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The Factor Structure of MASC Youth Report in Norwegian School Children

Introduction

Anxiety is common among children and adolescents, and estimates indicate that up to 20% of youth may qualify for an anxiety disorder diagnosis (Essau, Conradt, Sasagawa, & Ollendick, 2012). Anxiety is more common in girls and symptoms may also vary by age (March, 1997; Muris, Merckelbach, Ollendick, King, & Bogie, 2002). Problems with anxiety have unwanted consequences on functional outcomes (Swan & Kendall, in press), such as school functioning, social relations and family interactions. Childhood anxiety problems increase the risk for adolescent anxiety disorders (Pine, 2007), and early anxiety problems may become chronic if left untreated (Keller et al., 1992). Therefore, it is surprising that relatively few anxious children receive help from mental health services (Essau et al., 2012; Heiervang et al., 2007**)**. According to Essau et al. (2012), cost and availability of treatment, parents and teachers overlooking children with such problems, or consider the symptoms as transient, may account for this. The high prevalence of anxiety problems and the negative trajectory if they are left unaddressed, has resulted in an increased focus to identify children with anxiety problems and provide early interventions.

Rating scales are inexpensive tools used to identify symptomatic children who may benefit from indicated interventions to treat symptoms before they develop into disorders (Dierker et al., 2001). Having assessment instruments that can differentiate mild, but potentially pathological, anxiety from more transient and normal fears in childhood is important. The early instruments used to assess childhood anxiety were downward extensions of adult measures (Grills-Taquechel, Ollendick, & Fisak, 2008). Fortunately, newer measures that consider the developmentally typical expression of anxiety symptoms in children have been developed. While some anxiety symptoms are easy to identify by examining the behavior (e.g. separation anxiety), many anxiety symptoms are internal and are difficult for parents and others to observe (March & Albano, 1996). Hence, youth self-report measures serve an important function to identify and understand the child's anxious experiences.

The Multidimensional Anxiety Scale for Children (MASC, March, 1997) is a youth report scale to assess different anxiety dimensions in children. It may also be used to identify anxious children. The MASC builds on a theoretical understanding of anxiety in children, and the items tap into behavioral, emotional, cognitive and physical symptoms. The 39-item measure was developed through empirical and psychometric analyses, and identifies four factors related to anxiety: physical symptoms, social anxiety, separation anxiety and harm/avoidance (Grills-Taquechel et al., 2008; March, Parker, Sullivan, Stallings, & Conners, 1997). Previous research indicates that the MASC identifies

children who meet criteria for an anxiety disorder (Villabø, Gere, Torgersen, March, & Kendall, 2012),can be used to screen for anxiety symptoms in children aged 8 - 19, and is applicable in schools (March, 1997).

The empirically derived factor structure of the English version of the MASC has been evaluated in both clinical and nonclinical samples with equivalent factor structure for boys and girls (March et al., 1997). The four factors were also found to indicate good fit for differerent age groups of children (up to 12 years) and adolescents (13 years or more). Other studies examined the factor structure of the English language version of the MASC in clinical samples (Grills-Taquechel et al., 2008; March et al., 1997; Rynn et al., 2006) and in school-based samples (Baldwin & Dadds, 2007; Fincham et al., 2008). The factor structure was invariant across gender and age in the clinical samples, but not in a South African sample (Fincham et al., 2008). Age was not investigated in the school sample evaluated by Baldwin and Dadds (2007).

The original MASC scale has been translated into many languages and is widely used in non-English speaking countries and cultures. It is important to establish the factor structure of the translated versions of the measure and invariance across age and gender when comparing groups in international research. The results of factor analysis of translations of the MASC, including Icelandic schoolchildren (Olason, Sighvatsson, & Smami, 2004), Chinese adolescents (Yao et al., 2007) and youths in Taiwan (Yen et al., 2011) have confirmed the four-factor solution across cultures. In two studies, a three factor solution emerged: in a sample of African American adolescents (Kingery, Ginsburg, & Burstein, 2009) and in Australian adolescents (Houghton, Hunter, Trewin, Glasgow, & Carroll, 2014).

