RESEARCH ARTICLE

A French Translation of the Childhood Anxiety Sensitivity Index (CASI): Factor Structure, Reliability and Validity of This Scale in a Nonclinical Sample of Children

C. Stassart* and A. M. Etienne*

Introduction: Anxiety sensitivity (AS) refers to the fear of anxiety-related sensations due to beliefs that these sensations will lead to catastrophic outcomes. AS plays a central role in the etiology and maintenance of anxiety disorders. From a clinical perspective, it therefore seems important to possess a valid scale to assess AS in children. **Objective, Method:** This study examines the factor structure, reliability, and validity of the French translation of the Childhood Anxiety Sensitivity Index (CASI) in 353 Belgian children (9 to 13 years). **Result:** Results show that AS can be adequately measured using the French version of the CASI and conceptualized as a hierarchical factor structure with four lower-order factors – Physical Concerns, Mental Incapacity Concerns, Social Concerns, and Losing Control Concerns – loading on a single higher-order factor, Anxiety Sensitivity. The reliability was acceptable for the total scale. Hierarchical multiple regressions show that the CASI makes a significant contribution in predicting anxiety. **Conclusion:** The data support the relevance of the French CASI in the assessment of AS in nonclinical children.

Introduction

Reiss and McNally (1985) define the anxiety sensitivity (AS) as the fear of anxiety-related bodily sensations due to beliefs that these sensations will lead to catastrophic outcomes such as physical illness, social embarrassment, loss of control and mental incapacitation. Since the 1980s, this concept has attracted the attention of many researchers because of the central role that AS plays in the etiology and maintenance of anxiety pathologies (e.g., Anderson & Hope, 2009; Leen-Feldner, Feldner, Reardon, Babson, & Dixon, 2008), depression (e.g., Weems, Hammond-Laurence, Silverman, & Ferguson, 1997), and chronic pain (e.g., Tsao, Meldrum, Kim, & Zeltzer, 2007) in child populations. Given the high prevalence of anxiety disor-

* University of Liège, Belgium
  cstassart@ulg.ac.be, AM.Etienne@ulg.ac.be
Corresponding author: C. Stassart

ders among youth – some 10% (Silverman & Treffers, 2001) – it is important to have valid instruments to measure AS, whether for clinical or preventive reasons.

However, this concept has mainly been studied in adults and relatively little in children. After evidence of the importance of AS in adults had accumulated, some researchers investigating anxiety disorders in childhood turned their attention to the study of AS in children (Silverman, Fleisig, Rabian, & Peterson, 1991). Several authors have questioned whether AS can even exist in young children because of their level of cognitive development (e.g., Chorpita, Albano, & Barlow, 1996), while others have argued that the association between bodily sensations and harmful consequences might be rare in children. This does not mean that children have cognitive difficulties interpreting physical symptoms as catastrophic (Weems, Hammond-Laurence, Silverman, & Ginsburg, 1998). Muris, Mayer, Freher, Duncan, and van den Hout (2010) demonstrated in their study that, between the ages of 4 and 13, a substantial proportion of children were able to perceive their physical symptoms as signals of anxiety. Moreover, even if children are not able to make internal attributions, they can learn by observation or by conditioning that anxious symptoms can lead to unpleasant consequences (Weems et al., 1998).

Silverman et al. (1991) developed the Childhood Anxiety Sensitivity Index (CASI), a self-report scale to assess AS in children and adolescents aged 6 to 17 years. The CASI consists of 18 items, 16 of which are identical to items in the adult Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky, & McNally, 1986). Some items were modified to enhance children's comprehension. Silverman et al. (1991) obtained good internal consistency for their inventory (α = 0.87) and good test-retest reliability in both nonclinical (r = .76) and clinical samples (r = .79). Other studies have reported similar internal consistencies (Chorpita & Daleiden, 2000; Weems et al., 1997). The CASI has been translated into several languages (see

Table 1) and these versions show good reliability (α ranging from .77 to .89) and validity indices. An additional measure of child AS has since been developed and used to assess this construct in children: a revised version of the Childhood Anxiety Sensitivity Index (CASI-R; Muris, 2002). The CASI-R consists of 31 items – 8 items from the original CASI and 23 items from the Revised Anxiety Sensitivity Index (ASI-R; Taylor & Cox, 1998; revised AS index for adults) – and was developed to improve the scale's factor structure. Two studies have investigated the psychometric qualities of this revised version: Muris (2002) for the Dutch version and Stassart, Hansez, Delvaux, Depauw, and Etienne (2013) for the French version. These authors showed that the scale had satisfactory reliability and validity. Muris (2002) suggested that the CASI-R could not be used with children younger than [12 years] because they might find it difficult to understand some of the items, such as those that mention heart attack and stroke. For those children, he suggested the use of the CASI, which is shorter. In fact, in the literature, the CASI is the most frequently used scale to measure AS in children.

The factor structure of AS scales has been subject to dispute in the past. Some studies reported a one-dimensional structure that could be perceived as a fundamental fear (McNally, 1999; Reiss, 1991; Taylor, Koch, & Crockett, 1991). Other studies proposed a multidimensional construction with four factors (e.g., Telch, Shermis, & Lucas, 1989; Wardle, Ahmad, & Hayward, 1990): (1) fear of cognitive symptoms (dizziness and derealization), (2) fear of cardiopulmonary sensations (palpitations), (3) fear of gastrointestinal sensations (nausea), and (4) fear of loss of emotional control and behavioral symptoms (shaking). Another model has also been imposed: a hierarchical model with several lower-order factors loading on one higher-order factor (anxiety sensitivity). This model reconciles the two earlier ones: those authors who identified a one-dimensional structure of the AS focused more on the upper level of

Authors	Sample	Instrument: Number of Items and Language	Factor Label and Items			
			I	II	III	IV
North American studies						
Chorpita & Daleiden (2000)	Nonclinical N = 228 (7–17 years)	18 English	Autonomic Scale 3, 4, 6, 7, 8, 9, 10, 11, 14, 15, 16, 18	Non-Autonomic Scale 1, 2, 5, 12, 13, 17		
Walsh, Stewart, McLaughlin, & Comeau (2004)	Nonclinical N = 1698 (mean age = 14.3 (2.8))	18 English	Physical Concerns 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 16, 18	Psychological Concerns 2, 12, 15	Social/Control Concerns 1, 5, 17	
Wright et al. (2010)	Nonclinical N= 677 (7–17 years)	18 English	Physical Concerns 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 16, 18	Psychological Concerns 2, 12, 15	Social Concerns 1, 5, 17	
Silverman, Ginsburg, & Goedhart (1999)	Nonclinical N = 249 (7–12 years)	18 English	Physical Concerns 3, 6, 9, 10, 11, 14, 16, 18	Mental Incapacity Concerns 2, 12, 13, 15	Concerns about Publicly Observable Symptoms 1, 4, 5, 7, 8, 17	
			Physical Concerns 3, 6, 9, 11, 14, 16, 18	Mental Incapacity Concerns 2, 12, 13, 15	Social Concerns 1, 17	Control 4, 5, 7, 8, 10
Lambert, Cooley, Campbell, Benoit, & Stansbury (2004)	Nonclinical N = 144 (8–11 years)	18 English	Physical Concerns 4, 6, 9, 10, 14	Mental Incapacity Concerns 2, 7, 13, 15, 18	4 uninterpretable factors 1, 3, 5, 8, 11, 12, 16, 17	
Silverman, Goedhart, Barrett, & Turner (2003)	2 nonclinical N = 767 (7–15 years) N = 249 (7–12 years) Clinical N = 258 (7–16 years)	13 English	Disease Concerns 3, 6, 9, 11	Mental Illness Concerns 2, 12, 15	Social Concerns 1, 5, 17	Unsteady Concerns 4, 8, 10

