

# “We believe, we feel, we act”: Testing the BIAS Map predictions during adolescence

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## Abstract

The present study examined the relation between adolescents' beliefs, emotions, and intentional behaviors toward two immigrant groups from the Spanish context: Moroccans and Ecuadorians. For this purpose, we tested the SCM/BIAS Map predictions considering the three-dimensional perspective of stereotype content, which distinguishes between morality, sociability, and competence. Spanish adolescents ( $N = 231$ ,  $M_{age} = 15.39$ ,  $SD = 1.09$ ) evaluated either Moroccans ( $n = 114$ , 55.3% girls) or Ecuadorians ( $n = 117$ , 59% girls) on the SCM/BIAS Map variables. Our results confirmed, for both groups, the validity of the three-dimensional model of stereotype content and showed that adolescents differentiate between the two subdimensions of warmth and treat them as independent in intergroup evaluations. Furthermore, the mediating role of emotions in the stereotype content-behavior link was also confirmed but only for the univalent emotions in both groups. Finally, only morality acted as a consistent predictor of adolescents active behavioral intentions. The higher perceived morality of the immigrants increased adolescents' admiration toward them, which in turn led adolescents to manifest more active facilitation intentions. Likewise, the perceived morality of the immigrants negatively affected adolescents' contempt toward them, which in turn decreased adolescent's active harm intentions toward Ecuadorians and Moroccans. These findings indicate that the perceived morality of the outgroup is the key aspect in order to simultaneously promote helping behavior and decrease harmful one toward immigrant groups during adolescence.

## 1 | INTRODUCTION

Immigration is considered one of the major problems of the XXI century and ethnic prejudice, racism, and discrimination seem to flourish worldwide and across ages. In the present study, we examine, from the Behaviors from Intergroup Affect and Stereotypes Map (BIAS Map; Cuddy, Fiske, & Glick, 2007, 2008) framework, the relations between Spanish native adolescents' stereotypes, emotions, and behavioral tendencies toward two relevant immigrant groups in Spain: Ecuadorians and Moroccans. This framework is an extension of the stereotype content model (SCM; Fiske, Cuddy, Glick, & Xu, 2002) that offers a straightforward scheme for the study of intergroup relations. The models explain the dynamics between socio-structural

variables, stereotype content, emotions, and behavioral intentions. We focus on adolescence since, at this developmental stage, attitudes are still flexible and relatively easy to change. Therefore, mapping the relations between variables that influence adolescents' attitude toward ethnic outgroups is essential to facilitate attitude change at this stage before they get firmly established in adulthood.

### 1.1 | The BIAS Map foundation: The stereotype content model

According to the SCM premises, when we perceive others (individuals or groups), we build our evaluations considering the two fundamental dimensions of social judgment, namely, warmth (e.g.,

warm, friendly) and competence (e.g., skillful, intelligent). The socio-structural hypothesis of the model posits that warmth follows from perceived competition with others and is the primary dimension of social perception since it informs about others' intentions (do they share the ingroup's goals?). Concretely, the SCM postulates that competitive groups are perceived as cold, while non-competitive ones are perceived as warm. However, competence derives from the perceived social status of the social target and describes its capacity of accomplishing its goals (are they able to achieve their goals?). Specifically, high-status groups are perceived as competent, whereas low-status groups are considered incompetent.

The combination of high/low warmth and competence results in four categories of stereotype content, two univalent, high warmth and competence (HW-HC), low warmth and competence (LW-LC), and two ambivalent, high warmth and low competence (HW-LC), low warmth and high competence (LW-HC) (Fiske et al., 2002).

Additionally, the SCM proposes that each combination of stereotype content elicits a specific emotion. Warm and competent groups (e.g., ingroups, allies) evoke admiration, while cold and incompetent ones (e.g., homeless, immigrants) generate contempt. Warm and incompetent groups (e.g., elderly, housewives) elicit compassion, whereas cold and competent ones are envied (e.g., Asians, rich people) (Fiske et al., 2002).

The SCM assumptions have been tested and demonstrated using both correlational (Cuddy, Fiske, & Glick, 2008) and experimental methods (Caprariello, Cuddy, & Fiske, 2009). Furthermore, its initial findings (Fiske et al., 2002) have been replicated cross-culturally (Cuddy et al., 2009; Durante et al., 2013), and generalize across time and distinct levels of analysis (individuals, subtypes, groups, nations) (see Fiske, 2015, 2018, for a review).

## 1.2 | New approaches on stereotype content

Despite the wide support for the universality of warmth and competence dimensions, some authors (Brambilla, Rusconi, Sacchi, & Cherubini, 2011; Leach, Ellemers, & Barreto, 2007; see also, Abele et al., 2016) have argued and confirmed that the warmth dimension has, in turn, two conceptually distinct facets: morality and sociability. Morality is defined as "being benevolent to people in ways that facilitate correct and principled relations with them by the adherence to ethics and important social values" (e.g., trustworthy), while sociability is conceptualized as "being benevolent to people in ways that facilitate affectionate relations with them" (e.g., friendly) (Brambilla & Leach, 2014, p. 398). From this line of work, it has been confirmed the better fit of the three-dimensional model of stereotype content compared to the bi-dimensional one (López-Rodríguez, Cuadrado, & Navas, 2013). Likewise, the higher importance of morality compared to sociability and competence has been consistently demonstrated for interpersonal (Landy, Piazza, & Goodwin, 2016) as well as for ingroups (Leach et al., 2007) and outgroups' evaluations (Brambilla, Sacchi, Rusconi, Cherubini, & Yzerbyt, 2012). Following this line of research, in the present study, we will consider the three-dimensional model of the stereotype content. Therefore, morality

and sociability will be treated as distinct components of the broader dimension of warmth.

