. 1999; Markus and Kitayama 1991). Therefore, the best predictor of well-being is self-esteem in individualistic cultures, while in collectivist cultures, the best predictors of people's well-being are maintaining harmony with their meaningful persons and demonstrating adherence to norms, which are their fundamental motivations (Church 2000; Cross and Markus 1999; Heine 2001; Heine et al. 1999).

In relation to SSAB, studies have found that this is displayed in samples from the United States and other Western or individualistic countries, such as Canada or Australia (Heine 2005; Heine and Hamamura 2007), while this bias is reversed, absent, or strongly attenuated in samples from Asian societies such as Japan or China (Anderson 1999; Heine et al. 1999; Kitayama et al. 1995).

Despite these results, the controversy about the universality of this bias is not resolved, and currently any conclusion is premature since both positions are based on studies in very few countries. In relation to Western or individualistic cultures, most studies have been carried out on samples from North America, fundamentally from the United States, while samples from most European countries have not yet been investigated. Regarding collectivist cultures, studies have focused on samples from Asia, specially Japan and China, but countries from Latin America or Africa have not been studied. However, both from the perspective that defends its universality, and from the perspective that considers that it only occurs in individualistic cultures, it is essential to verify both the presence of different manifestations of self-enhancement motive in the various individualistic nations, as well as their absence in collectivistic ones.

Since SSAB aims to protect self-esteem, and this is the best predictor of well-being in individualistic cultures, researchers have also proposed that SSAB could be associated with well-being. In this vein, some studies have found that SSAB is inversely related to psychological distress (Koenig 1997; Sweeney et al. 1986; Wallbridge 1997), while the absence of SSAB or even a reversed SSAB has been associated with psychopathologies, such as depression (Alloy et al. 1997; Mezulis et al. 2004; Morris 2007), anxiety disorders (Fresco et al. 2006; Mezulis et al. 2004), and schizophrenia (Moore et al. 2006; Sanjuán et al. 2009).

However, it is necessary to note that well-being is not merely the absence of psychological distress or psychopathology (Keyes 2002). That is, people who are not depressed or anxious are not necessarily happy or satisfied. Therefore, it is important to investigate the relationships between SSAB and the positive side of well-being, as well as knowing how much this bias contributes to the development of well-being.

A perspective on the study of well-being, which is currently receiving much attention, is one that considers that people's subjective perception of their lives is more relevant than objective indices of quality of life, and thus, well-being is labeled as subjective well-being (SWB). SWB contains an affective and a cognitive component. The affective component entails predominance of positive over negative affect (or positive affect balance), while the cognitive component refers to evaluation of the satisfaction with one's life as a whole (Diener 2000; Diener et al. 2002).

Much research has been directed to explore the different factors that affect to SWB. Thus, it has been found that attributions and expectancies that reflect a positive view about the self and the world play a role on SWB development (Deneve and Cooper 1998; Diener et al. 1999; Lucas and Diener 2008; Lyubomirsky et al. 2005). Other factors such as pursuing meaningful goals, maintaining close social relationships, and having a personality characterized by low worry, as well as using certain strategies to cope with adversity contribute greatly to development of SWB (Deneve and Cooper 1998; Diener et al. 1999; Lucas and Diener 2008; Lyubomirsky et al. 2005; Sanjuán 2011).

According to the evidence and arguments presented above, the main objectives of the current study were to examine the presence and magnitude of SSAB in two undergraduate women samples from Spain and Denmark and to test a model about what the relations among SSAB, positive affect balance, and life satisfaction are like. Additionally, we wanted to explore possible differences on SSAB and both components of SWB among Spanish and Danish women.

Current features of Denmark and Spain correspond with these individualistic cultures (Triandis 2000, 2001). Moreover, previous studies, which have measured the individualism-collectivism dimension, have revealed that scores obtained by both countries are indicative of their individualism (Diener et al. 1995; Kuppens et al. 2008). Therefore, we expected that both samples would display the SSAB. We also expected to find direct relationships between SSAB and affective and cognitive components of SWB in both samples.