Authors	Sample	Instrument: Number of Items and Language	Factor Label and Items			
			I	II	III	IV
Laurent, Schmidt, Catanzaro, Joiner, & Kelley (1998)	3 nonclinical N = 95 (9–15 years) N = 112 (9–14 years) N = 144 (11–15 years)	12 English	Fear of Physiological Arousal 2, 3, 4, 6, 9, 12, 14, 15, 16	Fear of Mental Catastrophe 8, 10, 11		
Deacon, Valentiner, Gutierrez, & Blacker (2002)	Nonclinical N = 308 (12–18 years)	12 English	Physical Concerns 3, 4, 6, 8, 9, 10, 11, 14	Mental Concerns 2, 12, 15, 16		
European studies						
Sandín, Chorot, Santed, & Valiente (2002)	Nonclinical N = 151 (9–11 years)	18 Spanish	Somatic Concerns 4, 6, 8, 9, 10, 11, 14, 18	Mental Concerns 1, 2, 3, 12, 13, 15, 16, 17		
			Somatic Concerns 4, 6, 9, 10, 11, 14, 18	Mental Concerns 2, 12, 13, 15, 16	Social/Control Concerns 1, 3, 5, 7, 8, 17	
Van Widenfelt, Siebelink, Goedhart, & Treffers (2002)	Nonclinical N = 544 (8–16 years)	18 Dutch	Physical Concerns 3, 6, 9, 10, 11, 14, 16, 18	Mental Concerns 2, 12, 13, 15	Publicly Observable Concerns 1, 4, 5, 7, 8, 17	
Essau, Sasagawa, & Ollendick (2010)	Nonclinical N = 1292 (12–17 years)	18 German	Physical Concerns 3, 4, 6, 7, 8, 9, 10, 13, 14, 18	Mental Concerns 2, 11, 12, 15, 16	Social/Control Concerns 1, 5, 17	
Jokić-Begić, Jurin, & Lauri Korajlija (2012)	Nonclinical N = 1679 (10–17 years)	18 Croatian	Physical Concerns 4, 6, 7, 8, 9, 10, 11, 13, 14, 18	Psychological Concerns 2, 12, 15	Social Concerns 1, 5, 17	

Contd.

Authors	Sample	Instrument: Number of Items and Language	Factor Label and Items			
			I	II	III	IV
Muris, Schmidt, Merckelbach, & Schouten (2001)	Nonclinical N = 819 (13–16 years)	18 (two items not classified)	Fear of Physiological Arousal 4, 6, 8, 9, 10, 11, 14	Fear of Mental Incapacity 2, 3, 12, 15, 16	Fear of Losing Control and Social Evaluation 1, 5, 7, 13	
		Dutch	Fear of Physiological Arousal 3, 4, 6, 8, 9, 10, 11, 14	Fear of Mental Incapacity 2, 12, 15, 16	Fear of Social Evaluation 7, 13	Fear of Losing Control 1, 5
Fullana, Servera, Weems, Tortella-Feliu, & Caseras (2003)	Nonclinical N = 291 (mean age = 13.7 (1.6))	18 Catalan	Physical Concerns 3, 7, 8, 10, 11	Cognitive Symptoms 2, 12, 16	Social Concerns 1, 5, 17	2 uninterpretable factors 4, 13, 15, 6, 9, 14, 18
Adornetto et al. (2008)	4 nonclinical N = 1244, N = 225, N = 230, N = 143 (8–16 years)	13 German	Disease Concerns 3, 6, 9, 11, 14, 16, 18	Mental Incapacity Concerns 2, 12, 13, 15	Social Concerns 1, 17	Unsteady Concerns 4, 5, 7, 8, 10

Table 1: Overview of Factor Analyses of the Childhood Anxiety Sensitivity Index (CASI).

the hierarchical model while the ones who claimed a multidimensional structure paid more attention to the lower levels. Currently, the hierarchical construct with several lower-order factors loading on one higher-order factor (anxiety sensitivity) is generally accepted by most researchers and appears stable across both clinical and nonclinical populations (Zinbarg, Mohlman, & Hong, 1999). However, although different authors have agreed that AS has a hierarchical structure in children, they do not agree on the number and nature of factors. In addition, the number of items composing the CASI differs for different authors: some consider that the 13-item model is the best-fitting one, while others prefer the 18-item model or the 12-item model. **Table 1** summarizes the different studies that have conducted a factor analysis of the CASI.

These differences in the factor structure of the CASI can be explained by different causes such as the version used (18-, 13-, or 12-item versions), the origin of the sample (different nationalities), different methods of analysis, or a problem with the translation of the scale. Despite the differences, some similarities appear. All the authors distinguish between the factor representing the fear of physiological symptoms and factors representing mental, social and control concerns. Moreover, some items are always associated with the same factor: items 6, 9, 10, 11, and 14 with the physical concerns factor; items 2, 12, and 15 with the mental concerns factor; and items 1, 5, and 17 with the social concerns factor.

This study aims to define a factor structure for AS as assessed by the French version of the CASI. In order to contribute additional information to the debate about the number and nature of first-order factors, a first exploratory factor analysis was studied in a Belgian sample. We hypothesized that a three- or four-factor solution would be most valid. Then we tested two other models: (1) the pre-existing factor solution of Silverman et al. (1999, with the 18-item CASI) because this initial solution is still widely used for the original version of the CASI and was confirmed by Muris et al. (2001); and (2) the factor solution of Silverman et al. (2003, with the 13-item CASI) because these authors found that the 13-item version offers a better factor structure for AS from an empirical and theoretical point of view. Moreover, these two solutions were also chosen above the others presented in **Table 1** because the literature focuses more on hierarchical models with three or four first-order factors than two first-order factors.

Method
Participants
Data were collected from two samples recruited from several regular primary and secondary schools in the area of Liège (Belgium) by the same independent experimenters in different conditions. A first sample of 153 children, aged 9 to 13 years (64 boys, M = 10.6 years, SD = 1.20; 89 girls, M = 10.4 years, SD = 1.10), responded to the CASI in a study of the exploratory factor analysis of this scale. The second sample, comprising 200 children also aged 9 to 13 years (95 boys, M = 10.6 years, SD = 1.17; 105 girls, M = 10.7 years, SD = 1.27), was used for the confirmatory factor analysis and the evaluation of the psychometric qualities of the French version of the CASI. This second sample responded to all the questionnaires described in this study. The participants and their parents gave informed consent prior to the start of the study. To target a large population, participants were recruited in schools, but the children completed the questionnaires at home in order not to encroach on school time. The questionnaires were administered in a standardized way to children at home without their parents being present. Administration time was 5 minutes for the first sample and 40 minutes for the second sample.

