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Anxiety and Depressive Symptoms in Children and Adolescents during COVID-19 Pandemic: A Transcultural Approach

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Abstract

Background: Despite being necessary to delay the spread of COVID-19, home confinement could have affected the emotional well-being of children and adolescents. Knowing which variables are involved in anxiety and depressive symptoms could help to prevent young people's psychological problems related to lockdown as early as possible. This cross-sectional study aims to examine anxiety and depressive symptomatology in Italian, Spanish, and Portuguese children and adolescents in order to determine which variables are related to poorer well-being during the pandemic. **Method:** The parents of 515 children, aged 3-18 years old, completed an online survey. Children´s anxiety symptoms were assessed using the Spence Children's Anxiety Scale-Parent Version, and depressive symptoms were measured with the Short Mood and Feelings Questionnaire-Parent Version. **Results:** We found differences in anxiety and depression between countries, with higher anxiety scores in Spanish children, and higher depression scores in Spanish and Italian children compared to the Portuguese. Anxiety and depressive symptoms were more likely in children whose parents reported higher levels of stress. **Conclusions:** These findings are discussed in the light of detecting and supporting affected children as early as possible.

Keywords: COVID-19; anxiety; depression; youth, confinement.

Resumen

Ansiedad y Síntomas Depresivos en Niños y Adolescentes durante la Pandemia de la COVID-19: un enfoque transcultural. **Antecedentes:** a pesar de ser necesario para retrasar la propagación del COVID-19, el confinamiento podría haber afectado al bienestar emocional de niños y adolescentes. Conocer qué variables están involucradas en la ansiedad y depresión podría ayudar a prevenir en los niños los problemas psicológicos asociados al confinamiento lo antes posible. Este estudio transversal tiene como objetivo examinar la sintomatología ansiosa y depresiva en niños y adolescentes italianos, españoles y portugueses, para detectar qué variables están relacionadas con un peor bienestar durante la pandemia. **Método:** los padres de 515 niños de 3 a 18 años completaron una evaluación online. Los síntomas de ansiedad de los niños se evaluaron con la Spence Children's Anxiety Scale-Parent Version, y los síntomas depresivos con el Short Mood and Feelings Questionnaire-Parent Version. **Resultados:** se hallaron diferencias en la ansiedad y la depresión entre países, con mayor ansiedad en los niños españoles, y mayor sintomatología depresiva en los niños españoles e italianos, en comparación con los portugueses. Los síntomas de ansiedad y depresión eran más probables en niños cuyos padres informaron de un mayor nivel de estrés. **Conclusiones:** estos hallazgos se discuten con el propósito de detectar y apoyar a los niños afectados lo antes posible.

Palabras clave: COVID-19; ansiedad; depresión; jóvenes, confinamiento.

COVID-19 brought about a change in many areas of young people's lives. Academic routines changed due to school closure, and both leisure and social relationships were restricted to indoors. Spain and Italy were two of the countries most affected by COVID-19, so mandatory confinement was imposed following the Chinese government model. Both countries imposed the most restrictive lockdown rules, allowing Italian and Spanish children to go outside only after three and six weeks of confinement, respectively. Portugal, despite being geographically next to Spain, managed to stop the number of infections, and only voluntary confinement was recommended.

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Although necessary to delay the spread of COVID-19, confinement could have affected the emotional well-being of children and adolescents. As a recent review of studies indicates, quarantines are associated with psychological problems, such as stress, depression and/or anxiety, that may be long-lasting (Brooks et al., 2020). Also, loneliness, that use to happen when the social interaction is limited as in the home confinements, is related to mental health problems in children and adolescents (Loades et al., 2020). In our recent history, this is the first time that a pandemic has occurred, and a lockdown has been implemented almost worldwide, so few studies are available to date examining the impact on youths. In a study carried out after 34 days of confinement in a sample of school-age children recruited from China, 19 and 23%, respectively, reported anxiety and depressive symptoms (Xie et al., 2020). Within western countries, emotional and behavioral changes in their children were observed by parents in the first weeks of lockdown (Francisco et al., 2020; Orgilés et

al., 2020), finding differences depending on their age (Delvecchio et al., under review). Knowing if levels of anxiety and depressive symptoms are higher in youths during a pandemic is necessary to implement measures to detect and support the affected children as soon as possible. However, most studies were developed with Chinese population, with these cultural differences making it difficult to generalize the findings.