## 1.3 | Stereotype content research during childhood and adolescence

Most of the gathered evidence on SCM is from adult samples. Only a few studies have examined warmth and competence stereotype content at an early developmental stage (e.g., childhood). A recent study (Roussos & Dunham, 2016) examined the development of stereotype content in 5–6 and 9–10 years old children. Children rated the warmth and competence of two groups for each one of the four SCM quadrants. These authors' findings reveal that children detect and use cues of both dimensions. However, while their use of competence cues resembles that of adults, their warmth evaluations are influenced by competence information. This influence seems to diminish with age. Children gradually start, from the age of 10, to treat warmth as an independent dimension in regard to competence. In this line, Durante, Fasolo, Mari, and Mazzola (2014) also confirmed that children use the stereotype content dimensions in a similar fashion to adults by the end of elementary school. Their work examined the anti-fat bias in 6–11 years old children and found that children's ambivalent attributions of stereotype content of over-weight people mirrored those of adults.

Another study (Vauclair et al., 2018) explored age prejudice in a sample of both children (6–10 years old) and adolescents (11–15 years old). Their results evidenced that the ambivalent age stereotype starts in early childhood and prevails during adolescence toward adulthood. Their findings also showed that warmth evaluation seems to vary with age, whereas competence ratings seem not to change.

Although these studies examined children's stereotype content about distinct social groups, none addressed ethnic prejudice. Immigrants, in general, are evaluated as low in warmth and competence (Fiske et al., 2002). However, a study developed in the context of United States (Lee & Fiske, 2006) found that, when information on the ethnocultural origin of the immigrant groups is provided, intergroup differences emerge and ambivalent stereotypes are assigned to the evaluated immigrant groups. Thus, we will take into account this aspect by focusing on two distinct and relevant immigrant groups in the Spanish context.

Additionally, the aforementioned studies developed with children and adolescents always consider the bi-dimensional perspective of the stereotype content. Recent studies on the development of self-perceived morality, sociability, and competence during adolescence (Crocetti et al., 2019) have found that adolescents' level of self-perceived morality and competence was stable across time, while the level of sociability decreased. Additionally, the inter-individual differences and the intra-individual configuration of the three dimensions were also established and stable at this stage. Furthermore, Crocetti et al. (2018) evidenced the higher importance of adolescents' self-perceived morality (vs. sociability and competence) for establishing meaningful relationships with others in school

context, with family and with friends. According to Leach, Bilali, and Pagliaro (2015), "individual morality is an oxymoron" (p. 142). Thus, although morality is important for self-concept and interpersonal relations, it is a group phenomenon with significant implications as well for intergroup relations and outgroups' evaluations (Brambilla & Leach, 2014). However, these aspects have been mainly studied in adults.

To our knowledge, only one study developed with adolescents (Cuadrado & López-Turillo, 2014) applied the SCM considering morality and sociability instead of warmth in intergroup settings. These authors assessed adolescents' perception of three subtypes of women. Their results confirmed the SCM predictions for its three-dimensional perspective and showed that each women subtype was ambivalently stereotyped (e.g., housewives were assigned less competence than morality and sociability and elicited pity).

Therefore, the present research extends the previous literature in two ways: (a) by contemplating and examining the adequacy of the three-dimensional perspective of the SCM during adolescence at intergroup level, and (b) considering Spanish adolescents' perception of ethnic groups.

#### 1.4 | The BIAS Map model

Given that SCM refers only to the cognitive and emotional components of social attitudes, the BIAS Map (Cuddy, Fiske, & Glick, 2007) goes one step further and extends the SCM model by incorporating the behavioral aspect. In this regard, the model distinguishes between four types of behavioral intentions accounting for their valence -facilitation or harm, and their intensity -active or passive. Active facilitation implies acting for the outgroup and includes behaviors such as helping or defending the outgroup. Passive facilitation refers to associating or collaborating with an outgroup in order for the ingroup to also obtain benefits. Active harm occurs when an outgroup is overtly and intentionally acted against (e.g., attacked, harassed). Finally, passive harm entails acting without an outgroup by ignoring, avoiding, or neglecting it.

Accounting for the primacy of warmth, the BIAS Map predicts that this dimension will determine the valence of active behaviors, while competence will determine the valence of the passive ones. Furthermore, the mediational hypothesis of the model proposes that emotions will be better predictors of behaviors than stereotypes, and that at least one emotion will mediate each stereotype content-behavior link. Admiration toward HW-HC groups will lead to both active and passive facilitation, while contempt will lead to both active and passive harm toward LW-LC groups. Likewise, HW-LC pitied groups will prompt active facilitation and passive harm. Lastly, envied LW-HC groups will trigger passive facilitation and active harm as they evoke both respect and resentment (Cuddy et al., 2007).

Besides the core work of Cuddy et al. (2007), a few studies have tested and replicated the full range of proposed mediation models and only one study developed in the Norwegian context (Bye & Herrebrøden, 2018) replicated the original data. The BIAS Map

predictions were also tested for subgroups of mental illness (Sadler, Kaye, & Vaughn, 2015), women subtypes based on their parental status (Bays, 2017) as well as using experimental data (Becker & Asbrock, 2012). In general, the findings support the hypothesized mediating role of emotions for the stereotype-behavior link, but results are mixed. In some cases, only one emotion mediates the stereotype-behavior link (Bye & Herrebrøden, 2018), whereas in others, some of the mediations are not supported (e.g., Becker & Asbrock, 2012, the competence-passive behaviors link).

These findings reflect adults' view, but no study has yet tested the BIAS Map predictions during childhood or adolescence. Since recent research has found that children and adolescents use the two dimensions of social judgment for intergroup evaluations, the next logical step entails testing the BIAS Map predictions for these developmental stages. Therefore, we will test the hypothesized mediation in an adolescent sample. Also, in keeping with the well-demonstrated conceptual distinction of morality and sociability as subdimensions of warmth, we will test the mediation models considering the three-dimensional model of stereotype content, as this aspect has not yet been explored from Bias Map perspective either with adults or children.