Measures
Childhood Anxiety Sensitivity Index (CASI; Silverman et al., 1999)
The CASI is an 18-item questionnaire using a 3-point response scale designed to assess AS in children. Scores on the CASI can range

from 18 to 54, with higher scores reflecting more AS. The internal consistency of the total CASI score was good (Cronbach's α = .87): the Cronbach's alphas for the separate dimensions of AS ranged from .33 to .82. The analysis of the scale's validity appeared satisfactory (Silverman et al., 1999). The French translation used in this study was produced by Vanasse, Houde-Charron, and Langlois (2010). These authors found satisfactory validity and good internal consistency, with a Cronbach's alpha of .87 (Vanasse et al., 2010).

State-Trait Anxiety Inventory for Children (STAIC; Spielberger, Edwards, Lushene, Montuori, & Platsek, 1973; translated by Turgeon & Chartrand, 2003)

The STAIC consists of two 20-item scales using a 3-point response scale: a State scale, which measures transitory anxiety reactions to particular situations, and a Trait scale, which measures a stable predisposition to react anxiously, regardless of the situation. The detailed instructions, normative data, and various reliability and validity parameters (internal consistency and concurrent validity) for this scale are summarized by Spielberger et al. (1973) for the English version and by Turgeon and Chartrand (2003) for the French version. In this study, Cronbach's alpha was .77 for the trait scale and .79 for the state scale, indicating acceptable internal consistency.

Results
Factor Structure of the CASI
Exploratory Factor Analysis (with Extraction of Principal Components)

The exploratory factor analysis was done with STATISTICA 9 (StatSoft, 2010). The number of factors retained was decided using the following criteria: (1) Kaiser's (1961) criterion of retaining factors with unrotated eigenvalues of approximately 1 or greater, (2) the scree test (Cattell, 1966), and (3) the interpretability of the resulting factor structure (Gorsuch, 1983). Six factors with eigenvalues greater than 1 emerged, but the scree test and the interpretability of the factor structure sug-

gested that a three- or four-factor solution was more valid; see **Table 2** (Tabachnick & Fidell, 2001).

The three-factor model accounted for 39.10% of the total variance. The first factor corresponded to physical concerns, the second factor to mental incapacity concerns, and the third factor to social concerns. The significant interfactor correlation between Factors 1 and 2 was .63, for Factors 2 and 3 it was .34, and for Factors 1 and 3 it was .36.

The four-factor model accounted for 45.50% of the total variance. The first factor corresponded to the physical concerns scale, the second factor to mental incapacity concerns, the third factor to social concerns, and the fourth factor to loss of control. The interfactor correlations were all significant: between Factors 1 and 2 (r = .53), 1 and 3 (r = .33), and 1 and 4 (r = .50); between Factors 2 and 3 (r = .18), and 2 and 4 (r = .32); and between Factors 3 and 4 (r = .26).

Confirmatory Factor Analysis

The confirmatory factor analysis (CFA) was done with LISREL 8.80 (Jöreskog & Sörbom, 2006). The estimation of Robust Maximum Likelihood (RML) was applied to the covariance matrices. Goodness-of-fit indices of six models are presented in **Table 3**. The four-factor solution resulting from our exploratory factor analysis (EFA) was the best solution and provided the best fit to the data (**figure 1**). This model had the lowest Root Mean Square Error of Approximation (RMSEA), χ^2/df values and the highest Normed Fit Index (NFI), Non-Normed Fit Index (NNFI) and Comparative Fit Index (CFI) values. The χ^2 difference test could not be used for the comparisons between models resulting from EFA and other models because these models were not nested, and thus the Expected Cross Validation Index (ECVI) and Akaike Information Criterion (AIC) values were used. Given that the ECVI and AIC values depend on the number of parameters to estimate,[1] these values were compared separately to the model with the 18-item CASI and the model with the 13-item CASI.

Items	Three-Factor Model			Four-Factor Model			
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3	Factor 4
1. I don't want other people to know when I feel afraid			.74			.71	
2. When I cannot keep my mind on my schoolwork, I worry that I might be going crazy		.50			.47		
3. It scares me when I feel "shaky"	.59			.50			
4. It scares me when I feel like I am going to faint	.46						.62
5. It is important for me to stay in control of my feelings			.43			.44	
6. It scares me when my heart beats fast	.65			.67			
7. It embarrasses me when my stomach growls	.29			.28			
8. It scares me when I feel like I am going to throw up		.55					.67
9. When I notice that my heart is beating fast, I worry that there might be something wrong with me	.64			.65			
10. It scares me when I have trouble getting my breath	.54			.54			
11. When my stomach hurts, I worry that there might be something wrong with me		.38					.65
12. It scares me when I can't keep my mind on my schoolwork		.66			.72		
13. Other kids can usually tell when I feel shaky		.22					.45
14. Unusual feelings in my body scare me	.74			.75			
15. When I am afraid, I worry that I might be crazy.		.41			.52		
16. It scares me when I feel nervous		.62			.61		
17. I don't like to let my feelings show			.81			.81	
18. Funny feelings in my body scare me	.71			.65			
Eigenvalue	4.18	1.61	1.25	4.18	1.61	1.25	1.15
% Explained Variance	(23.20%)	(8.93%)	(6.97%)	(23.20%)	(8.93%)	(6.97%)	(6.41%)

Note. n = 153. EFA = Exploratory Factor Analysis; CASI = Childhood Anxiety Sensitivity Index.

Table 2: Three-and-Four-Factor EFA of the French CASI.

Model	χ^2	df	χ^2/df	RMSEA	NFI	NNFI	CFI	ECVI	AIC
Model resulting from our EFA analysis with 18-item CASI									
Three factors, one higher-order factor	636.82	132	4.82	.05	.93	.97	.98	1.39	276.24
Four factors, one higher-order factor	614.64	131	4.69	.04	.94	.98	.98	1.35	268.00
Silverman et al.'s (1999) model with 18-item CASI									
Three factors, one higher-order factor	696.43	132	5.28	.06	.92	.96	.96	1.47	292.75
Four factors, one higher-order factor	653.59	131	4.99	.05	.93	.97	.97	.138	273.99
Silverman et al.'s (2003) model with 13-item CASI									
Three factors, one higher-order factor	321.26	62	5.18	.06	.92	.95	.96	0.79	157.39
Four factors, one higher-order factor	319.32	61	5.23	.06	.92	.95	.96	0.80	158.88

Note. n = 200. EFA = Exploratory Factor Analysis; RMSEA = Root Mean Square Error of Approximation; NFI = Normed Fit Index; NNFI = Non-Normed Fit Index; CFI = Comparative Fit Index; ECVI = Expected Cross Validation Index; AIC = Akaike Information Criterion; CASI = Childhood Anxiety Sensitivity Index.

Table 3: Goodness-of-Fit Indices for the Five Models Tested.

