

Cross-cultural comparison of anxiety symptoms in Colombian and Australian children

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Abstract

Introduction. This cross-cultural study compared both the symptoms of anxiety and their severity in a community sample of children from Colombia and Australia.

Method. The sample comprised 516 children (253 Australian children and 263 Colombian children), aged 8 to 12-years-old. The Spence Children's Anxiety Scale (SCAS) was used to measure both the symptoms and levels of anxiety. Confirmatory factor analysis was used to compare the samples.

Results. The results showed a significant difference in the severity of the symptoms between the children in the two countries. In general, Colombian children reported more severe symptoms than their Australian peers, however there were no difference in the types of symptoms reported by the children in the two countries.

Discussion and Conclusion. The implications of these findings and their importance to cross-cultural research are discussed.

Keywords: anxiety; children; Spence Children's Anxiety Scale; cross-cultural.

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Una comparación transcultural de síntomas de la ansiedad en niños colombianos y australianos

Resumen

Introducción. El presente estudio transcultural compara los síntomas de ansiedad y su severidad en una muestra de niños colombianos y australianos.

Método. Para ello se trabajó con una muestra de 516 niños (253 niños australianos y 263 niños colombianos) de edades comprendidas entre los 8 y 12 años, utilizando la Escala de Ansiedad para Niños de Spence para medir los síntomas y niveles de ansiedad. Se realizó un análisis factorial confirmatorio para comparar las muestras.

Resultados. Los resultados muestran que existe una diferencia significativa en la manera como los niños reportan los síntomas y niveles de ansiedad en los dos países. Los niños colombianos reportaron puntajes mayores en la mayoría de estos síntomas comparado con los niños australianos, aunque no se encontraron diferencias en los tipos de síntomas de ansiedad que presentan.

Discusión y Conclusiones. Las implicaciones de los resultados obtenidos e importancia de este estudio transcultural son discutidos.

Palabras Clave: ansiedad; niños; Escala de Ansiedad para Niños de Spence; transcultural

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Introduction

Anxiety is a necessary and appropriate response in a number of situations (Erickson, 1992), and prepares the body to react to threatening conditions. Fears of the dark, animals, heights and blood are, for example, common in childhood (King, Muris, & Ollendick, 2005) and considered to be mild and age-specific. Anxiety can therefore be viewed as a signal of impending danger (Erickson, 1992). However, excessive anxiety can become a disorder and persist into adulthood (McLoone, Hudson, & Rapee, 2006). Anxiety is common to most people throughout their lifespan, but it is only under some circumstances that anxiety manifests as being dysfunctional and pathological.

Much research has shown that anxiety disorders are the most common disorders in children and adolescents. Dadds, Seinen, Roth and Harnett (2000) found a prevalence rate of anxiety between 17% and 21% in young people of which 8% was serious enough to require treatment. Together with age, gender also is an important factor in the prevalence of anxiety in children and adolescents. At all ages, girls report higher levels of anxiety than boys (Vasey & Ollendick, 2000). Furthermore 50% of children who met diagnostic criteria for an anxiety disorder still retained this diagnosis two years later (Dadds, Holland, Laurens, Mullins, Barrett, & Spence, 1999).

There is also comorbidity between anxiety and depressive symptoms (Fernández-Castillo & Gutiérrez-Rojas, 2009; Seligman & Ollendick, 1999). These two disorders could be diagnosed at the same time in the same person, as they share some similar symptoms of irritability, fatigue, difficulty concentrating and sleep problems (Fernández-Castillo & Gutiérrez-Rojas, 2009). Other related disorders are eating disorders (anorexia and bulimia), selective mutism, elimination disorders (enuresis and encopresis) and social isolation (Kauffman & Landrum, 2009). Children with these disorders can display high levels of anxiety at home or in school, often developing academic and social problems.

Anxiety in children can have detrimental effects on the child's school performance. Fernández-Castillo & Gutiérrez-Rojas (2009) found that students with a high score in anxiety

levels showed low levels of selective attention as anxiety impairs performance on tasks requiring high attention or short-term memory. An anxious child would have less capacity to perform tasks satisfactorily as his/her anxiety consumes working memory's processing resources. Also, difficult tasks produce worries generating a negative relationship with performance (Chen & Chang, 2009).