Since in previous studies Denmark has already been ranked as one of the happiest nations (Biswas-Diener et al. 2010; Diener et al. 1995), we also expected that Danish would report more well-being than Spanish.

Moreover, in the one hand, SSAB has consequences primarily in the emotional experience (Koenig 1997; Mezulis et al. 2004; Sweeney et al. 1986; Wallbridge 1997), and, in the other hand, it has been found that people use their emotional experience to form judgments of how satisfied they are with their lives (Schwarz and Clore 1983, 2007). Taking into account both findings, we also expected that positive affect balance would mediate the relationship between SSAB and life satisfaction. Specifically, it was proposed that SSAB would lead to experiencing a positive affect balance, which, in turn, would lead to judgment of life satisfaction.

Method

Participants

Two hundred fifteen undergraduate women students (mean age = 22.31 and SD = 2.88, ranging from 18 to 33) voluntarily participated in this study. Of these, 101 were Danish (mean age = 23.41 and SD = 2.85, ranging from 20 to 33) and 114 were Spanish (mean age = 21.34 and SD = 2.55, ranging from 18 to 25).

Measures

The eight-page anonymous booklet contained a short presentation of the study and the adapted versions of the following questionnaires: *Attributional Style Questionnaire* (ASQ; Peterson et al. 1982), the *Positive and Negative Schedule* (PANAS; Watson et al. 1988), and the *Satisfaction with Life Scale* (SWLS; Pavot and Diener 1993) (Cabañero et al. 2004; Jensen de López 2010; Sandin et al. 1999; Sanjuán and Magallares 2006).

The *ASQ* is a self-report instrument containing 12 hypothetical events, six negative and six positive. For each situation, subjects decide what they believe would be the major cause of the event, and they indicate on three 7-point scales the extent to which they would attribute these events to internal, stable, and global causes. A rating of "1" on the scales indicates an external (totally due to other people or circumstances), unstable (the cause will never again be present), and specific (the cause influences just this particular situation) attribution, while on the other extreme, a "7" reflects an internal (totally due to me), stable (the cause will always be present), and global (the cause influences other situations in my life) attribution.

Two composite scores, for positive and negative events, were calculated, which respectively correspond to attributional style for positive and negative situations. These scores were computed by averaging the items of positive or negative situations, respectively. Alpha coefficients for composite positive and negative were: .74 and .75, respectively, for the total sample; .72 and .70, respectively, for the Danish sample; and .76 and .73, respectively, for the Spanish sample.

A self-serving attributional bias score was calculated by subtracting attributions for negative outcomes from attributions for positive outcomes. This score provides an index of the direction or valence (negative or positive) of bias as well as its magnitude. A positive score reflects an SSAB (or stronger attributions for positive than for negative outcomes), a negative score reflects a self-derogating bias (or weaker attributions for positive than for negative outcomes), and a score of 0 reflects even-handedness.

The *PANAS* is a 20-item measure that evaluates two dimensions: positive affect (10 items) and negative affect (10 items). The response scale was a 5-point Lykert type. Respondents were asked to report how they usually felt. Positive and negative affect scores were computed by averaging items of positive or negative affect scales, respectively. Alpha coefficients for positive and negative affect were: .81 and .82, respectively, for the total sample; .79 and .78, respectively, for the Danish sample; and .84 and .87, respectively, for the Spanish sample.

The negative affect score was subtracted from the positive affect score to obtain a measure of positive affect balance. Thus, a positive score reflects a predominance of positive over negative affect, while a negative score reflects a predominance of negative over positive affect. One advantage of positive affect balance over one-dimensional measures of positive and negative affect is that it controls for extremity biases (Schimmack and Diener 1997).

The *SWLS* is a 5-item measure of global life satisfaction, or a person's satisfaction with life as a whole, rather than any specific domain. Respondents are asked to

Table 12.1 Descriptive statistics on analyzed variables by nationality

		Danish ($n=101$)	Spanish ($n=114$)	Total ($n=215$)
SSAB	*Mean*	0.90	1.19	1.05
	SD	0.76	0.77	0.78
Positive affect balance	*Mean*	1.71	1.41	1.55
	SD	0.76	0.90	0.85
Life satisfaction	*Mean*	6.08	4.78	5.39
	SD	0.93	0.97	1.15

Note: *SSAB* = self-serving attributional bias; positive affect balance = positive affect − negative affect

rate the extent of their agreement to these items across a 7-point Lykert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). A score was computed by averaging the 5 items of scale. Higher scores on the SWLS reflect greater life satisfaction. In the current study, alpha coefficients were: .89 for the total sample, .82 for the Danish sample, and .85 for the Spanish sample.

