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Psychosocial Predictors of Social Anxiety in Children

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Abstract Social Anxiety (SA) is one of the most prevalent psychiatric disorders in childhood that negatively impacts well-being and fosters cumulative disadvantages throughout life. The aim of this study was to predict SA for the first time in Mexico using these explanatory factors: assertiveness, specific phobia, separation anxiety disorder, obsessive compulsive disorder, self-concept, depression, and coping skills. 649 children aged 6-13 years old (*M*=8.87, *SD*=1.889) were randomly selected from public elementary schools in Mexico City. The main results obtained with multiple regression analyses showed that specific phobia, obsessive compulsive disorder, indirect assertiveness, and separation anxiety disorder significantly predicted SA in both genders. Concerning boys, assertiveness was also a relevant explanatory variable. Regarding girls, actual self-concept was also a significant predictor. The regression model explained 56.3% of the variance for boys, and 43.5% of the variance for girls. The findings of our study -comorbidity of SA with anxiety disorders- underline the importance of early intervention strategies to prevent the development of other disorders. Also, since assertiveness was a significant predictor, assertiveness training should be promoted in schools, with parents, and included in intervention programs in order for them to be efficient and sustainable, and to prevent and diminish social anxiety.

PALABRAS CLAVE
Ansiedad social,
asertividad,
afrontamiento,
autoconcepto,
trastornos de ansiedad

Predictores psicosociales de la ansiedad social en niños

Resumen La ansiedad social (AS) constituye uno de los desórdenes psiquiátricos más prevalentes en la infancia que afecta negativamente el bienestar y acumula desventajas a lo largo de la vida. El objetivo de este estudio fue predecir AS por primera vez en México usando los siguientes predictores: asertividad, fobia específica, trastorno obsesivo compulsivo, trastorno de ansiedad por separación, autoconcepto, afrontamiento y depresión. Se seleccionaron aleatoriamente a 649 menores de entre 6-13 años de edad (*M*=8.87, *DT*=1.889) de escuelas primarias públicas de la Ciudad de México. Los principales resultados obtenidos mediante un análisis de regresión múltiple mostraron que la fobia específica, el trastorno obsesivo compulsivo, la aser-

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tividad indirecta y el trastorno de ansiedad por separación significativamente predicen AS en ambos sexos. Referente a los niños, la asertividad también fue un predictor relevante, mientras que en las niñas lo fue el concepto actual. El modelo de regresión explicó el 56.3% de la varianza para niños y 43.5% de la varianza para niñas. Los hallazgos de este estudio –comorbilidad de AS con trastornos de ansiedad- subrayan la importancia de estrategias tempranas de intervención para prevenir el desarrollo de otros trastornos. Además, dado que la asertividad fue un predictor significativo, el entrenamiento asertivo debe ser promovido en las escuelas, con los padres e incluido en los programas de intervención para que estos sean eficientes y sostenibles, y para prevenir y disminuir la ansiedad social.

Social Anxiety (SA) is characterized by a persistent fear of one or more social or performance situations in which a person is exposed to unfamiliar people or to possible scrutiny by others (National Institute of Mental Health [NIMH], 2018). Across all countries, it is a prevalent disorder with prevalence rates being the highest in high-income countries, the Americas and the Western Pacific regions (Stein et al., 2017). In Mexico, it is the second most typical anxiety disorder (López, 2017).

Children with SA have a low academic achievement and performance (Delgado et al., 2018). They are unable to establish healthy relationships (Epkins & Seegan, 2015). They exhibit a devalued self-concept and self-esteem. They present depression, and they lack the resources needed to effectively cope with stressful situations (Coplan, Findlay & Schneider, 2010).

It is associated with various psychosocial factors such as self-concept, anxiety, depression, anxiety disorders, coping strategies, assertiveness, persistent fears, biases in interpreting threatening information (Cederlund & Öst, 2011), and physiological arousal in social situations (Nikolić, Aktar, Bögels, Colonnesi & Vente, 2018), among others.

A devalued self-concept generates feelings of low self-worth that interfere with the child's development, hence leading to difficulties in the acquisition of social skills and ineffective coping strategies, which increase the likelihood of presenting SA (Ehrenreich & Santucci, 2009).

SA often coexists with other anxious disorders, mainly specific phobia (SP), obsessive-compulsive disorder (OCD) and separation anxiety (In-Albon, Dubi, Rapee & Schneider, 2009).