The major aim of any cross-cultural study of anxiety disorders and their symptoms has been to understand the universality or specificity of anxiety across different cultures. To accomplish this goal, it is important to rely on valid assessment tools. The main anxiety measures are self-report questionnaires. Although there are many of these questionnaires such as the Revised Children's Manifest Anxiety Scale (RCMAS) (Gerard & Reynold, 2004) and the Multidimensional Anxiety Scale for children (MASC) (March, Parker, Sullivan, Stallings, & Conners, 1997), the main measure used in Colombia is the Screen for Child Anxiety Related Emotional Disorder (SCARED) (Birmaher *et al.*, 1999). However, the Spence Children's Anxiety Scale (SCAS) (Spence, Barrett, & Turner, 2003) is a widely used, reliable and valid measure (e.g. coefficient alpha of .92 for Essau, Muris, & Ederer, 2002; coefficient alpha of .92 for Spence *et al.*, 2003; and coefficient alpha of .89 for Nauta *et al.*, 2004) which assesses the frequency of symptoms relating to obsessive-compulsive disorder, separation anxiety, social phobia, panic/agoraphobia, generalised anxiety/overanxious disorder and fears of physical injury in children and adolescents. This scale also establishes the difference between anxious and non-anxious children, with sub-scale scores reflecting the type of presenting anxiety disorders in the participants (Spence *et al.*, 2003).

The SCAS has been psychometrically validated for many different cultures. It has been administered to 554 Mexican children aged 8-to-12 and its reliability and internal consistency have been confirmed for this population with the 32-item model the best fit (coefficient alpha of .88) (Hernández-Guzmán *et al.*, 2008). The SCAS has previously been translated into Spanish (Hernández-Guzmán *et al.*, 2008), however, there have been no studies of its psychometric properties for use with children in Colombia. It was also proposed to see whether girls express more anxiety than boys as is usually found (Vasey & Ollendick, 2000) and if fears decline with age (Castilla *et al.*, 2002). The first aim of the study was therefore to ascertain whether the SCAS is psychometrically valid to use with Colombian children as an alternative to the SCARED.

It is also known that anxiety is affected by culture. Culture not only affects adaptive and normative behaviours but also can influence the way some psychopathological symptoms are formed and explained by others (Yamamoto, Silva, Ferrari, & Nukariya, 1997). It is therefore important to understand that there are many cultural differences that can affect the way parents, teachers or psychologists recognise anxiety. Hence, in a particular culture a specific behaviour can be considered anxiety, while in another culture it can be seen as normal behaviour. For example, anxiety symptoms in Latino adolescents living in the United States have been compared with Colombian adolescents living in Colombia (Varela, Weems, Berman, & Rodriguez, 2007). It was found that there were cultural difference in beliefs and perceptions which could affect the way children and adolescents express anxiety symptoms. These cultural differences are related to the way Latino youth express their fears or distress. In Latino culture, it is unacceptable to express negative emotions or psychological problems, as this is seen as a weakness of character and leads to shame and social stigma (Varela *et al.*, 2007).

The second aim of this paper was therefore to explore if there were any differences in how children from Colombia and Australia expressed their fears by means of the SCAS. These countries were chosen as examples of a particularly violent environment in Colombia compared to a safer environment in Australia.

Colombia is considered one of the world's most violent nations and has one of the highest homicide rates compared to other countries (Moser & McIlwaine, 2004). Colombian children grow up used to danger and for them there are real reasons to worry. This then determines the way they see and analyse feelings, relationships, conflict, hazards and fears. Thus, some Colombian children may express fear of kidnapping of themselves or their family members or have nightmares about the conflict between the army and guerrillas. Those fears are based on a contextual reality, they may or may not happen, but they are there in their environment and are part of a different range of fear and worries children have (e.g., of the dark, separation anxiety, social phobia). In contrast, Australia is politically and economically stable, hence children could feel physically safer than Colombian children. It is hypothesized therefore that Colombian children could express more physical fears than Australian children and of greater severity.