Regarding other psychometric properties of the MASC, the translated versions have reported supportive findings. A Swedish version (Ivarsson, 2006) reported adequate internal consistency and moderate convergent validity in a population sample of youth between 13 – 16 years. A study of the reliability and validity of the MASC in a sample of Belgium high school youth also revealed satisfactory results (Muris et al., 2002), as did a study evaluating a Norwegian sample of treatment-seeking children (Villabø et al., 2012). These studies reported success in discriminating between children with and without clinical diagnosis for anxiety disorders and strong internal reliabilities on the total scale (Cronbach's alpha between 0.89 to 0.93) and questionable to strong values on the subscales (Cronbach's alpha between 0.65 - 0.89) using the conventions to interpret estimates of Cronbach's alpha as suggested by George and Mallery (2003). Until now, no one has examined the factor structure of the translated version of MASC in a Norwegian sample of anxious school children. As the factor structure may depend on the child's age and gender, it is also important to examine factorial invariance.

We examined the factor structure of the Norwegian translation of the MASC in a self-selected sample of 8 – 12 year old school children. Latent variable modelling (SEM) was conducted to investigate whether the theoretical four-factor structure fit the data. In addition, tests of invariance were run across gender and age groups. It was hypothesized that the four-factor structure as suggested by March et al. (1997) would be supported and that the structure would be comparable across gender and age. We also expected girls to report more anxiety than boys, and that the mean anxiety scores would be elevated in this sample compared to mean scores found in population samples.

Method

Participants

Children were recruited from schools during pretest of a randomized controlled trial studying the effect of a targeted preventive intervention to reduce symptoms of anxiety and depression in school children. Children were given information about the study and if they thought they were more anxious or sad than their peers and parents provided informed consent, they were invited to screening. As a result of this invitation proceedure, the sample in the present study was likely experiencing more anxious symptoms than would be found in the general child population. The following analyses were based on baseline data (N = 1686) from a representive sample of schools (36 schools in urban and rural areas) in Norway. Girls represented 53.8 % of the total sample (N = 907), and 14.9 % (N = 250) were in 6th grade, 44.5 % (N = 750) were in 5th grade, 35.7 % (N = 602) were in 4th grade and 4.9 % (N = 83) were in 3rd grade. Grade was used as a proxy for age in this study with an age range from 8 to 12 years. Of the total sample; 9.97% (boys 54.2 %, girls 45.8 %) reported symptoms of anxiety only, while 25.3 % (boys 42,1 %, girls 57.9 %) reported symptoms of both anxiety and depression.

Procedure

The children and their parents were verbally informed about the study at school as well as through written communication. Children were provided with developmentally appropriate information. Only those children who regarded themselves as more anxious or sad than their peers, and who had informed consent from their parents, completed the measure. The MASC was administred during regular school hours with a teacher present to answer

questions. Teachers were provided with written suggestions of how to explain terms that some children might find difficult to understand. The children were provided with a password to enter the questionnaire and answered the questions electronically.

Measure

The MASC consists of 39 items with response options 0 (*never true about me*), *1* (*rarely true about me*), *2* (*sometimes true about me*) and *3* (*often true about me*). The measure is multidimensional with a. four-factor structure. Three of the four-factor scales have subscales: 1) Physical Symptom scale, 12 questions (Tense subscale, Somatic subscale), 2) Harm/Avoidance scale, 9 questions (Perfectionism subscale, Anxious coping subscale), 3) Social Anxiety scale, 9 questions (Humiliation fears subscale, Performance subscale), 4) Separation Anxiety/Panic scale, 9 questions (no subscale)(March et al., 1997). A Total Anxiety score based on the sum of all 39 items has been used to identify children who may benefit from a more detailed clinical assessment. The measure was translated to Norwegian on assignment from the Multi-Health Systems (MHS)(MHS Assessments, 1997) in 1999, following their specifications.

Studies have indicated high (0.78 to 0.93, 3 week and 3-month) retest reliability in different samples (March et al., 1999; March et al., 1997), and good predictive and discriminative validity has been documented (Baldwin & Dadds, 2007; Dierker et al., 2001; Wood, Piacentini, Bergman, McCracken, & Barrios, 2002), including in a Norwegian clinical sample (Villabø et al., 2012).

Statistical analyses

The statistical package IBM SPSS (version 22) was used to examine the descriptive data and for reliability analyses (Cronbach's alpha). R was used to calculate Coefficient Omega (Hornik, 2016).