When looking at fit indices for the 18-item CASI, the four-factor models resulting from EFA had the lowest AIC and ECVI values. The completely standardized factor loadings of the CASI items were all significant (**Table 4**) and greater than .30 (salient loading; Gorsuch, 1983), except item 13.

Internal Consistency, Means and Standard Deviations

The CASI's reliability was assessed using Cronbach's alpha (α) (see **Table 5**). A series of *t*-tests revealed significant gender differences on the CASI as a whole ($t(198) = 4.02$, $p < .001$) and for the factors other than social concerns: the physical concerns factor ($t(198) = 4.26$, $p < .001$), the mental incapacity concerns factor ($t(198) = 2.68$, $p = .008$), and the losing control factor ($t(198) = 2.75$, $p = .007$). As presented in **Table 5**, girls had higher means; no effect of age or educational level was observed.

Item Analysis

In **Table 6**, the items of the CASI are listed and the results of the item analysis are presented. The item discrimination or the item–total correlation is the capacity of the items to differentiate individuals who have high trait levels from individuals who have low trait levels. (Embretson & Reise, 2000). Items with an item–total correlation less than 0.30 were considered questionable (Nunnally & Bernstein, 1994). The results indicated that item 13 fell considerably below this critical value, and items 2 and 7 just below the critical value. The item difficulty index indicated the likelihood of correct response (DeMars, 2010) and items ranging beyond 1.96 were considered difficult.[2] We observed that item 5 was questionable, and item 8 was just above the critical value.

Correlations and the Prediction of Anxiety

The CASI correlated significantly with Trait STAIC score (with the Bonferroni correction for the use of multiple correlations, the criterion of $\alpha = .0125$ was used). To determine how the CASI might predict anxiety, a hierarchical multiple regression analysis was conducted. To control for age, sex and state anxiety, these variables were entered in Steps 1 and 2; to investigate the incremental value
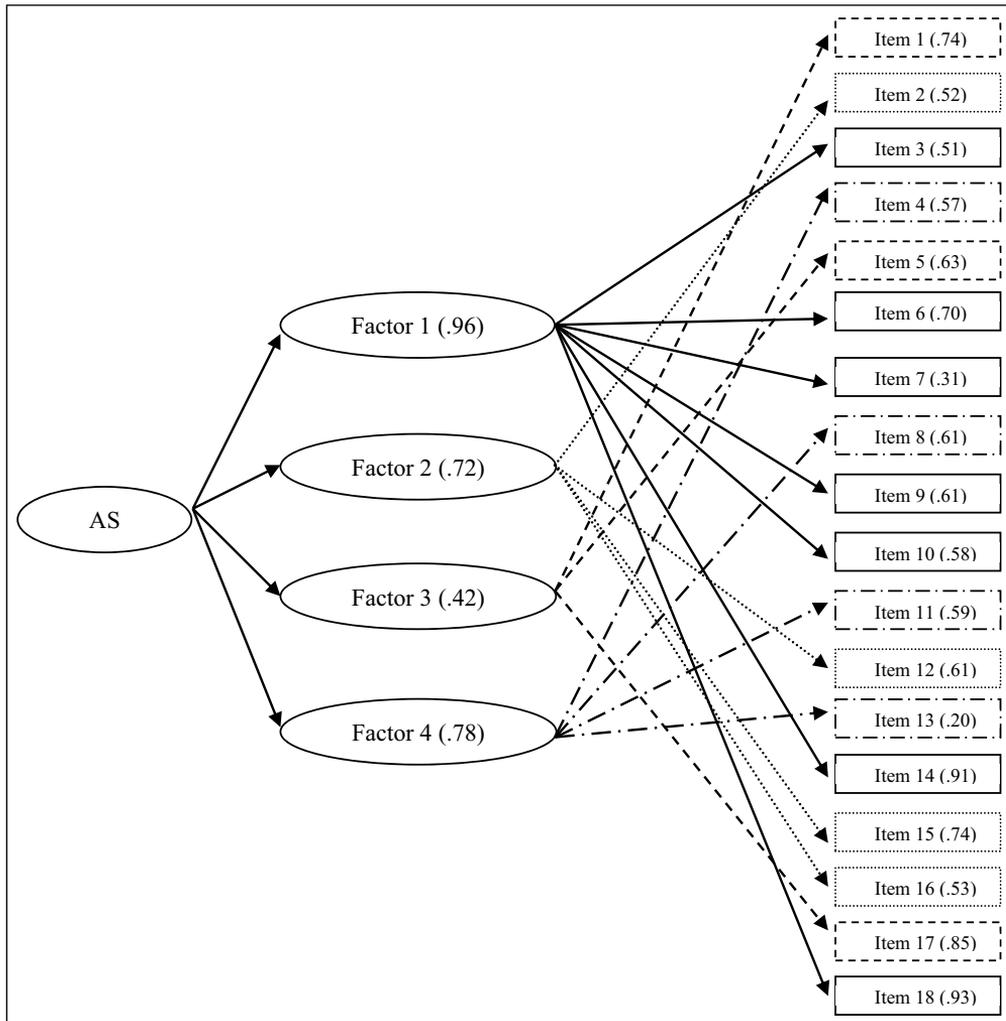
Figure 1: Structural Model of French Version of Childhood Anxiety Sensitivity Index (with Completely Standardized Loadings).

of the CASI and the interaction terms, these indexes were entered in Steps 3 and 4 (**Table 6**). Sex and State STAIC score were significant predictors of Trait STAIC score, but age was not. The CASI explained an additional 22% of the variance, making a significant contribution to the prediction of trait anxiety scores. The interaction terms were not significant.

Discussion

This study suggests that AS can be adequately measured using the 18-item French version of the CASI and conceptualized as a hierar-

chical factor structure with four lower-order factors – Physical Concerns, Mental Incapacity Concerns, Social Concerns and Losing Control Concerns – loading on a single higher-order factor, Anxiety Sensitivity. The completely standardized factor loadings of the CASI items were all significant, meaning that all items may be relevant in the evaluation of AS. However, item 13 has a standardized factor loading lower than .30. Item analyses revealed that this item presented low discriminability. Silverman et al. (2003) also observed a problem with the classifica-

Items	Factor 1	Factor 2	Factor 3	Factor 4
1			.74	
2		.52		
3	.51			
4				.57
5			.63	
6	.70			
7	.31			
8				.61
9	.61			
10	.58			
11				.59
12		.61		
13				.20
14	.91			
15		.74		
16		.53		
17			.85	
18	.93			
Loadings of factors on higher-order factor	.96	.72	.42	.78

Note. n = 200. All factor loadings are significant at p < .05. CASI = Childhood Anxiety Sensitivity Index.

Table 4: Completely Standardized Factor Loadings of French CASI Items.

	α	Means (SD)					
		Total (*n* = 200)		Boys (*n* = 95)		Girls (*n* = 105)	
CASI							
Total Score	.82	29.5	(5.7)	27.9	(5.2)	31.0	(5.7)
Physical Concerns	.77	10.9	(2.9)	10.1	(2.5)	11.7	(2.9)
Mental Incapacity Concerns	.54	5.7	(1.5)	5.4	(1.4)	5.9	(1.6)
Social Concerns	.69	6.0	(1.7)	5.9	(1.6)	6.2	(1.7)
Losing Control Concerns	.46	6.9	(1.7)	6.6	(1.7)	7.2	(1.6)

Note. CASI= Childhood Anxiety Sensitivity Index.