#### 1.5 | The present study

The main purpose of the present study is to explore the relations between adolescents' beliefs, emotions, and behavioral tendencies toward two immigrant groups relevant in the Spanish context: the Ecuadorian target group (ET) and the Moroccan target group (MT). The two groups were chosen for the following reasons. First, Moroccans are the main immigrant group in Spain (INE, 2018), whereas Ecuadorians, although less numerous nowadays, still are a representative immigrant group that is also perceived to share cultural features with the mainstream population (López-Rodríguez, Cuadrado, & Navas, 2017). Second, for comparative reasons, as previous research regarding these two immigrant groups was developed in the Spanish context with adult samples. In agreement with the original findings (Fiske et al., 2002), these studies have shown that for both groups (Ecuadorians and Moroccans), the perceived intergroup competition was negatively and significantly related to native ratings of morality and sociability, and unexpectedly with groups' perceived competence. Regarding perceived social status, the expected positive relation with perceived competence was confirmed for Moroccans, but not for Ecuadorians. For the Moroccans, perceived status also significantly correlated with morality and sociability (López-Rodríguez et al., 2013).

Ecuadorians were also considered more moral than Moroccans by the Spanish adults and other immigrant groups, although their defining feature was their perceived sociability (Cuadrado, López-Rodríguez, & Navas, 2016; López-Rodríguez et al., 2013). Likewise, Ecuadorians elicited more positive emotions and active and passive facilitation intentions, while Moroccans evoked more negative emotions and passive harm tendencies in the Spanish adults (López-Rodríguez, Cuadrado, & Navas, 2016).

However, the information regarding intergroup relations between Spanish adolescents and their Moroccan and Ecuadorians peers is rather scarce. For example, a recent international report (Organisation for Economic, Cooperation and Development [OECD], 2018) showed that the level of baseline academic proficiency and life satisfaction of immigrant students in Spain were below the UE and OECD countries average and were also lower compared to their native peers. Likewise, a national report (Díaz-Aguado, Martínez-Arias, & Martín-Barbarro, 2013) found that ethnic origin and having a different skin color were mentioned as reasons, by both aggressors and victims, of school violence. In addition, consistent with previous findings of target specific studies with adults (López-Rodríguez et al., 2013), some scholars (e.g., Calderón, 2009) have found that Spanish adolescents had more favorable attitudes toward Latin-American peers (mostly Ecuadorians), while the Moroccan peers triggered the most negative stereotypes among the immigrant groups evaluated.

Although, in our study, we do not directly compare adolescents and adults, these groundwork studies provide us with baseline information for the interpretation of our results. Furthermore, the studies performed with adults in the Spanish context did not test for the mediational hypothesis proposed by the BIAS Map. Thus, by testing it in the Spanish context, we contribute to the cross-cultural validation of the BIAS Map model.

In sum, we will test the full range of relations proposed by the SCM/BIAS Map framework during adolescence to examine adolescents' perception of two relevant immigrant groups in the Spanish context and to see how these two models operate when applied to adolescents. Thus, we will examine the suitability of these models to study adolescents' social perception in the context of interethnic relations.

In order to achieve our main purpose, we first test the fit of the three-dimensional model of stereotype content in an adolescent sample, and this way we extend previous findings on the validity of the three-dimensional perspective of the stereotype content to a different developmental stage.

Next, we test the socio-structural hypothesis of the SCM and the mediational hypotheses of the BIAS Map. We broaden previous literature by testing the BIAS Map from the three-dimensional perspective of the stereotype content. Also, by testing the SCM/BIAS Map predictions in an adolescent sample, we contribute to the generalizability of the models at a different age stage.

In line with the SCM predictions, we expect perceived intergroup competition to be negatively related to perceived morality and sociability of the target group, and perceived social status to be positively related to its perceived competence (H1).

Following the BIAS Map predictions, we expect morality and sociability to indirectly predict active harm through contempt and envy, and active facilitation through admiration and compassion (H2). Considering literature on the primacy of morality, we also expect morality to be a better predictor compared to sociability in the explored mediation processes (H3). Also, we expect that competence will indirectly predict passive facilitation through admiration and envy, and passive harm through contempt and compassion (H4).

## 2 | METHOD

### 2.1 | Participants and procedure

Spanish adolescents in a 14–18 age range ( $N = 231$ ,  $M_{age} = 15.39$ ,  $SD = 1.09$ ) evaluated the ET group ( $n = 117$ , 59% girls) or the MT group ( $n = 114$ , 55.3% girls). The adolescents attended three incidentally selected high schools. The percentage of immigrant students in the participating schools was of approximately 12%. All the participants included in the study were Spanish with Spanish-born parents. The students were randomly assigned to evaluate one of the two target groups. Each adolescent had to answer one of the two anonymous questionnaires. The paper and pencil questionnaires were identical except for the evaluated target group. The questionnaire was administered in their classrooms during regular school hours only to the students that voluntarily decided to participate. Following an inclusive criteria, the students with immigrant background were present in the classroom during data collection, but they completed a different questionnaire (these data were not included in the study). The teacher was present during the data collection as a condition imposed by the school boards. The study was approved by the authors' University Ethics Committee. The participation was voluntary. The adolescents that refused to participate stayed in the classroom and did a task given by the teacher.