Recognizing the variables involved in emotional symptoms could help to prevent psychological problems in future confinements. Therefore, this cross-cultural study examines depressive and anxiety symptoms among children and adolescents from three European countries (Italy, Portugal, and Spain), intending to detect which variables are related to poorer well-being due to the COVID-19 confinement. The specific objectives are: a) to examine the prevalence rates of anxiety and depressive symptoms in the sample, exploring differences by countries; and b) to identify variables involved in anxiety and depressive symptoms related to children (sex, age, country) and parents (sex and age; stress due to COVID-19 situation and COVID-19-status).

Methods

Participants

The inclusion criteria for participation in this study were: a) being parents or caregivers of children between 3 and 18 years, b) living with their children during home confinement due to COVID-19, and c) residing in Italy, Spain or Portugal. Parents of a total of 515 children aged 3-18 from Italy, Spain, and Portugal participated in the study. They were recruited from 94 cities of Italy, 87 cities of Spain, and 94 cities of Portugal. Parents' mean age was 42 (*SD* = 5.75); range: 20-60; children's mean age was 8.98 years and 54% were boys. The families had been confined at home for an average of 61.03 (*SD* = 7.62) days when they responded to the online survey. The samples from the three countries were equivalent in most of the variables, except for age groups of children, respondents' sex and parental COVID-19-status. The proportion of children in pre-school stage (3-5 years old) was higher in Portugal compared to Spain and Portugal. In Spain, there was a higher proportion of school children (6-12 years old) than in Italy and Portugal. However, the proportion of adolescents was significantly lower in Spain than in the rest of the countries. The Spanish and Portuguese samples included a higher proportion of male respondents than the Italian sample. In Spain, people were more likely to belong to an at-risk group for COVID-19 infection than the Italians (Table 1).

Instruments

The information included respondents' and children's sex and age. The number of days of confinement was evaluated with the item "How many days have you been in quarantine?". Parental stress due to the COVID-19 situation was assessed using a five-point scale ranging from 1 (*not at all stressed*) to 5 (*very stressed*). Parents reported their COVID-19-status as belonging to an at-risk group, at-risk family living with them during the lockdown, at-risk family not living with them during the lockdown, and no at-risk family. Anxiety symptoms were measured with the Spence Children's Anxiety Scale-Parent Version (Reardon et al., 2018), composed of 8 items and rated on a four-point response scale. The scale assesses symptoms of social anxiety, separation anxiety, panic/agoraphobia, and generalized anxiety. Psychometric properties were satisfactory in the original version (α = .82) and in the current sample (α = .86). Depressive symptoms were examined with the Short Mood and Feelings Questionnaire-Parent Version (Angold et al., 1995), which measures affective and cognitive depressive symptoms through 13 items rated on a three-point scale (ranging from *not true* to *true*). Psychometric properties were satisfactory both in the original study (α =. 87) and in the present sample (α =. 93).

Procedure

Data was collected for 15 days, starting seven weeks after the lockdown. When the assessment was applied, children from Spain had just permission to take a one-hour walk close to home accompanied by one parent, and a less restricted phase started in Italy, but the State of Alarm was still maintained. Portugal did not follow a mandatory confinement, but schools were closed in all the countries. Because face-to-face evaluation was not allowed due to the COVID-19 health crisis, participants were recruited via social networks (Twitter, Facebook and Instagram) and completed the assessment instruments through an online platform (Google Forms). A snowball sampling strategy was used. Before completing the survey, participants received information about the objectives of the study, and their informed consent was requested. The estimated response time was 15 minutes. The procedure was replicated simultaneously in the three participating countries. The approval of the Ethics Board of the authors' institution was obtained for the research.

Data Analysis

Generalized linear regression was applied; children's anxiety and depressive symptoms were included as the dependent variables. The independent variables were included in each model to verify the relationship of each predictor, controlling the effect of the rest of the predictors. Descriptive statistics were used to describe the sample, and the corresponding effect size, when the differences across countries were statistically significant. We used SPSS for Windows 26.0 (IBM), and *p*-values less than .05 were considered statistically significant.

Results

Based on the proposed cut-off criteria for the SCAS-P-8 (optimal cut-off score of 7.5; Reardon et al., 2018) and the SMFQ-P (a mean score of 10.50 for depressed children; Angold et al., 1995), a total of 194 children (38.1%) and 98 children (19%), respectively, presented anxiety and depressive symptoms. The percentage of children who scored above the cut-off point for anxiety was higher in Spain (56%, n = 75), compared to Italy (34.1%, n = 88) and Portugal (26.5%, n = 31), $\chi^2 = 26.56$, $p < .001$, Cramer's $V = .22$. The percentage of children who scored above the cut-off point for depression was also higher in Spain (26.4%, n = 37), compared to Italy (19.8%, n = 51) and Portugal (8.5%, n = 10); $\chi^2 = 13.40$, $p \leq .001$, Cramer's $V = .16$.