Procedure

The people who agreed to participate in the study were asked to fill out the three described measures (all in the same order) in the classroom before a course. It took about 20 min to complete the questionnaires. When participants had finished, one of the researchers gave them a brief report about the proposals and goals of the study.

Results

The means and standard deviations on analyzed variables by group according to nationality can be seen in Table 12.1. Both groups showed positive scores, demonstrating the presence of SSAB.

In order to compare our results with those obtained in other samples, the SSAB effect size was also computed using *d*, which is defined as the mean internal, stable, and global attribution for positive situations minus the mean for negative situations, divided by the mean standard deviation (Hedges 1981). The *d* values were 1.58 and 1.98 for Danish and Spanish samples, respectively. These magnitudes are similar to or greater than those found in samples of healthy individuals from the United States and other Western countries like Canada or Australia (Mezulis et al. 2004).

To explore possible differences on analyzed variables between Danish and Spanish women, analyses of variance for each of the three dependent measures (SSAB, positive affect balance, and life satisfaction) were conducted with nationality (Danish vs. Spanish) as the between-subject factor. Etas partial squared (η_p^2) were

Table 12.2 Correlations between analyzed variables

	1	2	3
1. SSAB	–	.24*	.17[a]
2. Positive affect balance	.34**	–	.59**
3. Life satisfaction	.21*	.45**	–

Notes: *SSAB* = self-serving attributional bias; positive affect balance = positive affect − negative affect
Correlations above the diagonal correspond to the Danish sample, while those below the diagonal correspond to the Spanish sample
*$p < .01$; **$p < .001$
[a]$p = .09$

also calculated as indices of effect size. These analyses revealed that there were significant differences among the Danish and the Spanish on the three analyzed variables. Thus, Spanish women displayed a stronger bias than Danish women ($F = 7.89$, $df = 1,213$, $p < .005$, $\eta_p^2 = .04$), while Danish women reported a more positive affect balance ($F = 6.55$, $df = 1,213$, $p < .01$, $\eta_p^2 = .03$) and greater life satisfaction ($F = 101.55$, $df = 1,213$, $p < .001$, $\eta_p^2 = .32$) than Spanish women.

Since there were differences in analyzed variables, Pearson correlations between SSAB and two components of SWB were calculated separately. As can be seen in Table 12.2, SSAB correlated with both SWB components, although correlation with life satisfaction in the Danish sample reached only marginal significance.

To test whether positive affect balance was a mediating variable linking SSAB to judgment of life satisfaction, procedures outlined by Baron and Kenny (1986) were followed. The requirement to test the mediation is that the predictor (SSAB), the criterion (life satisfaction), and the mediating variables (positive affect balance) are significantly correlated. As we have seen, all correlations were statistically significant except that between SSAB and life satisfaction in the Danish sample, which reached only marginal significance. However, and since this correlation is bordering on significance, we decided to test the mediating effect. Mediation occurs if the inclusion of the mediating variable into the regression equation decreases the relationship between the predictor and criterion variables, and if, moreover, criterion variable is still predicted by mediating variable. The results of the two hierarchical regression analyses for Danish and Spanish samples have been summarized in Tables 12.3 and 12.4, respectively.

According to these results, positive affect balance mediates the relationship between SSAB and life satisfaction in both samples.

To test whether the reduction in the relationship between predictor and criteria variables is significant, when the mediating variable is included in the regression model, the procedure outlined by Sobel (1988) was followed. Since *Zs* obtained through Sobel test were 2.47 and 2.75 (all $p < 0.01$) for Danish and Spanish samples, respectively, it can be said that the relationship between SSAB and satisfaction with life is significantly reduced with the inclusion of affect balance as a mediating variable.