### 2.2 | Measures

The perceived intergroup competition was measured with three items adapted from Cuadrado et al. (2016) based on Fiske et al. (2002). Participants had to answer the following affirmations on a five-point Likert scale (1 = totally disagree; 5 = totally agree): "The more power the (target group) have, the less power people like me are likely to have," "The (target group) get special breaks (such as preference in hiring decision or obtaining a place in the university/ vocational training courses) that make things more difficult for people like me" and "The resources that go to the (target group) are likely resources that are taken away from people like me."

Perceived social status was measured with two items adapted from Cuadrado et al. (2016) based on Fiske et al. (2002). Participants had to answer to the following questions: "What educational level do members of the (target groups) generally have?" and "What is the level of qualifications achieved by the (target group) students?" Items were rated on a five-point Likert scale (1 = very low; 5 = very high).

Stereotype content was assessed with nine items (three per dimension) adapted from the work of Fiske et al. (2002) and Leach et al. (2007) by López-Rodríguez et al. (2013). For the morality content, participants had to indicate how honest, sincere, and trustworthy they considered the evaluated group. For the sociability content, adolescents had to indicate how likeable, warm, and friendly they considered the target group. The competence content was evaluated using the items intelligent, competent, and skillful.

Emotions were measured using a scale of 24 items adapted to Spanish by Cuadrado et al. (2016) from Fiske et al. (2002).

Participants had to rate to what extent did they feel four types of emotions (admiration, contempt, envy, compassion) toward the target group. Admiration was measured with the following eight items: admiration, understanding, respect, comfort, fondness, pride, inspiration, and security. Contempt was assessed through the following 12 items: disappointment, fear, unease, anger, disgust, hatred, frustration, resentment, contempt, tension, shame, and anxiety. Two items, envy and jealousy, were used to measure envy. Lastly, two items, pity and compassion, were used for measuring compassion.

Intergroup behavioral intentions were evaluated with the intergroup behavioral tendencies scale developed by López-Rodríguez et al. (2016) following Cuddy et al. (2007), (2008) definitions, which we previously adapted and validated for adolescents.<sup>1</sup>

All the items of the last three measures were rated on a five-point Likert scale (1 = *not at all*; 5 = *very much*).

## 2.3 | Data analysis

First, we performed confirmatory factor analysis (CFA) with the EQS 6.2 program (Bentler, 2005), to test the internal structure validity of the extended stereotype content model. Goodness of fit of the models was assessed through the robust comparative fit index (RCFI), the Satorra–Bentler scaled  $\chi^2$  statistic,<sup>2</sup> the root mean squared error of approximation (RMSEA), and standardized root mean square residuals (SRMR). Values of the RCFI of .95 and higher are considered preferable and indicate that 95% or more of the covariation in the data is reproduced by the hypothesized model (Hu & Bentler, 1999). RMSEA values below .08 show a good fit of the hypothesized model to the observed data (MacCallum, Browne, & Sugawara, 1996). Similarly, SRMR values below .08 are indicative of the model good fit (Hu & Bentler, 1999). We also report the Akaike Information Criterion (AIC) (Akaike, 1974). This indicator is used to compare the proposed model with competing ones. Although this index does not provide a statistical comparison of competing models, its use is recommended when comparing non-nested models. The model with the lowest AIC value fits the data better than the alternative solutions (Brown, 2006).

The three-dimensional model of the stereotype content was tested against a competing non-nested bi-dimensional model. For this purpose, morality and sociability items loaded on the same latent factor.

Cronbach's *alpha* coefficient was calculated to assess the internal consistency of the studied variables.

Next, we tested the socio-structural hypothesis of the BIAS Map model. For this purpose, Pearson's correlation coefficient was used to examine the hypothesized relations between socio-structural

<sup>1</sup>Two items of the original scale were modified in order to be more appropriate for the age of our participants. The active facilitation item "Facilitate their promotion at work (*if I could*)" was modified into the item "Help them to progress at school and in other contexts (*if I could do it*)."<sup>2</sup> The active harm item "Prevent them from opening businesses" was replaced by the item "Prevent them from going to classes." This item was dropped from the analysis as it did not load on the expected active harm factor. Thus, active harm was measured with two items instead of three. These two items belonged to the original scale.

<sup>2</sup>Mardia's normalized coefficient revealed that our data presented multivariate kurtosis as for both groups and in all cases its value exceeded 5.00 (Bentler, 2005). In this case, both robust CFI and Satorra–Bentler scaled  $\chi^2$  statistic are preferred to ML estimates (Curran, West, & Finch, 1996).

**TABLE 1** Standardized factor loadings and standard errors for each item

Model/dimension	Item	Ecuadorians		Moroccans	
		$\beta$	SE	$\beta$	SE
<b>Stereotype content</b>					
Morality	Sincere	.67	.74	.83	.55
	Honest	.81	.58	.88	.48
	Trustworthy	.69	.72	.77	.64
Sociability	Warm	.81	.59	.81	.59
	Likeable	.58	.82	.65	.76
	Friendly	.83	.55	.86	.51
Competence	Intelligent	.60	.80	.66	.75
	Skillful	.40	.92	.64	.77
	Competent	.51	.86	.55	.83

Note: All factor loadings were significant ( $p < .05$ ).

variables and the stereotype content dimensions as well as between behavioral intentions and stereotype content and emotions.

Finally, the BIAS Map predictions regarding the stereotype-behavior link were tested for each group through six parallel mediation analyses (Hayes, 2017; Model 4) performed with the SPSS22 macro PROCESS v 3.0 (Hayes, 2017). The statistical significance of the effects was estimated using 95% confidence intervals based on 5,000 bootstrap samples.