Differences between countries were found in the means for anxiety and depression. The mean score in anxiety was significantly higher in children from Spain than in the rest (M_{Spain} = 8.69, SD = 4.59; M_{Italy} = 6.60, SD = 4.16; $M_{Portugal}$ = 5.94, SD = 3.74; $\chi^2 = 28.72$,

Table 1
Sample characteristics and differences among countries

	Total (N =515)	(1) Italy (n =258)	(2) Spain (n =140)	(3) Portugal (n =117)	Test[a]	Effect size[b]	Post-hoc[c]
Parental variables							
Sex, No (%)							
Male	44 (8.6)	10 (3.9)	20 (14.3)	14 (12)	14.65***	0.16	2>1 3>1
Age, *M* (*SD*)	42 (5.75)	42.08 (5.81)	42 (6.12)	41.81 (5.39)	0.25	-	-
Preschoolers (3-5 years)	156 (30.3)	71 (27.5)	41 (29.3)	44 (37.6)	19.19***	0.13	3>1 3>2
School children (6-12 years)	233 (45.2)	116 (45)	79 (56.4)	38 (32.5)			2>3
Adolescents (13-18 years)	126 (24.5)	71 (27.5)	20 (14.3)	35 (29.9)			1>2 3>2
Parental stress, *M* (*SD*)	3.17(0.97)	3.18 (0.96)	3.11 (0.93)	3.16 (0.96)	0.48	–	–
Parental status related to virus							
Risk group	53 (10.3)	12 (4.7)	27 (19.3)	14 (12)	33.61***	0.18	2>1
At-risk family living with them	58 (11.3)	25 (9.8)	13 (9.3)	20 (17.1)			
At-risk family, but not living with them	368 (71.7)	196 (76.6)	90 (64.3)	82 (70.1)			
No friends or family at-risk	34 (6.6)	23 (9)	10 (7.1)	1 (0.9)			
Children's variables							
Sex, No (%)							
Male	279 (54.2)	131 (50.8)	77 (55)	71 (60.7)	3.23	–	–
Age, *M* (*SD*)	8.98(4.29)	9.40 (4.28)	8.31 (3.87)	8.87 (4.69)	5.80	–	–

Note: *** $p < .001$.
[a] Cross-table (χ^2) for categorical variables and Kruskal-Wallis (χ^2) for continuous variables.
[b] Effect size = Cramer's *V* for multi-categorical variables and Epsilon-squared for continuous variables.
[c] Bonferroni correction applied to *p* values was used to reduce the risk of type I errors post hoc analysis of a chi-squared test

$p < .001$). The mean score in depressive symptoms was higher in Spanish and Italian children compared to Portuguese children (M_{Spain}= 7.37, SD = 5.94; M_{Italy}= 6.29, SD = 5.17; $M_{Portugal}$ = 4.74, SD = 4.32; χ^2 = 13.66, $p < .001$). Children with a higher level of anxiety (β=2.59; 95% CI [1.59, 3.60]) and depressive symptoms (β=2.50; 95% CI [1.31, 2.69]) tended to be from Spain and had parents with higher levels of stress due to the COVID-19 situation ($\beta_{anxiety}$=1.32; 95% CI [0.89, 1.74] and $\beta_{depression}$ =1.95; 95% CI [1.42, 2.48]). Italian children were also more likely to present depressive symptoms than the Portuguese sample (β= 1.52; 95% CI [0.50, 2.53]). Parent's situation related to COVID-19, and the children's age and sex were not related to the children's anxiety and depressive symptoms (Table 2).

Discussion

COVID-19 has changed the life of youths around the world, so strategies to reduce the impact on their psychological well-being are needed. Knowing which variables are involved in the emotional symptoms is the first step to prevent psychological problems and to detect as soon as possible the youths who are emotionally affected by the COVID-19 situation. The objective of the present study was to examine anxiety and depressive symptoms in three European countries and to determine the individual and family variables that could be related to poorer well-being in children and adolescents.