Not much has been explored in the scientific literature in relation to SA and social skills amongst children and teenagers. However, current research has demonstrated that SA correlates with deficits in social skills (Olivares, Ortiz & Olivares, 2019).

In such context, the study of SA as an important, but not too frequently studied, disorder in Latin American children makes this research relevant in order to obtain better knowledge of the condition and its clinical implications.

The aim of this cross-sectional exploratory study was to identify, for the first time in Mexico, some predictors of SA in a group of Mexican children. Assertiveness, self-concept, anxiety, depression, coping skills, specific phobia, obsessive compulsive disorder, and separation anxiety disorder were assessed as explanatory factors of SA. These factors were chosen due to previous research emphasizing their association with SA. Besides, understanding how these factors predict SA is imperative to investing effectively and efficiently in its prevention and reduction.

Our first research hypothesis was that anxiety disorders would significantly positively predict SA. Our second research hypothesis was that assertiveness and indirect assertiveness would significantly negatively predict this disorder. Hofmann's (2007) Model of SA and the Integrated Model of SA (Wong & Rapee, 2016) were used as the theoretical frameworks to guide this research.

Method

Participants

Participants included 649 children (Table 1). Using a simple random sampling method, participants were recruited from several public elementary schools in Mexico City. Participants were required to (1) reside within the selected school during the data collection period, and (2) consent to participate in the study. Participants with insufficient capacity to provide informed consent, insufficient proficiency in Spanish (spoken) to answer assessment questions, and a primary diagnosis of intellectual disability, head injury or substance misuse were excluded.

Table 1 Demographic characteristics of sample (*N*=649)

M(SD)	**Frequencies**							
Age (years)	**Gender**		**Birthplace**		**Lives with**		**School Grade**	
8.87(1.889)	355 Boys	294 Girls	614	Mexico City	19	Single Dad	106	1st
			32	Mexico	147	Single Mom	80	2nd
			3	USA	475	Parents	70	3rd
					8	Other	170	4th
							87	5th
							136	6th

Instruments

Spence Children's Anxiety Scale (SCAS): Adapted to the Mexican population by Hernández et al. (2010). It consists of 38 items rated on a 3-point Likert scale from 0 (*Never*) to 3 (*Often*) that assess anxiety (α=.80 to .93).

Anxiety Disorders Inventory (ITA-UNAM): Developed for the Mexican population by Hernández et al. (2003) (α = 0.96). It consists of 122 items grouped into four scales that assess several anxiety disorders: Obsessive-Compulsive Disorder, Specific Phobia, Social Anxiety, and Separation Anxiety Disorder.

Multidimensional Assertiveness Scale for Children (Flores & Díaz-Loving, 2010): Mexican self-report questionnaire for children that comprises 45 items rated on a 5-point Likert scale from 1 (*Never*) to 5 (*Always*). It assesses three dimensions: Indirect Assertiveness (α=.91), Unassertiveness (α=.81), and Assertiveness (α=.74).

Self-Concept Scale: Developed for Mexican children by Muñiz (1999). It consists of 32 items rated on a 4-point Likert scale from 1 (*Nothing*) to 4 (*A Lot*) that assess Actual Self-Concept, Ideal Self-Concept, and Must be Self-Concept (α=.89).

Children's Depression Inventory (CDI): Adapted to the Mexican population by Meave and Ayala (2001). It consists of 27 items that assess depression rated on a 3-point Likert scale from 0 (*Yes*) to 2 (*No*) (α=.85).

Coping Questionnaire: Developed for the Mexican population by Hernández (2003). The scale has 12 items rated on a 3-point scale ranging from *never* (0) to *always* (2). It assesses coping responses to situations perceived as stressful (α=.67).

Procedure

This study was reviewed and approved by the Institutional Review Board of Monterrey Institute of Technology and Higher Education Mexico City. This review serves as the Mexican equivalent to an American IRB Review. Informed consent was obtained after the aims of the study were discussed with the directors of the collaborating institutions, the prospective participants and their parents or legal guardians.

The researchers worked with several public elementary schools to acquire access to this population. Permission to conduct the study was provided by the institutions and by parental written consent as the legal authorities of the minors. All child participants in this study did so on a voluntary basis and provided their written consent. Participants received information about the study's general objectives, use of data, and confidentiality agreement. Researchers took care to answer participants' questions without biasing participation choice. Participants were empowered to refuse to answer any question or to discontinue study participation at any time.