## 3 | RESULTS

### 3.1 | The stereotype content model: Confirming the three-dimensional model

In order to test the validity of the three-dimensional perspective of stereotype content, we specified a first-order three-factor model. Each factor predicted three corresponding specific items (see Table 1). The metric of the latent variables was defined through the marker indicator approach. All factors were allowed to covariate. The model was tested separately for each target group. This model proved to have a good fit for all target groups<sup>3</sup>: ET,  $S-B\chi^2(24, 115) = 34.8159, p > .05$ , RCFI = .96, RMSEA = .06 (.00, .11), SRMR = .07, AIC = -13.184; MT,  $S-B\chi^2(24, 113) = 22.6024, p > .05$ , RCFI = 1.00, RMSEA = 0 (.00, .07), SRMR = .045, AIC = -25.39. In each target group, all factor loadings were statistically significant (Table 1).

We also tested a two-factor competing model in which the items measuring morality and sociability loaded on the latent factor of warmth, while the items measuring competence loaded on the competence latent factor. This competing model had a good fit for the Moroccan target group,  $S-B\chi^2(26, 113) = 36.3566, p > .05$ , RCFI = .97, RMSEA = .06 (.00, .10), SRMR = .06, AIC = -15.643, and a poorer although acceptable fit for the Ecuadorians,  $S-B\chi^2(26, 115) = 45.8262, p < .01$ , RCFI = .92, RMSEA = .08 (.04, .12), SRMR = .07, AIC = -6.174.

<sup>3</sup>Due to missing data, one case for the MT group and two cases for the ET group were skipped from the analysis.

	Ecuadorians			Moroccans		
	M	SD	$\alpha/r$	M	SD	$\alpha/r$
Intergroup competition	3.02	.94	.73	2.87	1.07	.72
Status	2.48	.59	.53**	2.32	.63	.43**
Morality	3.19	.70	.75	2.9	.83	.87
Sociability	3.68	.78	.78	3.19	.86	.82
Competence	3.29	.61	.52	3.44	.72	.64
Admiration	2.68	.72	.86	2.62	.86	.89
Contempt	1.47	.55	.88	1.63	.63	.88
Envy	1.15	.40	.66*	1.16	.42	.38**
Compassion	2.45	.86	.21*	2.5	.96	.40**
Active facilitation	3.09	.88	.77	2.88	.96	.81
Active harm	1.44	.82	.60**	1.4	.66	.34**
Passive facilitation	2.99	.92	.37**	3.13	1.09	.65**
Passive harm	1.60	.75	.71	1.72	.76	.65

Note: Scores ranged between 1 (*totally disagree*) and 5 (*totally agree*) for intergroup competition, from 1 (*very low*) to 5 (*very high*) for status and between 1 (*not at all*) and 5 (*very much*) for all other variables. Pearson's  $r$  is provided instead of Cronbach  $\alpha$  coefficient for variables with less than three indicators.

\* $p \leq .05$ ; \*\* $p \leq .01$ .

Although the two-factor model also fitted the data, the lower AIC values of the three-factor model indicated its superiority over the competing two-factor solution. Thus, the results indicate the superiority of the three-factor model of stereotype content and the need to distinguish between morality and sociability content for the following analysis.

Cross-group invariance of the three-dimensional model factorial structure was further tested through several multi-sample analyses. For the first multiple-sample analysis, no equality constraints were imposed. This configural model yielded a very good fit to the data,  $S\text{-}B\chi^2(48, 228) = 57.9131$ ,  $p > .05$ , RCFI = .98, RMSEA = .04 (.00, .08), SRMR = .06, which proves the configural equivalence of the model. Next, measurement equivalence was examined. Equality constraints were imposed for all free estimated factor loadings. The Lagrange multiplier test (LM test) revealed that the imposed equality constraints were tenable ( $p > .05$ , in all cases). This constraint model had a similar fit with the configural model:  $S\text{-}B\chi^2(54, 228) = 62.9573$ ,  $p > .05$ , RCFI = .98, RMSEA = .04 (.00, .07), SRMR = .07. Thus, all factor loadings were invariant across the two samples. Lastly, equality constraints were imposed for factor covariances and factor loadings, in order to test structural equivalence. As with the previous model, LM test results indicated that the imposed equality constraints were reasonable ( $p > .05$ , in all cases). The model also fitted the data very well, although the SRMR index had an inadequate value:  $S\text{-}B\chi^2(58, 228) = 66.8330$ ,  $p > .05$ , RCFI = .98, RMSEA = .04 (.00, .08), SRMR = .11. All in all, these results prove the cross-group invariance of the three-dimensional factorial structure of the stereotype content.

For each group, descriptive statistics and internal consistency coefficients for all the studied variables are shown in Table 2.

**TABLE 2** Means, standard deviations, and reliability coefficients of the measured variables

**TABLE 3** Correlations between socio-structural variables and stereotype content dimensions

	1	2	3	4	5
1. Intergroup competition	—	-.24*	<b>-.48**</b>	<b>-.35**</b>	-.08
2. Status		-.19*	—	.35**	.28**
3. Morality			<b>-.22*</b>	.17	—
4. Sociability				<b>.70**</b>	—
5. Competence					<b>.55**</b>

Note: Data for Ecuadorian target group are shown in the upper right section. The lower left section shows data for Moroccan target group. Bold correlations are those predicted to be significant by the SCM. Pearson's  $r$  is provided instead of Cronbach  $\alpha$  coefficient for variables with less than three indicators.

\* $p \leq .05$ ; \*\* $p \leq .01$ .

### 3.2 | Testing the socio-structural hypothesis: Relations between socio-structural variables and the stereotype content dimensions

As the information shown in Table 3 reveals, perceived intergroup competition was negatively and significantly related to morality and sociability for both groups, whereas a significant negative relation with competence stereotype content was found only for the MT group.

For the ET group, perceived status had a significant positive relation with morality, sociability, and competence. For the MT sample, perceived status correlated positively only with competence.

These results partially confirm H1, as unexpectedly intergroup competition significantly correlated with perceived competence for one of the groups (MT), whereas perceived status significantly correlated with morality and sociability for the other (ET).