Method

Participants

All participants (N= 516) were children between 8-to-12 years of age. The mean age of all the children was 10.04 (SD= 1.18), with 10.42 years (SD=1.15) in Australia and 9.69 years (SD=1.10) in Colombia. The Australian sample consisted of 253 (49%), included 151 (59.7%) girls and 102 (40.3%) boys. The Colombian sample consisted of 263 (51%), included 128 (48.7%) girls and 135 (51.3%) boys. The children in the Australian sample were in Years four to seven, drawn from six Catholic schools within the Brisbane area. The Colombian participants were in Years three to five, from five private schools in Bogota. Children in Australia were predominantly from Anglo-Saxon families, with English as their primary language. Students from Colombia were all from Latino families, with Spanish as their primary language.

Instrument

The Spence Children's Anxiety Scales, SCAS (Spence, 1998) is a questionnaire designed to examine anxiety symptoms in children. This scale has been reported to differentiate between clinically diagnosed anxious and non-anxious children. It consists of 44 items, 38 assess specific anxiety symptoms of separation anxiety, generalised anxiety, obsessive-compulsive disorder, panic attack, agoraphobia and physical injury fears. The other six items are "filler items" that reduce negative response bias (Spence *et al.*, 2003). Participants mark their answers on a four-point scale from Never (0) to Always (3). A total score is obtained by adding the scores of the 38 anxiety symptoms items. The psychometric properties of this self-report questionnaire have shown the scale to be reliable and valid (Spence, Barrett, & Turner, 2003). Previous studies have demonstrated high internal consistency and reliability (e.g. coefficient alpha of .92 for Essau *et al.*, 2002; coefficient alpha of .92 for Spence *et al.*, 2003; and coefficient alpha of .89 for Nauta *et al.*, 2004).

For the Colombian sample, the SCAS was translated from English to Spanish by a bilingual psychologist and was then back translated to the original by another bilingual psychologist. Individual minor discrepancies were noted and corrected (Hernández-Guzmán *et al.*, 2008).

Procedure

Ethical approval for the research was obtained in Australia from a university ethics committee and in Colombia, the permission was given by each school, as is common practice. Consent was obtained in Australian schools from both the parent and the child. In Colombian schools the schools' principals authorised the research.

The Australian children who participated in this research, completed the questionnaire during class time, had adequate English language skills as judged by their class teacher and returned a parental permission form. The Colombian children also completed the questionnaire at school, had adequate Spanish skills and a permission form was returned and signed by the school principal, as required in Colombia.

In both countries, participants completed the questionnaires individually, during class time. The instructions were read out aloud to all students. Students were informed that all questionnaires responses were confidential. The questionnaire was completed by the students in approximately 10 to 20 minutes.

Results

Confirmatory factor analysis

The program LISREL 8.71 (Jöreskog & Sörbom, 2004) was used to confirm the factor structure of the SCAS for each of the Australian and Colombian samples. For these analyses, maximum likelihood (ML) estimation was applied to the covariance matrices. As the data were non-normally distributed and with high kurtosis, the Satorra-Bentler (S-B) χ^2 will be reported as an unadjusted χ^2 can inflate the ML estimation (Tabachnick & Fidell, 2007). Following inspection of the overall model S-B χ^2 , a number of fit indices are generally considered in evaluating the fit of the model to the data. These include χ^2/df where values <2 indicate a good fit; the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) where values $>.90$ indicate good fit; and the Root Mean Square

Residual (RMR) and Root Mean Square Error of Approximation (RMSEA) where values $<.08$ suggest adequate fit.

Table 1 presents the goodness-of-fit indices for the Australian and Colombian models from the present study as well as those reported by Spence *et al.* (2003) for comparison. The models were established so that each questionnaire item loaded uniquely on its hypothesized latent factor and the 6 factors were allowed to intercorrelate. Table 2 presents the standardized factor loadings for each SCAS item. As can be seen from Table 1, both models demonstrated a good fit to the data with $X^2/df < 2$; NFI, NNFI, and CFIs $> .90$; and RMR and RMSEA $< .08$ (or close to). The indices are also similar to those reported by Spence *et al.* (2003). With respect to the factor loadings, all were statistically significant except for one item which failed to load on its hypothesized factor in the Australian data (Item 7, "I feel afraid if I have to use a public toilet or bathroom." failing to load on Social Phobia).