The research took place in collaborating institutions' onsite classrooms. Participants were individually interviewed and responses were recorded on questionnaires by the researchers. While interviews lasted approximately 15 to 30 minutes each, no time limit was established.

Data Analyses

Statistical analyses were conducted using SPSS version 24. These included: descriptive, and correlation analyses employing Pearson correlation. Also, the researchers conducted stepwise multiple linear regression analyses to predict SA using several explanatory variables as previously mentioned. The stepwise multiple regression analysis was carried out because it provides efficient means to examine multiple models for further investigation, and is commonly used in exploratory research (Ruengvirayudh & Brooks, 2016).

Results

Findings revealed that 74% of the participants presented SA that ranged from moderate to high, with girls (80%) exhibiting a higher index of SA in comparison to boys (70%). Although, there were non-significant neither gender differences nor by age or level of schooling found using a factorial analysis of variance.

Results of the Pearson correlation (Table 2) indicated that there was a significant positive association between anxiety and its various disorders in both genders, with higher *r* values among girls than boys.

With regard to females, indirect assertiveness negatively correlated with anxiety and all anxiety disorders, and positively correlated with actual self-concept. Assertiveness and unassertiveness were negatively associated with all anxiety disorders. Assertiveness was positively related to coping skills and actual self-concept. Actual self-concept negatively correlated with specific phobia, SA, and obsessive compulsive disorder. Lastly, depression correlated negatively with anxiety, anxiety disorders and coping skills.

Concerning boys, actual, ideal and must-be self-concept were positively associated with assertiveness. Coping skills positively correlated with anxiety, specific phobia, and separation anxiety disorder, and negatively with actual self-concept. On the other hand, anxiety was positively related to must be self-concept. Finally, SA negatively correlated with assertiveness, and positively with unassertiveness and indirect assertiveness.

To examine differences by gender when predicting SA, stepwise multiple regression analyses were carried out (Table 3). Regarding males, findings indicated that anxiety disorders, indirect assertiveness, and assertiveness explained 56.3% of the variance, $F_{(5,349)}$=92.066, p<.001. With respect to females, results showed that the same anxiety disorders as with boys, indirect assertiveness, and actual self-concept explained 43.5% of the variance, $F_{(5,288)}$=46.030, p<.001. Individual predictors were examined further and revealed that all of them significantly predicted SA for both genders (Table 4).

In the case of boys, obsessive compulsive disorder had the highest b value, followed by specific phobia, and separation anxiety disorder. In contrast, concerning girls, specific phobia had the highest b value, followed by obsessive compulsive disorder, and indirect assertiveness.

To summarize, anxiety disorders and indirect assertiveness seem to be crucial factors associated with SA in this group of Mexican children.

Discussion and Conclusions

The results obtained with regression analyses showed that several anxiety disorders significantly predict SA in both genders. As such, our first hypothesis was confirmed.

Table 2 Correlation analyses of study variables by gender (*N*=649)

	Study Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	*M*	*SD*
1	Anxiety	---	.429**	.349**	.326**	.326**	.290**	0.032	-0.03	0.066	.107*	-0.05	0.018	-0.06	77.85	14.83
2	Specific Phobia	.514**	---	.764**	.635**	.580**	.181**	0.013	-0.03	0.005	0.047	-0.03	0.072	-0.07	80.93	20.9
3	Separation Anxiety Disorder	.500**	.697**	---	.630**	.581**	.215**	0.019	-0.03	0.038	0.032	-0.02	0.056	-0.02	25.2	7.42
4	SA	.349**	.590**	.536**	---	.633**	0.092	0.052	-0.06	-0.01	0.004	.143**	.104*	-.128*	38.52	11.94
5	Obsessive Compulsive Disorder	.420**	.654**	.633**	.531**	---	0.102	-0.03	-0.03	-0.02	-0.03	-0.05	0.04	-0.1	43.88	13.84
6	Coping Skills	.232**	0.09	0.109	0.031	.150*	---	-0.04	-.112*	0.005	0.087	-0.01	-0.01	0.034	22.39	4.39
7	Depression	-.327**	-.163**	-.225**	-.203**	-.210**	-.128*	---	-0.03	0.054	0.077	-0.07	-0.05	-0.02	24.13	11.07
8	Actual Self-Concept	-0.1	-.152**	-0.07	-.160**	-.133*	-0.02	0.023	---	.561**	.420**	0.049	0.034	.205**	106	18.23
9	Ideal Self-Concept	0.027	-0.01	-0.03	-0.05	-0	0.045	-0.04	.751**	---	.748**	-0.1	-0.07	.197**	114	17.89
10	Must be Self-Concept	0.03	0.035	0.033	0.019	0.036	-0.01	-0.03	.611**	.813**	---	-0.08	-0.04	.148**	115.7	18.11
11	Indirect Assertiveness	-.125*	-.206**	-.178**	0.034	-.248**	-0.08	-0.11	.153**	0.03	-0.04	---	.624**	.140**	40.61	15.68
12	Unassertiveness	-0.04	-.129*	-.121*	-0.03	-.188**	-0.05	-0.04	0.105	0.01	-0.07	.641**	---	.129*	47.61	13.21
13	Assertiveness	-0.1	-.201**	-.157**	-.146*	-.171**	.119*	0.057	.150*	0.095	0.086	.333**	.373**	---	58.96	9.63
M		84.44	90.41	27.92	40.29	48.09	24.14	23.21	108.2	116.1	117.2	40.73	49.43	58.52		
SD		15.03	20.61	7.94	10.46	13.73	4.27	9.89	15.06	14.45	14.94	16.06	12.38	9.58		