**TABLE 4** Correlations of behavioral intentions with stereotype content dimensions and emotions

		Active facilitation		Active harm		Passive facilitation		Passive harm	
		ET	MT	ET	MT	ET	MT	ET	MT
Stereotypes	Morality	.52**	.52**	-.33**	-.39**	.26**	.34**	-.40**	-.39**
	Sociability	.44**	.60**	-.20*	-.30**	.21*	.40**	-.22*	-.43**
	Competence	.31**	.48**	-.19*	-.31**	.36**	.36**	-.16	-.35**
Emotions	Admiration	.73**	.73**	-.23*	-.38**	.46*	.53**	-.35**	-.42**
	Contempt	-.45**	-.41**	.67**	.65**	-.29**	-.24**	.65**	.57**
	Envy	-.08	.07	.13	.16	-.03	.07	.08	.10
	Compassion	.22*	.23*	-.04	-.18	.05	.17	-.05	-.04

Note: Bold correlations are those predicted to be significant based on the BIAS Map.

Abbreviations: ET = Ecuadorian group; MT = Moroccan group.

\* $p \leq .05$ ; \*\* $p \leq .01$ .

### 3.3 | The stereotype-behavior link: Testing the BIAS Map predictions

Once the socio-structural hypothesis was tested, we examined the BIAS Map predictions concerning the mediating role of emotions in the stereotype-behavior link. For this purpose, we first examined the relations of the four behavioral tendencies with the stereotype content and the emotions (see Table 4).

In both groups, active behavioral tendencies were significantly related to morality and sociability in the expected direction. Competence was significantly related only to passive facilitation tendencies.

In both groups, active facilitation was positively related to admiration and compassion, whereas active harm was positively related to contempt but not to envy. Similarly, in both groups, passive facilitation positively correlated with admiration, but no significant negative correlation was found with envy. Finally, passive harm was positively related to contempt in both groups and negatively related to compassion in the Ecuadorian group.

Following Cuddy et al. (2007), we further tested several mediation models in which the effect of each stereotype dimension on the hypothesized behavioral tendency was mediated by two specific emotions. But, unlike these authors, we distinguish between morality and sociability instead of collapsing them into the warmth dimension. Thus, six models were tested instead of four (Figure 1). For each model, we controlled for the effect of the two non-predictor stereotype dimensions and for participants' sex.<sup>4</sup> Completely standardized effects are presented.

<sup>4</sup>A factorial MANOVA was performed with the immigrant group and participants' sex as IVs and the three stereotype dimensions, four emotions and four types of behavioral intentions as DVs. A significant multivariate effect was found for the immigrant group (Pillai's Trace = .216,  $F(11, 216) = 5.41$ ,  $p < .001$ ,  $\eta_p^2 = .22$ ) and for participants' sex (Pillai's Trace = .126,  $F(11, 226) = 2.83$ ,  $p < .01$ ,  $\eta_p^2 = .13$ ). Univariate analysis revealed that Ecuadoreans were considered more moral,  $F(1, 226) = 6.87$ ,  $p = .01$ ,  $\eta_p^2 = .08$ , and sociable,  $F(1, 226) = 19.77$ ,  $p < .01$ ,  $\eta_p^2 = .08$ , than Moroccans. Likewise, the univariate analysis indicated that girls compared to boys consider immigrants more sociable,  $F(1, 226) = 5.14$ ,  $p = .02$ ,  $\eta_p^2 = .02$ , feel less contempt,  $F(1, 226) = 10.57$ ,  $p = .001$ ,  $\eta_p^2 = .05$ , and less envy,  $F(1, 226) = 13.00$ ,  $p < .01$ ,  $\eta_p^2 = .05$ . Girls also manifested more active facilitation intentions,  $F(1, 226) = 4.91$ ,  $p = .03$ ,  $\eta_p^2 = .02$ , and fewer active harm intentions,  $F(1, 226) = 10.21$ ,  $p = .002$ ,  $\eta_p^2 = .04$ , and passive harm intentions,  $F(1, 226) = 5.68$ ,  $p = .02$ ,  $\eta_p^2 = .03$ , toward immigrants than boys did.

Our results indicate that in both groups, active facilitation tendencies were indirectly predicted by morality but only through admiration: ET,  $B = .24 (.08)$ , CI 95% = .0752, .3786; MT,  $B = .18 (.07)$ , CI 95% = .0485, .3181. The same pattern was found for both groups when sociability was the predictor: ET,  $B = .21 (.08)$ , CI 95% = .0655, .3863; MT,  $B = .24 (.07)$ , CI 95% = .1266, .3954. Thus, perceiving the target group as moral or sociable elicits more admiration, which in turn fosters active facilitation tendencies toward these groups.

Active harm tendencies were indirectly predicted only through contempt and only when morality was the predictor: ET,  $B = -.27 (.10)$ , CI 95% = -.4502, -.0537; MT,  $B = -.19 (.10)$ , CI 95% = -.3878, -.0054. Sociability had no direct or indirect effect on this type of behavioral tendency (the bootstrap confidence intervals included zero for all the effects in both groups). In sum, only perceptions about the target group's morality and not those of its sociability fostered active harm tendencies and, as predicted, this effect was mediated by contempt.