Table 1. *Fit indices for comparisons between Colombian and Australian models and Spence et al. (2003) six correlated factor model*

Model	X^2	df	p	NFI	NNFI	CFI	RMR	RMSEA
Colombian data (n=263)	889.92	650	$<.001$	.94	.98	.98	.089	.038
Australian data (n=251)	912.51	650	$<.001$	.93	.98	.98	.038	.040
Spence et al. (2003) (n=875)	1634.00	650	$<.001$	.94	.96	.97	.052	.042

Internal consistency and reliabilities

The reliabilities for each of the SCAS sub-scales and full scale are presented in Table 3. As can be seen from this table, the alphas for each scale for each country are similar to those of the original Spence *et al.* (2003) alphas except for the physical injury fears scale for the Colombian sample. It should also be noted that the alphas from the Colombian data are generally equivalent or slightly lower than the Australian data except for, again, the physical injury fears scale.

Australia and Colombia anxiety data

Children in Colombia and in Australia reported significantly different levels of severity of anxiety symptoms, $t(514) = 13.00, p < .001$. Colombian children ($M = 36.65, SD = 16.75$) scored significantly higher than the Australian children ($M = 19.00, SD = 13.90$).

For each of the sub-scales, there was also a significant difference between the Colombian and Australian children, except for the physical injury fears sub-scale -- for panic attack and agoraphobia, $t(514) = 9.2, p < .001$, for separation anxiety, $t(514) = 11.7, p < .001$, for social phobia, $t(514) = 12.4, p < .001$, for obsessive compulsive, $t(514) = 12.25, p < .001$ and for generalized anxiety disorder/overanxious disorder $t(514) = 12.13, p < .001$. As can be seen in Figure 1, the Colombian children scored significantly higher in these sub-scales than did the Australian children. However, there was no difference in the types of symptoms reported by the children in the two countries.

Table 2. *Confirmatory factor analysis loadings of SCAS items on predicted six factors for Colombian data (with Australian data in brackets)*

	Factor loadings					
	Separation anxiety	Social phobia	Obsessive compulsive	Panic / Agoraphobia	Physical injury fears	Generalized anxiety
5. I would feel afraid of being on my own at home.	.76 (.56)					
8. I worry about being away from my parents.	.56 (.65)					
12. I worry that something awful will happen to someone in my family.	.43 (.53)					
15. I feel scared if I have to sleep on my own.	.71 (.63)					
16. I have trouble going to school in the mornings because I feel nervous or afraid.	.53 (.37)					
44. I would feel scared if I had to stay away from home overnight.	.67 (.67)					
6. I feel scared when I have to take a test.		.47 (.62)				
7. I feel afraid if I have to use a public toilet or bathroom.		.34 (.16)				
9. I feel afraid that I will make a fool of myself in front of people.		.71 (.66)				
10. I worry that I will do badly at my school work.		.56 (.64)				
29. I worry what other people think of me.		.68 (.69)				
35. I feel afraid if I have to talk in front of my class.		.57 (.54)				
14. I have to keep checking that I have done things right (like the switch is off, or the door is locked).			.51 (.42)			
19. I can't seem to get bad or silly thoughts out of my head.			.46 (.67)			
27. I have to think of special thoughts to stop			.70			