There were no missing data in the dataset. One-way analysis of variance (ANOVA) was used to determine if there was significant gender or grade (proxy for age) mean differences. To examine whether the four-factor structure originally proposed for the MASC was adequate in the current sample, we employed confirmatory factor analysis (CFA) using Mplus 7.0 statistical software with the weighted least squares estimator (WLSMV, Muthen & Muthen, 2012) . This method allows interpretation of the items as observable signs of the unobservable (latent) factors, that they reflect. Furthermore, through confirmatory factor analysis in structural equation modeling, error scores are accounted for. The four-factor model was tested using three commonly reported indicies; *Root Mean square Error of Approximation (RMSEA, Steiger & Lind, 1980)*, *the Bentler's Comparative fit index (CFI, Bentler, 1990)* and *the Tucker-Lewis Index (TLI,*

Tucker & Lewis, 1973). RMSEA values < 0.05 suggest good model fit, while values < 0.08 suggest reasonably model fit (M. W. Brown & Cudeck, 1993). A value > 0.10 is often used as the cutoff for poor fitting models (Kenny, 2015). The CFI and the TLI are comparative indices and both depend on the average size of the correlations in the data (Kenny, 2015). The CFI and the TLI should be > 0.95. However indicies >= .90 indicate that the model has adeqguate fit with the data (Bentler, 1995). As Chi-square is highly influenced by sample size where trivial discrepancies can lead to rejection of an otherwise highly satisfactory model, this statistic was not reported. (T. A. Brown, 2006). To evaluate factor loadings we used Tabachnick & Fidell's (2007) suggestion, rating 0.32 as Poor, 0.45 as Fair, 0.55 as Good, 0.63 as Very Good and 0.71 as Excellent.

We also tested for measurement invariance to examine whether the instrument had the same factorial structure for boys and girls and for children from different age groups. Cheung and Rensvold (2002) argue that establishing measurement invariance between groups is necessary before between-group differences in scale scores can be interpreted: a change in CFA smaller than or equal to - 0.01 indicates that the null hypothesis of invariance should not be rejected.

Results

Factor structure

Examining the total model with four scales as originally suggested by (March, 1997), the CFA indicated acceptable fit with RMSEA = 0.047, CFI = 0.93 and TLI = 0.93. Factor loadings on most subscales were good (see Table 1). When examining the factor loading on the Harm/Avoidance subscale, some items had low loadings. The items with poorest factor loading were item 2 ('I usually ask for permission', factorloading: 0.08) and item 11 ('I try hard to obey my parents and teachers', factorloading: 0.11). Due to the low correlation with all other items, these items were excluded from further analyses. We then tested the four-factor solution with the two items excluded. The model fit was again acceptable (RMSEA = 0.045, CFI = 0.94 and TLI = 0.94). This may be due to the fact that some items on the Harm/Avoidance scale still had low factor loadings (see Table 1). Nevertheless, these items (i.e. item 21 'I try to do things other people will like', item 28 'I try to do everything exactly right' and item 32 'If I get upset or scared, I let someone know right away') were significant and thus kept in the model.

---------- *Insert Table 1 here* ----------

To investigate whether the latent constructs were interpreted in the same way across gender and grade level, we tested invariance of factor loadings. The configural model for gender had acceptable model fit (RMSEA = 0.044, CFI = 0.937, TLI = 0.936). The model with factor loadings constrained to be equal across gender maintained good model fit (RMSEA = 0.043, CFI = 0.937, TLI = 0.938). There was no difference in the CFI between the two models ($\Delta CFI \leq 0.001$), indicating that the measure means the same for both genders (Cheung & Rensvold, 2002).

We tested for invariance of grade level. The configural model indicated good model fit (RMSEA = 0.042 CFI = 0.947, TLI = 0.947). Constraining the factor loadings for the age groups yielded similar results (RMSEA = 0.040, CFI = 0.952, TLI = 0.952). The difference between the CFI in the two models was relatively small ($\Delta CFI = 0.005$), indicating that the measure had a similar factor structure to younger and to older children in the sample.

Internal consistency:

The instrument demonstrated internal consistency (item to total remainder correlations) for the total MASC scale with a Cronbach's alpha of 0.91. Internal consistency for most of the subscales were good ($\alpha = 0.72 – 0.86$), however the internal consistency of the Harm/Avoidance subscale was lower ($\alpha = 0.61$) (see Table 2). March et al. (1997) suggested coefficients below .60 to be suspect, so the internal consistency of the Harm/Avoidance factor was marginal. For the Harm/Avoidance scale we also calculated McDonalds Omega (McDonald, 1999) as this reliability coefficient has less risk of over- and under-estimation of reliability due to unequal factor loadings or error variances (Dunn, Baguley, & Brunsden, 2014). Using the MBESS package in R and the script suggested by Dunn et al (2014), we found marginally improved reliability for the Total MASC scale ($\Omega = 0.62$ vs $\alpha = 0.61$), and for the subscales Harm/Perfectionism ($\Omega = .43$ vs $\alpha = 0.42$) and Harm/Anxious Coping ($\Omega = .57$ vs $\alpha = 0.56$).