Table 5: Cronbach's Alpha (α) and Means (Standard Deviations).

Items	M	SD	r_{it}	Item Difficulty	Frequency Distribution*		
				p-value	1	2	3
1. I don't want other people to know when I feel afraid	1.90	0.66	0.30	1.90	54	112	34
2. When I cannot keep my mind on my schoolwork, I worry that I might be going crazy	1.35	0.62	0.28	1.35	145	40	15
3. It scares me when I feel "shaky"	1.39	0.54	0.40	1.39	128	67	5
4. It scares me when I feel like I am going to faint	1.76	0.67	0.42	1.76	75	98	27
5. It is important for me to stay in control of my feelings	2.19	0.73	0.44	*2.19*	37	88	75
6. It scares me when my heart beats fast	1.31	0.51	0.52	1.31	144	51	5
7. It embarrasses me when my stomach growls	1.61	0.69	0.29	1.61	103	73	24
8. It scares me when I feel like I am going to throw up	1.99	0.72	0.39	*1.99*	52	98	50
9. When I notice that my heart is beating fast, I worry that there might be something wrong with me	1.46	0.62	0.46	1.46	122	64	14
10. It scares me when I have trouble getting my breath	1.82	0.72	0.47	1.82	74	89	37
11. When my stomach hurts, I worry that there might be something wrong with me	1.62	0.63	0.31	1.62	92	92	16
12. It scares me when I can't keep my mind on my schoolwork	1.68	0.70	0.39	1.68	92	81	27
13. Other kids can usually tell when I feel shaky	1.58	0.67	0.20	1.58	105	75	20
14. Unusual feelings in my body scare me	1.71	0.65	0.64	1.71	80	98	22
15. When I am afraid, I worry that I might be crazy.	1.20	0.46	0.34	1.20	166	29	5
16. It scares me when I feel nervous	1.44	0.55	0.38	1.44	119	75	6
17. I don't like to let my feelings show	1.94	0.72	0.35	1.94	58	96	46
18. Funny feelings in my body scare me	1.64	0.64	0.66	1.64	91	91	18

Note. Italics indicate values of r_{it} of less than 0.30 and of item difficulty index above 1.96.

Table 6: Mean (M), Standard Deviation (SD), and Item–Total Correlation (r_{it}) of the 18 Items.

Predictor variables	R	R²	B	SE B	β	ΔR²
Step 1		.02				.02
Age	−.02		−.13	.34	−.03	
Sex	.15		1.78	.83	.15*	
Step 2		.17***				.15***
Age			−.28	.31	−.06	
Sex			2.40	.77	.20**	
State STAIC	.36**		.59	.10	.39**	
Step 3		.39***				.22***
Age			−.03	.27	−.01	
Sex			.53	.70	.05	
State STAIC			.38	.09	.26***	
CASI	.57**		.52	.06	.50***	
Step 4		.40***				.01
Age			.01	.28	−.001	
Sex			.68	.71	.06	
State STAIC			.38	.09	.26***	
CASI			.52	.06	.50***	
CASI*sex			−.03	.13	−.02	
CASI*age			.07	.05	.08	

Note. $N = 200$. State STAIC = State Anxiety Inventory for Children, CASI = Childhood Anxiety Sensitivity Index.

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 7: Pearson Correlations and Hierarchical Regression Analysis for Variables Predicting Trait STAIC Score.

tion of item 13; this could indicate a specific conceptual problem involving the item itself and not a problem with its translation into French. As for the item difficulty index, we observed that item 5 ("It is important for me to stay in control of my feelings") was difficult for children. In fact, most children in the sample had to ask questions before they could respond to this item. The interpretation of this item and specifically the concepts of "emotion" and "control" may be problematic for children. This item may need to be reformulated in order to increase their understanding of it.

The factor structure obtained was rather similar to those obtained by past studies (Adornetto et al., 2008; Essau et al., 2010; Fullana et al., 2003; Jokić-Begić et al., 2012; Muris et al., 2001; Silverman et al., 1999; Silverman et al., 2003; van Widenfelt et al., 2002): the same factor labels (physical, mental incapacity, social concerns) applied, as did the same arrangement of items (respectively, items 6, 9, 10 and 14; items 2, 12 and 15; and items 1, 5 and 17). However, the structure observed in this study is actually more similar to the original structure reported by Silverman et al. (1999).

As regards reliability, the internal consistency of the CASI was acceptable for the total scale ($\alpha = .82$), but it was lower for some dimensions of AS. The Cronbach's alphas for the physical, mental incapacity, social and losing control concerns were low at .77, .55, .69 and .46, respectively (ideally >.75; Nunnally, 1978). Although these values were

similar to those observed in several previous studies – between .82 and .73 for physical concerns, between .47 and .79 for mental incapacity concerns, between .33 and .57 for social concerns, and between .46 and .67 for losing control concerns (Essau et al., 2010; Jokić-Begić et al., 2012; Muris et al., 2001; Silverman et al., 1999; van Widenfelt et al., 2002; Walsh et al., 2004) – these results suggested that the use of the global score for AS would be more appropriate with the CASI.

Consistent with the literature (Deacon et al., 2002; Muris et al., 2001; van Widenfelt et al., 2002; Walsh et al., 2004), girls scored higher on the CASI than boys. This effect was also observed for the individual factors, except for social concerns. Gender role theory may explain the higher prevalence of AS in girls than in boys (e.g., Palapattu, Kingery, & Ginsburg, 2006). The expression of fear is accepted and even encouraged among girls but is inconsistent with the masculine gender role: boys are expected to face their fears and use adaptive behavior to handle the situation (Bem, 1981). The lack of a gender effect on the social concerns factor was also observed by Stewart, Taylor, and Baker (1997) in an adult population and by Deacon et al. (2002) in a child population. The absence of such an effect may be due to the fact that peer pressure to conform to gender roles is very strong in children (Brody, 1999). Children who are sex-role stereotypical are more likely to be socially accepted, while those who are not tend to be punished by social rejection (Dafflon Novelle, 2006). This observation may explain why girls and boys did not differ on the social concerns factor: the fear of social rejection is as great in girls as in boys.