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bad things from happening (like numbers or words).	(.68)	
40. I have to do some things over and over again (like washing my hands, cleaning or putting things in certain order).	.39 (.46)	
41. I get bothered by bad or silly thoughts or pictures in my mind.	.69 (.74)	
42. I have to do some things in just the right way to stop bad things happening.	.54 (.62)	
13. I suddenly feel as if I can't breathe when there is no reason for this.	.66 (.54)	
21. I suddenly start to tremble or shake when there is no reason for this.	.70 (.61)	
28. I feel scared if I have to travel in car or on bus or train.	.49 (.46)	
30. I am afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds).	.55 (.45)	
32. All of a sudden I feel really scared for no reason at all.	.79 (.78)	
34. I suddenly become dizzy or faint when there is no reason for this.	.64 (.42)	
36. My heart suddenly starts to beat too quickly for no reason.	.72 (.66)	
37. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of.	.68 (.75)	
39. I am afraid of being in small places, like tunnels or small rooms.	.47 (.44)	
2. I am scared of the dark.	.76 (.55)	
18. I am scared of dogs.	.20 (.33)	
23. I am scared of going to the doctors or dentist.	.33 (.59)	
25. I am scared of being in high places or lifts (elevators).	.44 (.60)	
33. I am scared of insects or spiders.	.46 (.49)	
1. I worry about things		.44 (.65)
3. When I have a problem, I complain of having a funny feeling in my stomach.		.54 (.57)
4. I complain of feeling afraid.		.49 (.41)
20. When I have a problem, my heart beats really fast.		.68 (.60)
22. I worry that something bad will happen to me.		.65 (.67)
24. When I have a problem, I feel shaky.		.70 (.70)

Gender differences

Taking the combined data from the two countries, there were gender differences in reports of anxiety based on the total score on the SCAS, $t(514) = 2.65, p < .044$ with girls ($M=29.90, SD= 18.86$) scoring significantly higher than boys ($M=25.76, SD= 16.10$). In each sub-scale there were also significant differences between girls and boys except for the social phobia and obsessive compulsive sub-scales -- for panic attack and agoraphobia, $t(514) = 2.02, p < .044$, separation anxiety, $t(514) = 2.64, p < .009$, physical injury fears, $t(514) = 4.57, p < .001$, and generalized anxiety disorder/overanxious disorder $t(514) = 3.07, p < .002$. As can be seen in Table 4, girls scored significantly higher than boys in these sub-scales.

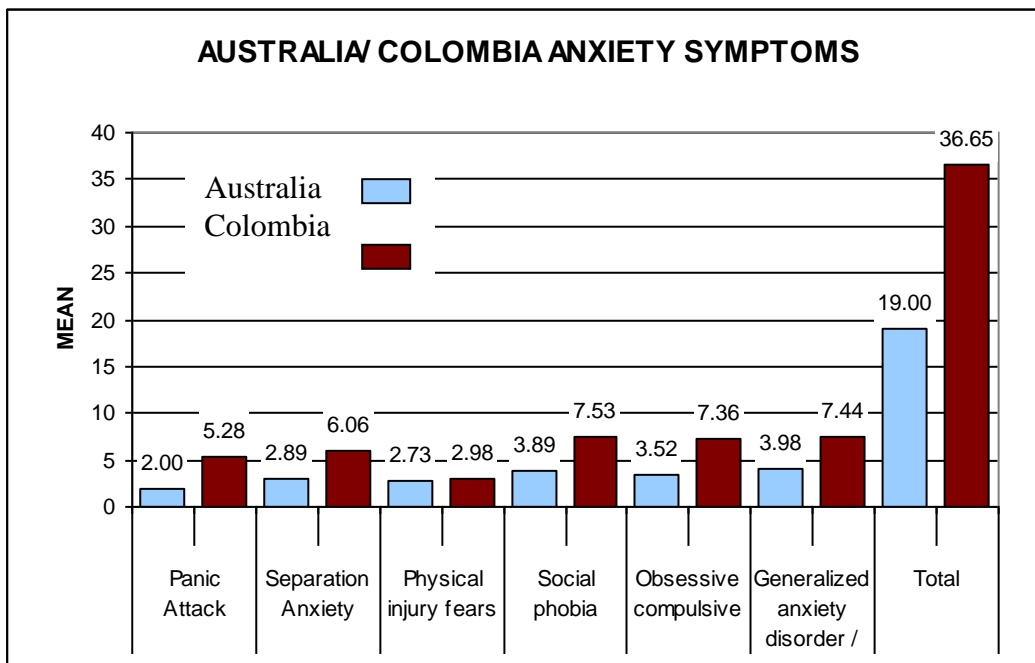


Figure 1. Australian and Colombian children’s reports of anxiety symptoms.