The results obtained in the two samples can be seen represented in Fig. 12.1.

Table 12.3 Hierarchical regression analysis to predict life satisfaction in Danish sample

Predictors	β	*t*	ΔR^2
Step 1			
SSAB	.17	1.70[a]	
	Model $R^2 = .02$, $F(1,100) = 2.91$[a]		
Step 2			
SSAB	.02	0.29	.32
Positive affect balance	.59	7.04**	
	Model $R^2 = .34$, $F(2,99) = 26.96$**		

Notes: SSAB = self-serving attributional bias; positive affect balance = positive affect − negative affect
**$p < .001$
[a]$p = .09$

Table 12.4 Hierarchical regression analysis to predict life satisfaction in Spanish sample

Predictors	β	*t*	ΔR^2
Step 1			
SSAB	.21	2.23*	
	Model $R^2 = .03$, $F(1,113) = 4.98$*		
Step 2			
SSAB	.06	0.68	.16
Positive affect balance	.43	4.83**	
	Model $R^2 = .19$, $F(2,112) = 14.66$**		

SSAB = self-serving attributional bias; positive affect balance = positive affect − negative affect
*$p < .05$; **$p < .001$

Discussion

The main objectives of the current study were to examine the presence and magnitude of SSAB and to analyze their relationships with the cognitive and affective components of SWB in Danish and Spanish women.

In relation to SSAB, the results showed that Danish and Spanish samples displayed this self-enhancement bias, that is, both made more internal, stable, and global attributions for positive situations than for negative ones. Although both samples showed this bias with similar magnitude to that found in other Western samples (Mezulis et al. 2004), the bias of the Spanish women was stronger than that of Danish ones.

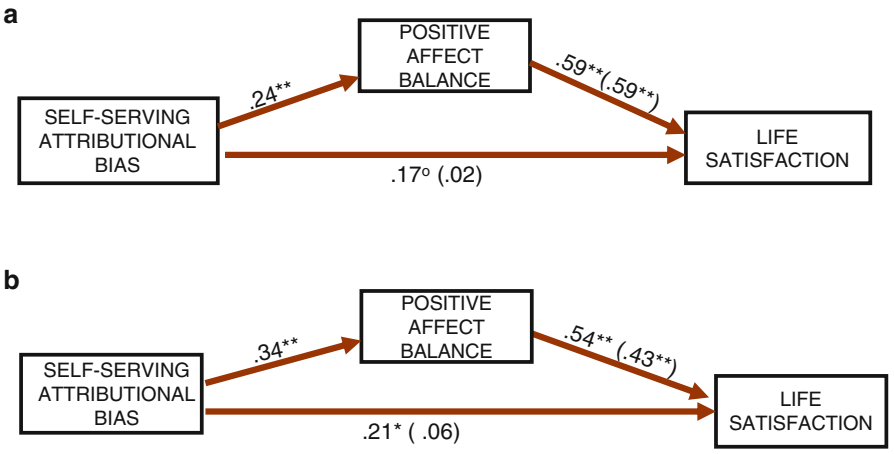

Fig. 12.1 Standardized β coefficients and standardized β coefficients reduced (*in parentheses*) when positive affect balance is introduced as a mediating variable between self-serving attributional bias and life satisfaction [(**a**) model for the Danish sample; (**b**) model for the Spanish sample] $^{*}p < .05$; $^{**}p < .001$; $^{º}p = .09$

These results demonstrate that this attributional bias is also displayed in these countries, and, therefore, they should be considered in theories about self-enhancement. Knowledge about whether people self-enhance and whether this bias reaches a similar magnitude across nations is important for any theory that aspires to understand why individuals are motivated to view themselves positively.

With respect to relationships between SSAB and SWB, our results showed that SSAB correlated with positive affect balance and life satisfaction in both samples. Moreover, we also found, for the first time, that SSAB affects the judgments of life satisfaction through its effect on positive affect balance. That is, the results support that SSAB lead to experiencing a positive affect balance, which, in turn, lead to judgment of life satisfaction. As a whole, these results show that SSAB not only maintains a negative relationship with psychological distress measures, as other studies have already shown (Koenig 1997; Mezulis et al. 2004; Sweeney et al. 1986; Wallbridge 1997), but this bias is also positively associated with direct well-being measures in samples from different nations.