---------- *Insert Table 2 here* ----------

The MASC Total scale as well as all subscales scores were higher for girls (M_{girls} = 55.58, *SD* = 16.53), than for boys (M_{boys} = 47.67, *SD* = 16.33). MASC total: ($F(1684,1) = 97.15$, $p < 0.001$, MASC Physical: ($F(1684,1) = 49.02$, $p < 0.001$, MASC Social: ($F(1684,1) = 49.64$, $p < 0.001$, MASC Harm: ($F(1684,1) = 10.06$, $p < 0.05$) and MASC Sep/Panic: ($F(1684,1) = 116.32$, $p < 0.001$). The means and standard deviations for the full sample and for boys and girls separately, are reported in Table 2.

Grade level was used as a proxy for age and we grouped grade 3 and 4 into the younger category (8 – 10 year olds) and grade 5 and 6 into the older category (11-12 year olds). We did not find a statistically significant difference between younger and older children on most scales. The exception was the Separation/panic scale where younger children reported more symptoms of separation/panic than older children did ($F(1683,1) = 14.53$, $p < 0.001$). We did not find an interaction between gender and age.

We ran descriptive analyses both with 39 items and with 37 items. The descriptive results with the two problematic items on the Harm/Avoidance scale removed weresimilar to the results for the full scale..

Discussion

Screening for anxiety symptoms is an efficient method to identify children with internalizing difficulties and subsequently providing interventions to change an otherwise negative trajectory. The MASC is an often used and widely translated instrument for the self-reported measurement of anxiety problems in youth. Although some studies have confirmed the proposed four-factor structure, other studies have not. We used latent variable modelling with a large sample of anxious school children, and the four-factor solution of the MASC was generally confirmed. In addition, the factor structure was consistent across gender and grade level. The measure had high internal consistency on all subscales exept for the Harm/Avoidance scale. That said, the measure may benefit from modifications such as rephrasing of some of the questions.

We found acceptable model fit for the four-factor model using all items in the scale. While earlier studies have also confirmed a four-factor solution (Baldwin & Dadds, 2007; Grills-Taquechel et al., 2008; March et al., 1997; Rynn et al., 2006), the model fit indicies from the factor analysis in the latent variable modelling in our study may indicate that some features of the scale need to be modified. Of the separate factors, the MASC items on the Physical factor, the Social factor, and the Separation factor were supported. The items on the Harm/Avoidance factor,however, were found

to have limited cohesion. Other studies have also indicated that some items on the Harm/Avoidance factor may be problematic (Kingery et al., 2009; Osman et al., 2009). In this study, we excluded the items with non-significant factor loadings (item 2 and 11) on the Harm/Avoidance scale which resulted in slightly improved fit for the whole model. According to March (1997), the Harm/Avoidance scale assesses perfectionistic symptoms (e.g., the need to obey parents and teachers) and anxious coping symptoms (e.g., to check out things). The deleted items, 'I usually ask for permission' (2) and 'I try hard to obey my parents and teachers' (11) tap into the perfectionistic subscale of the Harm/Avoidance scale. While these traits may be relevant for younger children, they might not fit well with the cultural norm in Norway which values independence more than obedience. Other studies, however, have also found the Harm/Avoidance factor to be less cohesive than other factors in the MASC scale (Grills-Taquechel et al., 2008; van Gastel & Ferdinand, 2008; Villabø et al., 2012; Wei et al., 2014), and it has been suggested that the low internal consistency of this factor may also be due to the clinical features that this subscale aims to tap into (Perfectionism and Anxious Coping), which has less predictability of a specific anxiety disorder than the other subscales. It may also be that open questions, such as "I try to do things other people will like" (21) and "I try to do everything exactly right" (28) are difficult to understand for children 8 – 12 years of age. These characteristics may explain some of the lower factor loadings on these items. Future research should examine the Harm/Avoidance scale more closely. Inclusion of items with low factor loadings in the original English version and in cross-cultural translations may need to be re-examined. In addition, for the Norwegian culture, some of the expressions used in the items have a somewhat old-fashioned tone (e.g. 'I try hard to obey my parents and teachers'). A revision of the wording of the items to more developmentally and culturally appropriate expressions (e.g. 'I try to follow the rules set by my parents and teachers') could improve the psychometrics and the clinical utility of the self-report MASC.