Gender differences were also explored within each country. For the Australian sample, girls reported a significantly higher number of symptoms than did boys on separation anxiety, $t(251) = 3.22, p < .01$, physical injury fears, $t(251) = 3.52, p < .01$, social phobia, $t(251) = 3.31, p < .01$, generalized anxiety disorder, $t(251) = 3.96, p < .01$, and total score, $t(251) = 3.23, p < .01$. For the Colombian sample, girls similarly reported significantly higher anxiety symptoms on all scales except for obsessive-compulsive, all $t_s (261) \geq 2.01$, all $p_s < .05$. Descriptive data for these analyses are presented in Table 4.

The present analysis is similar to the original analysis of Spence *et al.*'s (2003) where a significant effect for gender, ($F(1,874) = 48.04, p < .001$), also existed as girls tended to report a higher number of symptoms than boys for all sub-scale except obsessive-compulsive symptoms.

Table 4. *Descriptive statistics (means with standard deviations in brackets) for SCAS sub-scale scores by country and gender*

SCAS Scales	Country	
	Australia	Colombia
Panic attack		
Boys	1.70 (2.65)	4.43 (3.94)
Girls	2.21 (3.32)	6.17 (5.34)
Total	2.00	5.28
Separation anxiety		
Boys	2.21 (1.98)	5.48 (2.94)
Girls	3.35 (3.21)	6.68 (3.61)
Total	2.89	6.06
Physical injury fears		
Boys	2.08 (2.18)	2.53 (2.32)
Girls	3.17 (2.58)	3.46 (2.40)
Total	2.73	2.98
Social phobia		
Boys	3.14 (2.64)	7.10 (3.41)
Girls	4.40 (3.18)	7.98 (3.77)
Total	3.89	7.53
Obsessive compulsive		
Boys	3.41 (3.04)	7.08 (3.61)
Girls	3.59 (3.51)	7.66 (3.94)
Total	3.52	7.36
Generalized anxiety disorder		
Boys	3.11 (2.40)	6.79 (3.32)
Girls	4.56 (3.14)	8.12 (3.56)
Total	3.98	7.44

Total score		
Boys	15.64 (10.96)	33.41 (15.14)
Girls	21.28 (15.19)	40.07 (17.72)
Total	19.00	36.65

Age relationships

Across the two countries age was significantly correlated with overall anxiety scores, $r = -.23, p < .001$. As the children’s age increased, anxiety scores decreased. For each sub-scale, this pattern of significant negative correlations continued -- panic attack, $r = -.18, p < .001$, separation anxiety, $r = -.29, p < .001$, social phobia, $r = -.11, p < .001$, obsessive compulsive, $r = -.24, p < .001$, generalized anxiety disorder, $r = -.18, p < .001$. Only the physical injury sub-scale was not significantly related to age.

For the Australian children, significant relationships for age existed for reports of panic attack, separation anxiety, obsessive compulsive and total score (see Table 5). However, for the Colombian children, significant relationships for age were only evident for separation anxiety and physical injury fears (see Table 6).

Table 5. *Correlation with age and the SCAS sub-scales for Australian children*

	AGE						Total
	Panic Attack	Separation anxiety	Physical injury fears	Social phobia	Obsessive compulsive	Generalized anxiety disorder	
Overall	-.18*	-.29**	-.07	-.11*	-.24**	-.18**	-.23**
Australia	-.12*	-.21**	.05	.05	-.19**	-.10	-.12*

* $p < .05$ ** $p < .001$

Table 6. *Correlation with age and the SCAS sub-scales for Colombian children*

	AGE						Total
	Panic Attack	Separation anxiety	Physical injury fears	Social phobia	Obsessive compulsive	Generalized anxiety disorder	
Overall	-.18*	-.29**	-.07	-.11*	-.24**	-.18**	-.23**
Colombia	-.04	-.16**	-.13*	.05	-.05	.01	-.06

* $p < .05$ ** $p < .001$

Discussion and Conclusions

This cross-cultural research is the first comparing Colombian and Australian children, using the SCAS to measure anxiety symptoms. The Screen for Child Anxiety Related Emotional Disorder (SCARED) is usually used by Colombian psychologists. The factor structure of the SCAS proposed by Spence *et al.* (2003) was confirmed in the present study for both the Colombian and the Australian samples. The model fit indices were comparable across samples and with Spence *et al.* Only one item across both samples failed to load significantly on its hypothesized factor. This study also compared self-reported anxiety symptoms and severity in children aged 8-to-12-years-old from Colombia and Australia. Results showed that Colombian children reported significantly higher severity of anxiety symptoms than did Australian children ($M= 36.65$ for Colombian children against $M= 19.00$ for Australian children). However, the results showed there were no differences in the types of symptoms reported by the children.