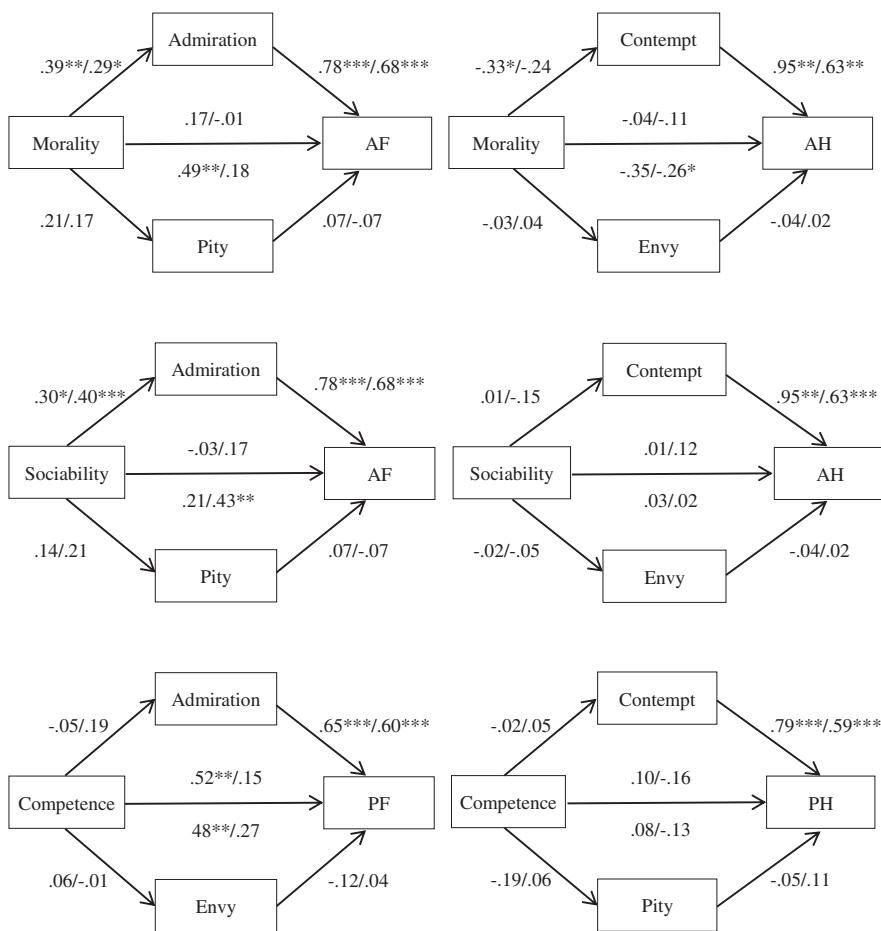
These results partially confirm H2, as only admiration acted as a mediator of morality and sociability on active facilitation intentions. Also, only morality predicted active harm and only through contempt. Therefore, these results show that morality, unlike sociability, predicted both types of active behavioral intentions rendering support to H3.

Passive facilitation tendencies were directly predicted by competence in the Ecuadorian group,  $B = .35 (.16)$ , CI 95% = .2098, .8375, and indirectly predicted through admiration in the Moroccan group,  $B = .08 (.04)$ , CI 95% = .0049, .1743. No direct or indirect effects of competence on passive harm were found for either of the two groups (the bootstrap confidence intervals included zero for all the effects in both groups).

Our fourth hypothesis receives also partial support. For both groups, competence only affected passive facilitation behavior, and this effect was mediated only by admiration in the Moroccan group.

## 4 | DISCUSSION

The main purpose of the present work was to examine the relation between adolescents' stereotypes, emotions, and behavioral



**FIGURE 1** Results from the parallel multiple mediator analyses. Unstandardized coefficients are reported. Total effects are reported below the central lines and direct effects are reported above the central lines. Ecuadorian group/Moroccan group; AF = Active facilitation; AH = Active Harm; PF = Passive Facilitation; PH = Passive Harm.  
\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$

intentions toward two relevant immigrant groups in the Spanish context. In this sense, we applied and tested the assumptions proposed by the SCM/BIAS Map framework along with the literature that emphasizes the primacy of morality over sociability and competence stereotype content.

We first tested the fit of the three-dimensional model of stereotype content. In line with previous findings obtained in the Spanish context (López-Rodríguez et al., 2013) and elsewhere (Brambilla et al., 2011), our results confirm in both groups the better fit of this model, compared to the traditional bi-dimensional one.

From a theoretical standpoint, these results not only support the need of distinguishing between morality and sociability stereotype content for intergroup evaluations, but they also strengthen the evidence that adolescents differentiate between the two sub-dimensions of warmth and treat them as independent in intergroup evaluations (Cuadrado & López-Turillo, 2014).

Once the three-dimensional model of the stereotype content was confirmed, we tested the socio-structural hypothesis proposed by the SCM. In this regard, our results present some similarities and some differences with the core predictions of this model (Fiske et al., 2002). For both groups, as expected, the perceived intergroup competition was negatively related to warmth subdimensions, and the perceived status was positively related to competence.

However, the higher perceived competition with the Moroccans also decreased their perceived competence, while Ecuadorians' perceived status also positively affected their perceived morality and sociability.

These unpredicted findings are not entirely unexpected. Indeed, studies developed in the same context with adults using an identical approach (e.g., López-Rodríguez et al., 2013) have found similar results. It seems that mainstream adolescents not only have endorsed the ethnic stereotype content of the mainstream adults, but this content is further related to the socio-structural variables in a similar fashion. These results are in keeping with social learning theory premises (Bandura, 1977) as well as socio-developmental theories of prejudice (e.g., Barrett, 2007) which emphasize that prejudice becomes more context-dependent during this developmental stage (Raabe & Beelmann, 2011).

Although the effect of the socio-structural variables on adolescents' attitudes and behaviors toward different outgroups has been analyzed (Abrams, Pelletier, Van de Vyver, Cameron, & Lee, 2015; Cuadrado & López-Turillo, 2014; Siegelman, 2012), our study is the first one that examines the interplay of socio-structural variables and the three-dimensional stereotype content assigned by adolescents to different ethnic outgroups.