Given that anxiety is more common in girls than in boys (March, 1997; Muris et al., 2002) and that some symptoms may vary with age (March, 1997), it is important to establish that instruments measuring symptoms have comparable factor structure for age and gender. The results from the invariance analysis in this study suggests that the MASC has the same meaning for boys and girls, and for children in younger grade levels (3rd and 4th grade) compared to higher grade levels (5th to 6th grade Our findings regarding age invariance are in accordance with March (1997). As Cheung and Rensvold (2002) suggest, gender and age invariance indicates that any differences found using the scale are not due to different psychometric responses to the scale items, but rather indicate meaningful response differences

The Physical scale, the Social scale, the Separation scale and the Total scale were all found to have good internal consistency. As expected from the latent variable modeling analysis, the internal consistency in the Harm/Avoidance scale was lower. Other studies have reported similar results (Olason et al., 2004; Rynn et al., 2006; Villabø et al., 2012). The lower internal consistency of the Harm/Avoidance scale was also reported in the normative sample (March, 1997). Whereas separate scale scores may be useful in making separate predictions regarding specific problems, separate scores on the Harm/Avoidance scale may not be as useful in making predictions to outside criteria.

Children in this Norwegian sample were observed to report higher symptoms of anxiety than what children reported in an Icelandic population-based study (Olason et al., 2004). Comparing the mean scores of this sample to the normative data of Swedish adolescents aged 13 to 16 years (Ivarsson, 2006), and to the normative data of March (1997), it appears that the children in the current study are expressing higher mean anxiety scores than normative groups. These findings are not surprising and consistent with the recruitment of participants to the randomized controlled study from which these data were derived. In this sense, the higher mean scores reflect that the youth were experiencing more anxiety than their peers. Examining the present mean scores in relation to a Norwegian clinical sample (Villabø et al., 2012), the children in this indicated sample scored comparably. Accordingly, the MASC appears to have been successful in screening for children who are more anxious than their peers.

As in the sample used when develping the MASC (March, 1997), females scored significantly higher than boys on all subscales as well as on the Total Anxiety scale. Gender differences were also found in a Norwegian clinical sample (Villabø et al., 2012), in the Icelandic community sample (Olason et al., 2004) and in the Swedish youth sample (Ivarsson, 2006). Although clinical studies in the US of youth diagnosed with an anxiety disorder reflect a 50 – 50 gender balance (e.g., Kendall et al., 2010), nondiagnosed samples tend to reflect a gender difference that is cross-cultural. Except for the Separation Anxiety scale, the relationship with grade level (age) was not significant which is in contrast to the original study by March (March et al., 1997) and to the Icelandic study (Olason et al., 2004). Ivarsson (2006) ,however, also found varying results with regard to age differences on the MASC Total scale and the subscales. In Ivarsson (2006), younger youth had lower mean scores on the subscale Tense/Restless and higher scores on the Separation Anxiety scale, while there were no significant differences on the other subscales. The March (March et al., 1997) and Olason et al. (2004) studies had a wider age range in their sample (March; 8 – 19 years, Olason: 10 – 15) than did the current study. The younger age of the participants could explain the discrepant results. For example, grade level was meaningful with regard to the SSeparation Anxiety scale, with children in 3rd and 4th grade expressing more

Separation anxiety than did children in 5th and 6th grade. This finding is in line with the developmental trajectory of separation anxiety in children which decreases with increasing age (Cohen et al., 1993). If adolescents were included in the current sample and by this including more similar age ranges as in the initial validation sample, however, these results could have changed.

It also merits mentioning that in the present sample, 25.3 % reported symptoms of both anxiety and depression. Comorbid symptoms of depression could influence the identification of anxiety symptoms as indicated by Dierker et al. (2001), who found support for the MASC's ability to identify specific anxiety disorders in children, but only so for girls.

Potential limitations merit mentioning. The children in our study were self-selected based on the children experiencing more anxious feelings than their peers. We may thus not generalize the results to the population of school children in general. The current study used only child report of symptoms at the screening stage for considering participation in the RCT. It is usually recommended to use several informants (e.g. parents, teachers) in assessments of children (Wei et al., 2014), and while it is generally low concordance rates between child and parent report on MASC (e.g. Villabø et al. (2012)), this study could have benefitted from getting a broader picture of the child's challenges also using parents as informants. It is also possible that additional children with anxiety problems could have been identified using multiple informants.