In this way, it could be suggested that SSAB serves not only to protect the individual against emotional distress but also to facilitate well-being development in general. In this way, self-serving appraisals may be a strategy that many people tend to use to maintain psychological homeostasis, especially when faced with difficult stressful situations.

Likewise, previous studies have found that Danish people reported one of the highest levels of well-being (Biswas-Diener et al. 2010; Diener et al. 1995); our results also showed that Danish women subjectively feel that they enjoy greater well-being than Spanish women. Beyond confirming these results, further studies

should identify not only what factors facilitate the achievement of these high levels of happiness but also how much each contributes to happiness when all factors are considered together. Knowledge of what factors influence the well-being and how strong these influences are would allow us to develop the accurate well-being promotion programs.

Currently, we know that well-being is achieved by the influence of different factors. Making attributions in a healthy way is an important factor in the development of well-being (Deneve and Cooper 1998; Diener et al. 1999). As noted above, the achievement of meaningful goals, the maintenance of good relationships, the use of adaptive coping strategies, and the low experience of worries are the most important factors that contribute to the development of well-being (Deneve and Cooper 1998; Diener et al. 1999; Lucas and Diener 2008; Lyubomirsky et al. 2005; Sanjuán 2011). Research must be directed to study all these factors together to determine the relative contribution of each of them, and whether this contribution is different depending on the characteristics of nations.

Besides these features, which are more or less under personal control, other factors such as genetic or life circumstances contribute to the development of well-being (Lyubomirsky et al. 2005; Myers 2000). In relation to life circumstances, there is a current trend, supported by some studies (Biswas-Diener 2008; Biswas-Diener et al. 2010; Deaton 2008; Diener and Biswas-Diener 2002; Diener et al. 1995), which considers that some socioeconomic variables such as unemployment rate, access to health and education systems, respect for human right, equality, or income have certain influence in well-being, emphasizing thus that its development not only depends on individuals but also on social institutions. These socioeconomic factors would affect the well-being by providing the means to fulfill basic needs and by allowing individuals to make progress toward their goals, which, as we have previously indicated, have an important contribution to well-being.

In this sense, beyond the different psychological factors that affect the development of SWB, which will be the goal of future studies, Denmark and Spain differ on various objective socioeconomic indices, which could explain, at least in part, the differences obtained here on SWB. Thus, even in 2008, which was when the data are collected, all socioeconomic indices (such as gross domestic product per inhabitant, unemployment rate, budget surplus, deficit of gross domestic product, public health, and education systems budget) were better in Denmark than in Spain (Eurostat 2008).

In support to our hypothesis about the possibility that availability of socioeconomic resources can explain the high levels of Danish people well-being, some research suggests that in Denmark, wealth is more equally distributed than in other rich countries (Biswas-Diener et al. 2010). The availability of socioeconomic resources along with greater access to them could explain why Danish people report more well-being than other wealthier countries, such as the United States (Diener et al. 1995), and that in Denmark there are no differences in well-being between the poorest and the richest people (Biswas-Diener et al. 2010).

This study was subject to some limitations that deserve mention. First, it is necessary for the results to be corroborated in other samples that include men, which also allow us to check possible gender differences. Similarly, it is desirable that the

results can be tested with samples of nonstudents. Second, it would also be necessary for future studies to analyze SSAB using not only self-reports, which are likely to be distorted, but also more objective criteria. Third, although we have based our study on the results of previous studies which used a measure of individualism-collectivism (Diener et al. 1995; Kuppens et al. 2008), we have not used any measures of this cultural differentiation variable. Finally, longitudinal studies that provide insight into how SSAB interacts with different stressful experiences are needed. This would be a way to know whether SSAB is a relevant factor in promoting psychological well-being and preventing emotional distress.

Despite these main limitations, this study provides new data about the presence and magnitude of SSAB in countries not yet studied and its contribution to the development of well-being.

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