As observed in the past (Muris et al., 2001; Weems et al., 1998), the CASI correlated significantly with anxiety symptoms, suggesting that high levels of AS were associated with high levels of trait anxiety. Moreover, the CASI explained a unique proportion of the variance in trait anxiety, beyond what is already explained by sex and state anxiety. Several authors have shown that AS can

predict the onset of an anxiety disorder (Lau, Calamari, & Waraczynski, 1996; Silverman & Weems, 1999). Theoretically, being sensitive to high anxiety leads to a reduced ability to cope with anxiety disorders (Reiss, 1991; Reiss et al., 1986). Because of the fear of bodily sensations, AS amplifies anxiety responses. In other words, a person with high AS will interpret certain sensations as a sign of imminent danger and, therefore, become more anxious (Reiss, 1991). Accordingly, Schmidt et al. (2007) developed a primary prevention program designed to reduce AS. This program has proven effective in reducing the risk of developing an anxiety disorder in the course of the following year. Thus, AS can be a symptom that predicts anxiety disorders, and its treatment can also be effective in treating such disorders (Balle & Tortella-Feliu, 2010). From a clinical point of view, the use of a questionnaire such as the CASI is therefore useful both for prevention, namely detecting children at risk of developing an anxiety disorder, and for treatment, that is, working on a maintenance factor for anxiety such as AS.

Our study presented some limitations. First, the samples are not representative of the Belgian population as both were recruited entirely from schools in the area of Liège. In subsequent studies, the invariance of the factor structure of this French version should be investigated with samples of children from other areas of Belgium and from other French-speaking areas (France, Switzerland, Quebec). Second, our sample is limited regarding age (9 to 13 years). One cannot assume that the results will generalize across age ranges on the basis of this sample. In future studies, it would be interesting to have CFA data on factor invariance across sex, age, and educational level (primary versus secondary school). Third, the sample was recruited in a nonclinical population. Given that AS may predict the development of anxiety disorders (Anderson & Hope, 2009), future research could determine the French CASI's ability to discriminate

between clinical and nonclinical samples. Fourth, the reliability is limited to internal consistency; it will be essential to evaluate test-retest reliability in future. Finally, the results were based exclusively on the children's self-reports and thus could be biased by perceived social desirability.

Overall, this version of the CASI can be seen as having a factor structure with four lower-order factors loading on a single higher-order factor. It has acceptable reliability for the scale as a whole, and has the potential to be used to identify children with anxiety symptoms. This study provides further support for the claim that AS is a relevant concept in the Belgian French population.

Note: Conflict of interest: none

Appendix

Voici plusieurs phrases que des enfants utilisent pour se décrire. Lis chaque phrase attentivement. Indique à quel point tu as l'impression qu'elle te décrit bien. À la droite de chaque phrase, mets un X en dessous du choix qui te décrit le mieux. Il n'y a pas de bonne ou de mauvaise réponse.

01. Je ne veux pas que les autres sachent quand j'ai peur de quelque chose.	pas du tout ___	un peu ___	beaucoup ___
02. Quand je ne suis pas capable de me concentrer sur mes devoirs, j'ai peur d'être en train de devenir fou.	pas du tout ___	un peu ___	beaucoup ___
03. Ça me fait peur quand je sens que je tremble.	pas du tout ___	un peu ___	beaucoup ___
04. Ça me fait peur quand j'ai l'impression que je vais m'évanouir.	pas du tout ___	un peu ___	beaucoup ___
05. C'est important pour moi de contrôler mes émotions (ex. la peur, la colère, la joie, la tristesse).	pas du tout ___	un peu ___	beaucoup ___
06. Ça me fait peur quand mon cœur bat vite.	pas du tout ___	un peu ___	beaucoup ___
07. Ça me dérange quand mon ventre se met à faire du bruit.	pas du tout ___	un peu ___	beaucoup ___
08. Ça me fait peur quand j'ai l'impression que je vais vomir.	pas du tout ___	un peu ___	beaucoup ___
09. Quand je remarque que mon cœur bat vite, j'ai peur que quelque chose n'aille pas bien à l'intérieur de moi.	pas du tout ___	un peu ___	beaucoup ___
10. Ça me fait peur quand j'ai difficile à reprendre mon souffle.	pas du tout ___	un peu ___	beaucoup ___
11. Quand j'ai mal au ventre, j'ai peur d'être vraiment malade.	pas du tout ___	un peu ___	beaucoup ___
12. Ça me fait peur quand je ne suis pas capable de me concentrer sur mes devoirs.	pas du tout ___	un peu ___	beaucoup ___
13. Les autres enfants peuvent remarquer quand je tremble.	pas du tout ___	un peu ___	beaucoup ___
14. Les sensations inhabituelles dans mon corps me font peur (ex. quand tu as peur, tu peux avoir le cœur qui bat plus vite, ou mal au ventre, ...).	pas du tout ___	un peu ___	beaucoup ___
15. Quand je suis effrayé, j'ai peur d'être en train de devenir fou.	pas du tout ___	un peu ___	beaucoup ___

16. Ça me fait peur quand je me sens nerveux (se).	pas du tout ___	un peu ___	beaucoup ___
17. Je n'aime pas montrer mes émotions (ex. la peur, la colère, la joie, la tristesse).	pas du tout ___	un peu ___	beaucoup ___
18. Les drôles de sensations dans mon corps me font peur (ex. quand tu as peur, tu peux avoir le cœur qui bat plus vite, ou mal au ventre, ...).	pas du tout ___	un peu ___	beaucoup ___

Author information
A. M. Etienne: Health Psychology, Department of Human Systems and Clinical Studies, Faculty of Psychology and Science of Education, University of Liège, Boulevard du Rectorat B33, 4000 Liège, Belgium. AM.Etienne@ulg.ac.be

  C. Stassart: Tel.: +32 (0) 4 366 23 98; fax: +32 (0) 4 366 29 88. E-mail address: cstassart@ulg.ac.be Postal address: Health Psychology, Department of Human Systems and Clinical Studies, Faculty of Psychology and Science of Education, University of Liège, Boulevard du Rectorat, 3 Bat. B33, 4000 Liège, Belgium.

Notes

[1] In LISREL, the calculated value of ECVI: Chi-squared + 2*the number of parameters to estimate) / (N − 1), N is the sample size; and the calculated value of the AIC: Chi-squared + 2*the number of parameters to estimate (cf. Diamantopoulos & Siguaw, 2000).

[2] A difficult item requires a relatively high trait level in order to be answered correctly, but an easy item requires only a low trait level to be answered correctly. Item difficulties are usually scored on a standardized metric, so that their means are 0 and the standard deviations are 1, which leads to a z-score of 1.96 with a probability of .05 (DeMars, 2010).

References

Adornetto, C., Hensdiek, M., Meyer, A., In-Albon, T., Federer, M., & Schneider, S. (2008). The factor structure of the Childhood Anxiety Sensitivity Index in German children. *Journal of Behavior Therapy and Experimental Psychiatry, 39*, 404–416. DOI: http://dx.doi.org/10.1016/j.jbtep.2008.01.001

Anderson, E. R., & Hope, D. A. (2009). The relationship among social phobia, objective and perceived physiological reactivity, and anxiety sensitivity in an adolescent population. *Journal of Anxiety Disorders, 23*, 18–26. DOI: http://dx.doi.org/:10.1016/j.janxdis.2008.03.011

Balle, M., & Tortella-Feliu, M. (2010). Efficacy of a brief school-based programme for selective prevention of childhood anxiety. *Anxiety, Stress and Coping, 23*, 71–85. DOI: http://dx.doi.org/10.1080/10615800802590652

Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review, 88*, 354–364. DOI: http://dx.doi.org/10.1037/0033-295X.88.4.354

Brody, L. R. (1999). The power of peers. In L. R. Brody (Ed.), *Gender, emotion and the family* (pp. 244–259). London: Harvard University Press.