The exact age of the children in this study was not accessible, such that grade level was used as a proxy for developmental differences. Lastly, the present study did not assess the degree to which the children met diagnostic criteria for an anxiety disorder, and therefore the predictive validity of the MASC factor scores remains an area for future studies.

The four-factor structure was confirmed in the current sample of school children. The Harm/Avoidance scale had limited internal consistency and this scale may need revision to be of use for screening purposes on its own and in different samples, such as community based samples. Until this is resolved, we recommend that items 2 and 11 are excluded when scoring the MASC in studies of Norwegian samples. As the factor structure is invariant across age and gender, the measure can be used to establish between group differences. This study, with reported means falling between the higher score of children meeting diagnostic criteria for an anxiety disorder (Villabø et al., 2012) and lower

score for community samples (Muris et al., 2002), suggests that the MASC can be used for screening purposes and as such can be useful to recruit at-risk children to indicated interventions

Compliance with Ethical Standards

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Conflict of Interest

The authors declare that they have no conflict of interest, and all authors have approved the manuscript for publication.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The study was approved by the Regional Ethics committee, Region South and East Norway, 2013/1909/REK Sør-Øst.

Consent to participate

All parents have signed consent to participate in the study.

Consent for publication

All parents have signed consent to participate in the study.

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Tables

Table 1
Factor Loadings on The Four Subscales of the MASC

Item		Factor loadings on subscales			
		Physical	Harm/ Avoidance	Social	Separation/ Panic
1	I feel tense or uptight	.63			
6	I have trouble getting my breath	.61			
8	I get shaky or jittery	.70			
12	I get dizzy or faint feelings	.62			
15	I'm jumpy	.54			
18	I have pains in my chest	.61			
20	I feel strange, weird, or unreal	.75			
24	My heart races or skips beats	.66			
27	I feel restless and on edge	.56			
31	I feel sick to my stomach	.61			
35	My hands shake	.64			
38	My hands feel sweaty or cold	.65			
2	I usually ask permission		*		
5	I keep my eyes open for danger		.50		
11	I try hard to obey my parents and teachers		*		
13	I check things out first		.33		
21	I try do things other people will like		.29		
25	I stay away from things that upset me		.65		
28	I try to do everything exactly right		.28		
32	If I get upset or scared, I let someone know right away		.27		
36	I check to make sure things are safe		.68		
3	I worry about other people laughing at me			.74	
10	I am afraid that other kids will make fun of me			.80	

14	I worry about getting called on in class	.63	
16	I'm afraid other people will think I'm stupid	.84	
22	I worry about what other people think of me	.78	
29	I worry about doing something stupid or embarrassing	.74	
33	I get nervous if I have to perform in public	.47	
37	I have trouble asking other kids to play with me	.60	
39	I feel shy	.67	
4	I get scared when my parents go away		.66
7	The idea of going away to camp scares me		.58
9	I try to stay near my mom or dad		.62
17	I keep the light on at night		.48
19	I avoid going to places without my family		.50
23	I avoid watching scary movies and TV shows		.31
26	I sleep next to someone from my family		.40
30	I get scared riding in the car or on the bus		.67
34	Bad weather, the dark, heights, animals, or bugs scare me		.59

Note; MASC = The Multidimensional Anxiety Scale for Children (March, et al., 1997), * items excluded from analysis.

Table 2

Descriptive data of the MASC subscale and total score

MASC	Total (n = 1686)			Female (n = 907)			Male (n = 779)		
	Mean	*SD*	α	Mean	*SD*	α	Mean	*SD*	α
MASC Total	51.92	16.89	0.91	55.58**	16.53	0.91	47.67	16.33	0.90
MASC Physical	11.70	6.49	0.85	12.72**	6.52	0.86	10.51	6.26	0.84
MASC Social	11.97	6.13	0.86	13.17**	6.94	0.85	10.56	6.05	0.85
MASC Harm/Avoid	18.30	3.91	0.61	18.58*	3.81	0.62	17.98	4.00	0.60
MASC Sep/panic**	9.95	4.89	0.72	11.10**	4.74	0.71	8.61	4.73	0.70

Note: MASC = The Multidimensional Anxiety Scale for Children, 39 items (March et al., 1997), Range of scores possible MASC Total scale: 0 – 117. Item to total correlation used to calculate Cronbach alpha. * p <.05, ** p< .001. MASC Sep/panic**; sign difference between grade levels comparing 3rd & 4th grade vs 5th & 6th grade