Regarding the mediational hypothesis proposed by the BIAS Map, the expected relations were partially confirmed. Only univalent

emotions (i.e., admiration and contempt) took priority and acted as mediators between the stereotypes and their corresponding behavioral intention. This occurred mainly for active behavioral intentions.

Concretely, the higher perceived morality and sociability of each group elicited adolescents' admiration toward them (but not their compassion), which in turn, led adolescents to manifest more active facilitation intentions. Furthermore, for both groups, only their perceived morality negatively affected adolescents' contempt toward them (and not envy), and this, in turn, decreased their active harm intentions toward Ecuadorians and Moroccans. Therefore, the evidence of the higher importance of morality over sociability is further reinforced as only morality affected both types of active intentions.

Whereas the results for active behavioral intentions broadly confirmed our expectations and converged with findings of previous studies that considered warmth as one dimension (Bye & Herrebrøden, 2018; Cuddy et al., 2007, 2008), the results for passive behavioral intentions were in part inconsistent. Competence only affected adolescents' passive facilitation toward both groups, and this effect was mediated by admiration only for Moroccans.

These inconsistent patterns of the competence–passive behavior link have also been found in other studies (e.g., Becker & Asbrock, 2012). Children's evaluations of others' competence resemble those of adults and seem to prevail across the lifespan (Roussos & Dunham, 2016). However, for morality and sociability, this seems not to be the case. As children get older, morality and personal relations acquire greater importance for their interpersonal and intergroup relations. By adolescence, both dimensions are being treated as independent, and morality seems to become the primary dimension of social judgment, as it was confirmed by our findings. These findings align with previous results on the development of self-perceived morality, sociability, and competence during adolescence (Crocetti et al., 2019) and its effects on adolescents' relationships with meaningful others (Crocetti et al., 2018). These studies have shown the distinct relevance across time of each one of the stereotype dimensions during adolescence. Furthermore, our results were affected by gender in a similar vein with the results of these authors. These trade-offs might affect the stability of the stereotype content dimensions with the predicted emotional and behavioral response toward outgroups. How these trade-offs occur across time, as well as their effect on intergroup evaluations, may be interesting avenues to be explored in future studies. However, in general lines, our findings provide support to previous studies (e.g., Cuadrado, López- Rodríguez, & Constantin, in press; Siersma, Lansu, Karremans, & Bijlstra, 2018) which have shown that stereotype content is an important variable that influences adolescent's behavior.

Regarding the lack of influence of the mixed emotions (envy and pity) in the hypothesized mediation between the stereotype dimensions and their corresponding behavioral intentions, it could have several explanations. On the one hand, the authors of the BIAS Map suggest as a possible explanation the high contextual dependency of these emotions. This type of affective response represents a complex combination of positive and negative affect that elicits volatile patterns of behavior highly sensitive to the social context (Cuddy et

al., 2007). For example, under stable social conditions, envied groups may elicit passive facilitation responses following the premise "going along to get along," but when the conditions become unstable, envied groups may elicit overt attacks (Harris, Cikara, & Fiske, 2008).

On the other hand, the ratings of both groups on the evaluated stereotype content dimensions were rather moderate. Envy is felt toward competent and cold targets, while pity is triggered by incompetent and warm ones, so the lack of effect of these variables could be due to the specific target groups being assessed more than to the ability of these emotions to mediate the stereotype-behavior link. Likewise, measurement issues (e.g., weak correlation between the items measuring pity) could also account for these findings (however, our results upheld even when the ambivalent emotions were removed from the mediation analyses). Although we used the original scales to ensure conceptual correspondence with the original operationalization of these variables, the measures used in the original work (Cuddy et al., 2007) were validated to rate aggregated social groups. It is possible that for these measures, the items do not represent a "singular construct when evaluating groups in isolation" (Bays, 2017, p. 152).

Another limitation of our study is the correlational nature of the data and its cross-sectional design. Also, our results cannot be generalized to the adolescent population, as the sample we used was a convenience sample. Furthermore, our findings cannot be generalized to other immigrant groups as we evaluated only Moroccan and Ecuadorian immigrants.

In sum, although we could say that our main purpose was achieved, the limitations of our study compel us to be cautious with the interpretations of the results and to provide some recommendations for future studies. First, the premises of the model should be tested with target groups that fit into each one of the stereotype content quadrants of the model. Second, measurement issues should be attended developing and validating specific measures of envy and pity to evaluate groups in isolation. Third, our findings should be replicated with experimental methods in order to confirm the directionality of the predicted relations, as well as with a longitudinal design to have a more profound insight from a developmental standpoint. Fourth, results should also be replicated with adolescents from other cultural contexts as well as with other immigrant groups in order to increase their external validity. Finally, in our study, we have strictly focused on the BIAS Map component variables. The inclusion of other relevant individual variables into the analysis (e.g., contact, friendship, socioeconomic status) would increase our knowledge regarding their relation with adolescents' social perception and could provide useful information with practical implications for attitude improvement toward ethnic outgroups during this developmental stage.

All things considered, we believe that our study offers compelling information about adolescents' social perception in the context of interethnic relations by making four main contributions to the current psychosocial literature. First, we confirmed that, like adults, adolescents make social judgments about outgroups distinguishing between morality and sociability. Second, we provide

evidence of the higher importance of morality compared to sociability and competence for these social judgments. Third, our study illustrates the process through which adolescents' stereotype evaluations of different immigrant groups are translated into behavioral intentions toward them through emotions. Finally, our findings have clear implications for intergroup relations in adolescence as we have shown that perceived morality is a key aspect to promote helping behaviors and decrease harmful ones toward outgroups.

This small although relevant piece of information could be substantiated in actions destined to highlight immigrants' moral character as a part of intervention programs aimed at reducing ethnic prejudice and promoting healthy and harmonious interethnic relations during adolescence.

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