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1*, 245–276. DOI: http://dx.doi.org/10.1207/s15327906mbr0102_10

Chorpita, B. F., & Daleiden, E. L. (2000). Properties of the Childhood Anxiety Sensitivity Index in children with anxiety disorders: Autonomic and nonautonomic factors. *Behavior Therapy, 31*, 327–349. DOI: http://dx.doi.org/10.1016/S0005-7894(00)80018-0

Chorpita, B. F., Albano, A-M., & Barlow, D. H. (1996). Child Anxiety Sensitivity Index: Considerations for children. *Journal of Clinical Child Psychology, 25*,

77–82. DOI: http://dx.doi.org/10.1207/s15374424jccp2501_9

Dafflon Novelle, A. (2006). Identité sexuée: Construction et processus. In A. Dafflon Novelle (Ed.), *Filles-garçons: socialisation différenciée?* (pp. 9–26). Grenoble: Presses Universitaires de Grenoble.

Deacon, B. J., Valentiner, D. P., Gutierrez, P. M., & **Blacker, D.** (2002). The anxiety sensitivity index for children: Factor structure and relation to panic symptoms in an adolescent sample. *Behaviour Research and Therapy, 40*, 839–852. DOI: http://dx.doi.org/10.1016/S0005-7967(01)00076-6

DeMars, C. (2010). *Item response theory.* New York: Oxford University Press. DOI: http://dx.doi.org/10.1093/acprof:oso/9780195377033.001.0001

Diamantopoulos, A., & **Siguaw, J. A.** (2000). *Introducing LISREL.* London: Sage Publications.

Embretson, S. E., & **Reise, S. T.** (2000). *Item response theory for psychologists.* Mahwah, NJ: Lawrence Erlbaum Associates.

Essau, C. A., Sasagawa, S., & **Ollendick, T. H.** (2010). The facets of anxiety sensitivity in adolescents. *Journal of Anxiety Disorders, 24*, 23–29. DOI: http://dx.doi.org/10.1016/j.janxdis.2009.08.001

Fullana, M. A., Servera, M., Weems, C. F., Tortella-Feliu, M., & **Caseras, X.** (2003). Psychometric properties of the childhood anxiety sensitivity index in a sample of Catalan school children. *Anxiety, Stress and Coping, 16*, 99. DOI: http://dx.doi.org/10.1080/1061580021000009647

Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Jokić-Begić, N., Jurin, T., & **Lauri Korajlija, A.** (2012). Factor structure and psychometric properties of the modified Childhood Anxiety Sensitivity Index in a sample of Croatian children and adolescents. *Journal of Psychopathology and Behavioral Assessment, 34*, 126–135. DOI: http://dx.doi.org/10.1007/s10862-011-9244-7

Jöreskog, K. G., & **Sörbom, D.** (2006). *LISREL 8.80 for Windows [computer software].* Lincolnwood, IL: Scientific Software International, Inc.

Kaiser, H. (1961). A note on Guttman's lower bound for the number of common factors. *Multivariate Behavioral Research, 1*, 249–276. DOI: http://dx.doi.org/10.1111/j.20448317.1961.tb00061.x

Lambert, S. F., Cooley, M. R., Campbell, K. D. M., Benoit, M. Z., & **Stansbury, R.** (2004). Assessing anxiety sensitivity in inner-city African American children: Psychometric properties of the Childhood Anxiety Sensitivity Index. *Journal of Clinical Child and Adolescent Psychology, 33*, 248–259. DOI: http://dx.doi.org/10.1207/s15374424jccp3302_5

Lau, J. J., Calamari, J. E., & **Waraczynski, M.** (1996). Panic attack symptomatology and anxiety sensitivity in adolescents. *Journal of Anxiety Disorders, 10*, 355–364. DOI: http://dx.doi.org/10.1016/0887-6185(96)00016-3

Laurent, J., Schmidt, N. B., Catanzaro, S. J., Joiner, T. E., & **Kelley, A. M.** (1998). Factor structure of a measure of anxiety sensitivity in children. *Journal of Anxiety Disorders, 12*, 307–331. DOI: http://dx.doi.org/10.1016/S0887-6185(98)00017-6

Leen-Feldner, E. W., Feldner, M. T., Reardon, L. E., Babson, K. A., & **Dixon, L.** (2008). Anxiety sensitivity and posttraumatic stress among traumatic event-exposed youth. Behaviour Research and Therapy, *46*, 548–556. DOI: http://dx.doi.org/10.1016/j.brat.2008.01.01410.1016/j.brat.2008.01.014

McNally, R. J. (1999). Theoretical approaches to the fear of anxiety. In S. Taylor (Ed.), *Anxiety sensitivity: Theory, research, and treatment of the fear of anxiety* (pp. 3–16). Mahwah, NJ: Lawrence Erlbaum Associates.

Muris, P. (2002). An expanded childhood anxiety sensitivity index: Its factor structure, reliability, and validity in a non-clinical adolescent sample. *Behaviour Research and*

Therapy, 40, 299–311. DOI: http://dx.doi.org/10.1016/S0005-7967(00)00112-1

Muris, P., Mayer, B., Freher, N. K., Duncan, S., & van den Hout, A. (2010). Children's internal attributions of anxiety-related physical symptoms: Age-related patterns and the role of cognitive development and anxiety sensitivity. *Child Psychiatry and Human Development, 41*, 535–548. DOI: http://dx.doi.org/10.1007/s10578-010-0186-1

Muris, P., Schmidt, H., Merckelbach, H., & Schouten, E. (2001). Anxiety sensitivity in adolescents: Factor structure and relationships to trait anxiety and symptoms of anxiety disorders and depression. *Behaviour Research and Therapy, 39*, 89–100. DOI: http://dx.doi.org/10.1016/S0005-7967(99)00179-5

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Palapattu, A. G., Kingery, J. N., & Ginsburg, G. S. (2006). Gender role orientation and anxiety symptoms among African American adolescents. *Journal of Abnormal Child Psychology, 34*, 441–449. DOI: http://dx.doi.org/10.1007/s10802-006-9023-1

Reiss, S. (1991). Expectancy model of fear, anxiety, and panic. *Clinical Psychology Review, 11*, 141–153. DOI: http://dx.doi.org/10.1016/0272-7358(91)90092-9

Reiss, S., & McNally, R. J. (1985). The expectancy model of fear. In S. Reiss & R. R. Bootzin (Eds.), *Theoretical issues in behavior therapy* (pp. 107–121). New York: Academic Press.