This significant difference in severity of self-reported anxiety of Colombian children was confirmed. This could be explained by the environmental factors and the contextual violence that Colombian children experience every day. Colombia is considered one of the world's most violent nations and has one of the highest homicide rates compared to other countries (Moser & McIlwaine, 2004). Colombian children grow up used to danger and for them there are real reasons to worry. Thus, some Colombian children may express fear of kidnapping of themselves or their family members or have nightmares about the conflict between the army and guerrillas. Those fears are based on a contextual reality, they may or may not happen, but they are there in their environment and are part of a different range of fear and worries children have (e.g., of the dark, separation anxiety, social phobia). In contrast, Australia is politically and economically stable; hence children could feel physically safer than Colombian children. These results could be actually underestimated as it is known that, verbal expression of negative emotions or psychological problems including anxiety could be considered a weakness of character and could cause shame or emotional restraint in Colombian children (Varela *et al.*, 2007).

Interestingly, this research's findings showed significantly lower anxiety severity scores for the Australian children ($M= 19.00$) than previous Australian samples ($M = 28.59$,

Spence, 1998). However, even compared to a study in the Netherlands, this sample of Colombian children still reported higher levels of anxiety ($M=36.65$), than Dutch children ($M=18.11$) (Muris, Schmidt, & Merckelbach, 2000).

The reasons for these significant differences are unclear, but some possible explanations are proposed. First, there could be methodological differences between this study and Spence *et al.*'s (2003), which could be explored in future studies. Second, the different environmental and contextual factors between countries may affect the way children respond to the questionnaires. Australian and Colombian girls reported higher levels of anxiety than did Australian and Colombian boys. This finding supports previous research and literature that affirmed the tendency of girls to report higher anxiety levels than boys (Castilla *et al.*, 2002; Vasey & Ollendick, 2000). In both countries, there was a significant relationship between anxiety and age with increasing age being related to decreasing reporting of anxiety symptoms. Between countries, there were differences in the relationship across the sub-scale scores. For example, there was no relationship between age and physical injury fear in the Australian sample; and there was a negative relationship in the Colombian sample. As stated previously, the greater anxiety in younger children in Colombia could be the local issues surrounding of kidnapping, insecurity on the streets and physical violence (Castilla *et al.*, 2003). Interestingly, the five items deleted in the analysis of the Colombian sample data all reflected fears and anxiety in public places. Further analysis is required to determine why these items might load on a specific item that may be reflective of the Colombian context and culture.

A limitation of the present study relates to the sample. The findings cannot be generalised to clinical samples or other age groups such as younger children and adolescents as the present samples were not clinical populations. However, the results of this study do provide important information about the differences between both sample groups and may be useful for further studies.

In addition, this study did not establish the socio-economic background of its Colombian and Australian participants. It is suggested that the Spanish version of the SCAS is administered to in a larger sample of Colombian children from all socio-economic backgrounds. In Latin American culture the differences between socio-economic classes is evident, and as shown in other studies children from lower classes are reported to perceive fears and threatening situations differently to children from upper classes (Spielberger & Diaz-Guerrero, 1990).

It would also be also interesting to use other measures than self-report to confirm these results.

In conclusion, this study shows that the SCAS has good psychometric properties to use as an alternative self-report questionnaire with Colombian children. The results also show that there are significant differences between Colombian and Australian children in severity but not type of anxiety symptoms. The results suggest the need for more research in Colombia involving children from all the socio-economic backgrounds to obtain information about anxiety. In general, the results of this study may provide more information about anxiety disorders in different cultures, which could assist psychologists or health professionals to understand anxious children from different backgrounds and cultures.

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