Note. Intercorrelations for boys (*n*=355) are presented above the diagonal, and intercorrelations for girls (*n*=294) are presented below the diagonal. Means and standard deviations for male participants are presented in the vertical columns, and means and standard deviations for female participants are presented in the horizontal rows.
*$p<.05$
**$p<.01$

Table 3 Summary of stepwise multiple regression analyses models used to predict SA by gender (*N*=649)

Model	*R*	R^2	Adjusted R^2	*Standard Error of Estimation*	Statistics of Change		df_1	df_2	p of Change in *F*
					Change in R^2	Change in *F*			
Boys (*N*=355)									
1	.635[a]	0.403	0.401	9.24119	0.403	238.204	1	353	0.000**
2	.713[b]	0.509	0.506	8.39463	0.106	75.786	1	352	0.000**
3	.734[c]	0.539	0.535	8.14452	0.030	22.951	1	351	0.000**
4	.748[d]	0.559	0.554	7.97387	0.020	16.184	1	350	0.000**
5	.754[e]	0.569	0.563	7.89831	0.010	7.729	1	349	0.006**
Girls (*N*=294)									
1	.590[A]	0.348	0.346	8.44981	0.348	155.769	1	292	0.000**
2	.620[B]	0.385	0.381	8.22076	0.037	17.498	1	291	0.000**
3	.649[C]	0.421	0.415	7.98743	0.036	18.250	1	290	0.000**
4	.660[D]	0.435	0.427	7.90429	0.014	7.133	1	289	0.008**
5	.666[E]	0.444	0.435	7.85499	0.009	4.639	1	288	0.032*

Note. *$p<.05$, **$p<.01$
a. Predictors: (Constant), Specific Phobia [$F_{(1,353)}=283.204$, $p<.001$]
b. Predictors: (Constant), Specific Phobia, Obsessive Compulsive Disorder [$F_{(2,352)}=188.228$, $p<.001$]
c. Predictors: (Constant), Specific Phobia, Obsessive Compulsive Disorder, Indirect Assertiveness [$F_{(3,351)}=136.712$, $p<.001$]
d. Predictors: (Constant), Specific Phobia, Obsessive Compulsive Disorder, Indirect Assertiveness, Separation Anxiety Disorder [$F_{(4,350)}=111.016$, $p<.001$]
e. Predictors: (Constant), Specific Phobia, Obsessive Compulsive Disorder, Indirect Assertiveness, Separation Anxiety Disorder Assertiveness
A. Predictors: (Constant), Specific Phobia [$F_{(1,292)}=155.769$, $p<.001$]
B. Predictors: (Constant), Specific Phobia, Obsessive Compulsive Disorder [$F_{(2,291)}=91.034$, $p<.001$]
C. Predictors: (Constant), Specific Phobia, Obsessive Compulsive Disorder, Indirect Assertiveness [$F_{(3,290)}=70.370$, $p<.001$]
D. Predictors: (Constant), Specific Phobia, Obsessive Compulsive Disorder, Indirect Assertiveness, Separation Anxiety Disorder [$F_{(4,289)}=55.677$, $p<.001$]
E. Predictors: (Constant), Specific Phobia, Obsessive Compulsive Disorder, Indirect Assertiveness, Separation Anxiety Disorder, Actual Self-Concept