Reiss, S., Peterson, R. A., Gursky, D. M., & McNally, R. J. (1986). Anxiety sensitivity, anxiety frequency and the prediction of fearfulness. *Behaviour Research and Therapy, 24*, 1–8. DOI: http://dx.doi.org/10.1016/0005-7967(86)90143-9

Sandín, B., Chorot, P., Santed, M. A., & Valiente, R. M. (2002). Análisis factorial confirmatorio del índice de sensibilidad a la ansiedad para niños. *Psicothema, 14*, 333–339. Retrieved from http://www.psicothema.com/pdf/728.pdf

Schmidt, N. B., Eggleston, A. M., Woolaway-Bickel, K., Fitzpatrick, K. K., Vasey, M. W., & Richey, J. A. (2007). Anxiety sensitivity amelioration training (ASAT): A longitudinal primary prevention program targeting cognitive vulnerability. *Journal of Anxiety Disorders, 21*, 302–319. DOI: http://dx.doi.org/10.1016/j.janxdis.2006.06.002

Silverman, W. K., & Treffers, P. D. A. (Eds.). (2001). *Anxiety disorders in children and adolescents: Research, assessment and intervention.* Cambridge, UK: Cambridge University Press.

Silverman, W. K., & Weems, C. F. (1999). Anxiety sensitivity in children. In S. Taylor (Ed.), *Anxiety sensitivity: Theory, research, and treatment of the fear of anxiety* (pp. 239–268). Mahwah, NJ: Lawrence Erlbaum Associates.

Silverman, W. K., Fleisig, W., Rabian, B., & Peterson, R. A. (1991). Childhood Anxiety Sensitivity Index. *Journal of Clinical Child Psychology, 20*, 162–168. DOI: http://dx.doi.org/10.1207/s15374424jccp2002_7

Silverman, W. K., Ginsburg, G. S., & Goedhart, A. W. (1999). Factor structure of the Childhood Anxiety Sensitivity Index. *Behaviour Research and Therapy, 37*, 903–917. DOI: http://dx.doi.org/S0005-7967(98)00189-2 [pii]

Silverman, W. K., Goedhart, A. W., Barrett, P., & Turner, C. (2003). The facets of anxiety sensitivity represented in the childhood anxiety sensitivity index: Confirmatory analyses of factor models from past studies. *Journal of Abnormal Psychology, 112*, 364–374. DOI: http://dx.doi.org/10.1037/0021-843X.112.3.364

Spielberger, C. D., Edwards, C. D., Lushene, R. E., Montuori, J., & Platsek, D. (1973). *State-Trait Anxiety Inventory for Children ("How I feel questionnaire"):*

Professional manual. Redwood, CA: Mind Garden.

Stassart, C., Hansez, I., Delvaux, M., Depauw, B., & Etienne, A-M. (2013). A French translation of the Revised Childhood Anxiety Sensitivity Index (CASI-R): Its factor structure, reliability, and validity in a non-clinical sample of children aged 12 and 13 years old. *Psychologica Belgica, 53*, 57–74. DOI: http://dx.doi.org/10.5334/pb-53-1-57

StatSoft. (2010). STATISTICA (Version 9.0). [Computer software]. Maisons-Alfort, France: StatSoft France.

Stewart, S. H., Taylor, S., & Baker, J. M. (1997). Gender differences in dimensions of anxiety sensitivity. *Journal of Anxiety Disorders, 11*, 179–200. DOI: http://dx.doi.org/10.1016/S0887-6185(97)00005-4

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn and Bacon.

Taylor, S., & Cox, B. J. (1998). An expanded anxiety sensitivity index: Evidence for a hierarchic structure in a clinical sample. *Journal of Anxiety Disorders, 12,* 463–484. DOI: http://dx.doi.org/10.1016/S0887-6185(98)00028-010.1016/S0887-6185(98)00028-0

Taylor, S., Koch, W. J., & Crockett, D. J. (1991). Anxiety sensitivity, trait anxiety, and the anxiety disorders. *Journal of Anxiety Disorders, 5,* 293–311. DOI: http://dx.doi.org/10.1016/0887-6185(91)90030-W

Telch, M. J., Shermis, M. D., L Lucas, J. A. (1989). Anxiety sensitivity: Unitary construct or domain-specific appraisals? *Journal of Anxiety Disorders, 3*, 25–32. DOI: http://dx.doi.org/10.1016/0887-6185(89)90026-1

Tsao, J. C., Meldrum, M., Kim, S. C., & Zeltzer, L. K. (2007). Anxiety sensitivity and health-related quality of life in children with chronic pain. *Journal of Pain, 8*, 814–823. DOI: http://dx.doi.org/10.1016/j.jpain.2007.05.011

Turgeon, L., & Chartrand, E. (2003). Psychometric properties of the French-Canadian version of the State-Trait Anxiety Inventory for Children. *Education and Psychological Measurement, 63*, 172–181. DOI: http://dx.doi.org/10.1177/0013164402239324

van Widenfelt, B. M., Siebelink, B. M., Goedhart, A. W., & Treffers, P. D. A. (2002). The Dutch Childhood Anxiety Sensitivity Index: Psychometric properties and factor structure. *Journal of Clinical Child and Adolescent Psychology, 31*, 90–100. DOI: http://dx.doi.org/10.1207/S15374424JCCP3101_11

Vanasse, L. J.-P., Houde-Charron, M.-C., & Langlois, F. (2010). *Propriétés psychométriques de la version francophone du questionnaire Child Anxiety Sensitivity Index (CASI).* Poster presented at the 2010 annual meeting of Société Québécoise de Recherche pour la Psychologie (SQRP), Montreal, Canada.

Walsh, T. M., Stewart, S. H., McLaughlin, E., & Comeau, N. (2004). Gender differences in Childhood Anxiety Sensitivity Index (CASI) dimensions. *Journal of Anxiety Disorders, 18*, 695–706. DOI: http://dx.doi.org/10.1016/S0887-6185(03)00043-4

Wardle, J., Ahmad, T., & Hayward, P. (1990). Anxiety sensitivity in agoraphobia. *Journal of Anxiety Disorders, 4*, 325–333. DOI: http://dx.doi.org/10.1016/0887-6185(90)90029-9

Weems, C. F., Hammond-Laurence, K., Silverman, W. K., & Ferguson, C. (1997). The relation between anxiety sensitivity and depression in children and adolescents referred for anxiety. *Behaviour Research and Therapy, 35*, 961–966. DOI: http://dx.doi.org/10.1016/S0005-7967(97)00049-1

Weems, C. F., Hammond-Laurence, K., Silverman, W. K., & Ginsburg, G. S. (1998). Testing the utility of the anxiety sensitivity construct in children and adolescents referred for anxiety disorders. *Journal of Clinical Child Psychology, 27,*

69–77. DOI: http://dx.doi.org/10.1207/s15374424jccp2701_8

Wright, K. D., Asmundson, G. J. G., McCreary, D. R., Stewart, S. H., McLaughlin, E., Comeau, M. N., & **Walsh, T. M.** (2010). Confirmatory factor analysis of the Childhood Anxiety Sensitivity Index: A gender comparison. *Cognitive Behaviour Therapy,* *39,* 225–235. DOI: http://dx.doi.org/10.1080/16506073.2010.486840

Zinbarg, R. E., Mohlman, J., & **Hong, N. N.** (1999). Dimensions of anxiety sensitivity. In S. Taylor (Ed.), *Anxiety sensitivity: Theory, research, and treatment of the fear of anxiety* (pp. 83–114). Mahwah, NJ: Lawrence Erlbaum Associates.