Table 4 Coefficients of the stepwise multiple regression models used to predict SA by gender (*N*=649)

Regression Model	Non-Standardized Coefficients		Standardized Coefficients	*t*	p	95% CI for β		Correlations		
	B	*Standard Error*	β			Lower Limit	Upper Limit	*Zero*	*Partial*	*Part*
Boys (*N*=355)										
(Constant)	5.656	3.333		1.697	0.091	-0.899	12.212			
Specific Phobia	0.141	0.032	0.248	4.380	0.000**	0.078	0.205	0.635	0.228	0.154
Obsessive Compulsive Disorder	0.300	0.039	0.348	7.745	0.000**	0.224	0.376	0.633	0.383	0.272
Indirect Assertiveness	0.141	0.027	0.185	5.218	0.000**	0.088	0.194	0.143	0.269	0.183
Separation Anxiety Disorder	0.388	0.091	0.241	4.261	0.000**	0.209	0.568	0.630	0.222	0.150
Assertiveness	-0.123	0.044	-0.099	-2.780	0.006**	-0.211	-0.036	-0.128	-0.147	-0.098
Girls (*N*=249)										
(Constant)	11.250	4.408		2.552	0.011	2.574	19.925			
Specific Phobia	0.171	0.034	0.338	5.062	0.000**	0.105	0.238	0.590	0.286	0.222
Obsessive Compulsive Disorder	0.178	0.047	0.233	3.754	0.000**	0.084	0.271	0.531	0.216	0.165
Indirect Assertiveness	0.136	0.030	0.209	4.570	0.000**	0.077	0.195	0.034	0.260	0.201
Separation Anxiety Disorder	0.241	0.085	0.183	2.822	0.005**	0.073	0.409	0.536	0.164	0.124
Actual Self-Concept	-0.067	0.031	-0.097	-2.154	0.032*	-0.128	-0.006	-0.160	-0.126	-0.095

Note. *p<.05, **p<.01

SP is characterized as a marked and persistent fear that is excessive or unreasonable, cued by the presence or anticipation of a specific object or situation. This fear in SA is related to negative evaluations in social and/or performance situations, as stated in the SA Models (Hofmann, 2007; Wong & Rapee, 2016). Thus, the intense and persistent fear present in SP may increase the likelihood of exhibiting SA in which the fear specifically implies negative evaluation during social situations (Rudaz, Lederman, Margraf, Becker & Craske, 2017). Furthermore, SP emerges in childhood while SA in adolescence or early adulthood (Beesdo & Knappe, 2012), and anxiety disorders follow a chronic course (Bandelow & Michaelis, 2015). As such, it seems that SP tends to precede the apparition of SA when left untreated given that fear is maintained by safety and avoidance behaviours, a common feature of SA. Additionally, SA is comorbid with other anxiety disorders, the most usual being SP (García, Bonilla & Muela, 2016).

OCD is a disorder that leads to significant impairment in social functioning. It is often seen in children and adolescents and is highly comorbid with other anxiety disorders (Paul, Sinha, Sarkel & Praharaj, 2015), predominantly social anxiety, which frequently co-occurs with OCD (Assunção et al., 2012). Cognitive factors such as perfectionism, concern over mistakes, fear of negative evaluation, and doubts about actions are common to both disorders and inherent to individuals with OCD (Rudy et al., 2014). These cognitive vulnerabilities increase the likelihood of presenting SA as this disorder appears to have the highest concern over mistakes (Mousavi, Gharraee, Ramazani-Farani & Taremian, 2017). When presenting OCD, persons focus on negative cognitions, and have a distorted self-perception, and excessively high social standards and goal settings. These features are typically associated with the development of SA (Hofmann, 2007).

Indeed, the social impairment associated with one anxiety disorder may, if left untreated, be a risk factor for the emergence of another anxiety disorder (Cummings, Caporino & Kendall, 2014).

The presence of features associated to SP or OCD may increase exposure and maintenance to factors related to social-evaluative situations. The greater the social-evaluative threat, the greater the operational severity of the maintaining factors, and the more likely the individual will experience frequent/severe social-evaluative anxiety and meet the criteria for SA, thus turning into a self-perpetuating cycle (Wong & Rapee, 2016).

On the other hand, assertiveness and indirect assertiveness were significant predictors of SA, mainly in boys. Our second hypothesis was partially confirmed because only assertiveness was a negative predictor of SA in boys, and indirect assertiveness was a significant positive predictor in both genders. According to the SA Models (Hofmann, 2007; Wong & Rapee, 2016), a socially anxious individual adopts safety behaviours that are deemed socially incompetent in order to reduce the risk of being negatively evaluated. These behaviours (e.g., avoidance, speaking in a low voice or hiding the face), reduce their capability to adequately

interact with others, in turn, leading to social rejection and negative criticism from others.

Existing research has still not demonstrated that social anxiety predicts social and communication difficulties (Pickard, Rijsdijk, Happé & Mandy, 2017). Therefore, the relationship between assertiveness and SA has been addressed conceptually, but studied little empirically.

Social skills deficits affect social functioning and adaptation and have a number of implications and impairments that have been assumed as one of the paramount aspects of SA (Scharfstein & Beidel, 2015). In fact, the lack of assertiveness predicts SA (Knappe & Sasagawa, 2015). Unassertiveness increases social difficulties and social anxiety which, in turn, may inhibit the adequate expression of social skills (Caballo, Salazar, Irurtia, Olivares & Olivares, 2014), thus leading to a progressively impairing cycle of avoidance and negative social experiences throughout development (Hoff et al., 2017).

Regarding females, self-concept was a significant negative predictor of SA. Low self-concept and self-esteem is related to SA in girls more so than boys (Quatman & Watson, 2001) which could explain why self-concept was a predictor in SA in girls and not in boys. Current studies have found that a negative self-concept correlates with social anxiety (Krull, Leibing, Leichsenring, Pöhlmann & Salzer, 2014). Maladaptive self-beliefs present in self-concept are positively associated with anxiety disorders, predominantly social anxiety and depression (Gregory & Peters, 2017). Individuals with SA tend to have less positive beliefs about their personality characteristics in comparison to non-anxious individuals (Wilson & Rapee, 2006).

Concerning the findings obtained with Pearson's correlation, in girls, assertiveness correlated positively with anxiety and some of its disorders, while negatively in boys. These results may be culturally explained by the fact that Mexican girls are raised in a limited environment with a lack of social, educational, labour, and recreational opportunities. Females are taught to be conservative and submissive, and not to engage in social interactions. Contrastingly, males are encouraged by society to compete, to take part in social activities and interactions, be independent and self-autonomous, and to accomplish goals. As such, unassertiveness is fostered in Mexican girls, while assertiveness is fostered in boys (González, Guevara, Jiménez & Alcázar, 2018). This may also help explain why assertiveness was not a significant predictor of SA in girls.

Thus, psychological and moral pressures, severe discipline, threats, punishment, and limitations and constraints cause children to become submissive, lacking the courage to express themselves, which in turn paves the way to SA and shyness (Ostovar, Khorasani & Rezaei, 2015). This cultural background may also help explain why females tend to be more assertive indirectly (e.g., expressing thoughts, personal opinions, and feelings by phone, a letter or via a third person) than males. Behaving assertively may be unconsciously too stressful for females because their primary goal is to avoid rejection at all costs and maintain some degree of connectedness with others (Malhotra & Gupta, 2012).

Additionally, assertiveness was positively correlated with coping skills in girls, which in turn were negatively associated with depression.

Assertiveness influences the ability to use coping abilities effectively. The assertive style is advocated to minimize feelings of anger or fear associated with stressful encounters and to work towards a peaceful resolution. Hence, assertive behaviours are essential for coping efficiently with a variety of life stressors (Ajibade, Adeleke, Ejidokun & Oyewumi, 2015).

Coping strategies are related to the regulation of emotions, especially anxiety (Tunkay, Musabak, Gok & Kutlu, 2008). Maladaptive coping is positively associated with anxiety (Morales & Jacobson, 2018) and depression (Chou, Ko, Hsiao, Cheng & Yen, 2017). In contrast, correlation analysis in male participants revealed a positive correlation between anxiety and coping skills, and a negative association among coping skills and actual self-concept. When facing stressful conditions, the realization of the lack of control and the uncertainty of a situation may result in the activation of defensive coping or avoidance coping styles such as denial, mental disengagement, hostility, and focusing on and the venting of emotions, all of which are associated with anxiety (Chou et al., 2017). This may be because they are working to alter their own experience of negative emotions and events resulting from stressful sources in a way in which their manliness is not compromised or threatened, hence avoiding social disapproval and fitting social expectations. Ideals of masculinity often discourage men from awareness and expression of psychic pain and admission of weaknesses and vulnerabilities. The masking of emotional distress or problems may be a face-saving strategy for many men who are less skilled at emotional expression and bound by expectations that men must be strong and invincible (Falicov, 2003).

Self-concept and assertiveness were found negatively related to anxiety disorders in both genders, which lead to infer that "poor" thoughts regarding self could predict SA. These findings can be explained with SA Models because they stress the importance of negative self-perceptions in maintaining SA.

On the other hand, for females, indirect assertiveness and assertiveness were positively correlated with actual self-concept. Assertive or indirect assertive individuals have a higher self-concept because unassertive people tend to have more negative thoughts and physiological reactions associated with anxiety (González et al., 2018).

With respect to boys, the correlation analyses revealed that anxiety was positively correlated with must be self-concept. Congruence between ideal self-concept (i.e., representations of an individual's beliefs about his or her own or a significant other's hopes, wishes, or aspirations for the individual), must be self-concept (i.e., representations of an individual's beliefs about his or her own or a significant other's beliefs about the individual's duties, responsibilities, or obligations), and actual self-concept is associated with adequate psychological functioning and with an increase in well-being. Nonetheless, discrepancies amongst these types of self-concept are linked to lower indexes of self-esteem and well-being, and higher levels of distress (Lynch, La Guardia & Ryan, 2009). Discrepancies between the actual/own self-state (i.e., the self-concept) and ideal self-states signify the absence of positive outcomes, which is associated with dejection-related emotions (e.g., disappointment, dissatisfaction, sadness). In contrast, discrepancies between the actual/own self-state and ought self-states signify the presence of negative outcomes, which is associated with agitation-related emotions (e.g., fear, threat, restlessness) (Higgins, 1987; Hofmann, 2007).

Lastly, the negative correlation found between anxiety and depression in female participants contradicts existing research literature that states that anxiety and depression are highly comorbid disorders (Jacobson & Newman, 2014). Yet, these findings may be explained from a cultural point of view. In collective cultures and male-oriented societies such as the Mexican culture, women are oriented towards placing the needs of others ahead of themselves, in a manner that results in a 'silencing of the self' (Crowley-Jack, 1991). Consequently, women sacrifice to adapt to cultural specifications for their behaviour while simultaneously interpreting their inferior positions as due to internal shortcomings (Stoppard, 2000). As such, females may feel that they are not entitled to suffer from depression.

The main findings of our study- comorbidity of SA with anxiety disorders- underline the importance of early intervention strategies to prevent the development of other disorders. Clinicians should be vigilant for comorbidity in SA and should select treatments that target the full range of comorbid disorders. Early intervention or prevention of social fears or SA has the potential to reduce the risk of comorbid disorders. In addition, assertiveness was identified as an important significant protector factor against SA. Consequently, seeking to remedy behavioural deficits and to improve social interaction, assertive training should be promoted in schools, with parents, and be included in intervention programs in order for them to be efficient and sustainable.

Some of the limitations of this study were that results were exploratory rather than confirmatory. In fact, to the best of our knowledge, the researchers did not find regression models of SA with Mexican children. Methodological limitations include using stepwise regression analyses and elementary public school-based samples from a small area of Mexico City. Such a sample may have somewhat limited generalizability, and may partly exclude children with severe psychopathology (disruptive disorders, substance use, depressive or anxiety disorders), being absent from school, and adolescents. Likewise, the researchers only considered some of the factors commonly associated with SA without taking into account other variables as would be rearing practices, quality of social interactions, self-efficacy, self-esteem, family mental health disorders, substance use and abuse, quality of life, behavioural inhibition, and avoidance behaviour. Future studies should include these factors in order to obtain a better model for predicting SA and other assessment measures for SA. Finally, it is worth mentioning that this study adds to the body growing of literature of SA in Latin America.

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Ethical Statements

We would like to assert that we have abided by the Ethical Principles of Psychologists and the Code of Conduct as set out by the APA. Ethical approval was given by the Institutional Review Board of Monterrey Institute of Technology and Higher Education Mexico City. This review serves as the Mexican equivalent to an American IRB Review.

Conflict of Interest

The authors, Susana Castaños-Cervantes Ph.D. and Nicole Vélez-Agosto Ph.D., have no conflict of interest with respect to this publication.

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