Results of our study report that the prevalence of anxiety and depressive symptoms was higher than usual; the 19% of children and adolescents showed depressive symptoms, and the 38% presented anxiety symptomatology. Specifically, anxiety symptoms were informed by the 56% of Spanish parents, a percentage higher than found in studies carried out before the pandemic. For instance, the 26.41% of a sample of children and adolescents from Spain who completed the original version of the SCAS showed anxiety symptoms (Orgilés et al., 2012), and the 21.2% reached a score above the cut-off point when the brief version of the scale was used (Orgilés, Rodríguez-Menchón et al., 2020). Focusing on the Italian sample, the 34.1% of parents reported anxiety symptoms in their children, a higher prevalence compared to a previous study (7.3%) that administered a multidimensional anxiety scale to a sample of children aged 8 to 16 (Mazzone et al., 2007). In Portuguese children, a prevalence of 26.5% was found in the sample, slightly higher than the percentage found (20.64%) in a recent study with children (Costa et al., 2020) and also higher than the prevalence (11.5%) informed with a sample aged 10 to 17 (Gaspar de Matos et al., 2003). Depressive symptoms were showed by the 26.4% of the Spanish children, a percentage higher than the 12% than previous

Table 2
Characteristics of participants, according to anxiety and depressive symptoms

Characteristics	Anxiety symptoms				
	Marginal Means (SE)	Coeff.	SE	β (95% Wald CI)[a]	P value
Children's sex					
Male	7.12 (0.37)	0.38	0.35	-0.30, 1.08	.27
Female	6.73 (0.34)	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA
Children's age	–	-0.007	0.04	-0.09, 0.07	.87
Country					
Italy	6.55 (0.41)	0.7	0.45	-0.14, 1.62	.10
Spain	8.41 (0.42)	2.59	0.51	1.59, 3.60	≤.001
Portugal	5.81 (0.42)	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA
Parental stress	–	1.32	0.21	0.89, 1.74	≤.001
Parental status					
Risk group	7.46 (0.71)	1.31	1.13	-0.91, 3.53	.24
At-risk people living with them	7.05 (0.58)	0.89	1.04	-1.16, 2.95	.39
Friends or family are at-risk population, but not living with them	7.03 (0.22)	0.87	0.89	-0.87, 2.63	.32
No friends or family at-risk	6.15 (0.86)	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA
Characteristics	**Depressive symptoms**				
	Marginal Means (SE)	**Coeff.**	**SE**	**β (95% Wald CI)[a]**	**P value**
Children's sex					
Male	6.12 (0.39)	-0.06	0.43	-0.91, 0.77	.87
Female	6.19 (0.40)	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA
Children's age	-	0.06	0.05	-0.04, 0.16	.22
Country					
Italy	6.33 (0.43)	1.52	0.51	0.50, 2.53	.003
Spain	7.31 (0.51)	2.50	0.60	1.31, 3.69	≤.001
Portugal	4.81 (0.46)	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA
Parental stress	–	1.95	0.27	1.42, 2.48	≤.001
Parental status					
Risk group	7.03 (0.73)	1.63	1.17	-0.66, 3.93	.16
At-risk people living with them	6.12 (0.65)	0.72	1.11	-1.47, 2.91	.51
Friends or family are at-risk population, but not living with them	6.07 (0.28)	0.67	0.95	-1.20, 2.54	.48
No friends or family at-risk	5.39 (0.89)	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA	1 [Reference] NA

Note: SE = Standard Error.
[a] The β values (95% Wald CI) were derived from generalized linear regression

studies reported (Canals et al., 2018; Fernández-Martínez et al., 2020). In the Italian sample, the 19.8% children reached the score above the cut-off point for showing depressive symptoms, higher than other studies reporting a prevalence of depressive symptoms around 10% (Babore et al., 2016; Frigerio et al., 2001). Finally, the 8.5% of the Portuguese sample showed depressive symptoms, lower than the prevalence reported in previous studies with children (18%) (Costa et al., 2020) and adolescents (13.6%) (Gaspar de Matos et al., 2003). Although Portuguese children seems to be more adapted to the pandemic than the other two countries, this is an unexpected finding; changes in the family dynamic related to the pandemic, such as spending more time with their parents in a non-mandatory confinement, could have influencing on Portuguese children's mood; however, more research is needed to clarify this finding. Overall, despite this unexpected result, the percentage of Italian, Spanish, and Portuguese youths with emotional symptoms also seems to have increased during the pandemic, as reported in the Chinese sample (Xie et al., 2020). However, although the prevalence rates reached in the present study contrast with findings before the COVID-19 confinement, it is not possible to conclude it since there are no data prior to home confinement for the study sample.

A main objective of this study was to examine variables related to anxiety and depressive symptomatology. Given the results, two main findings are highlighted. First, differences in emotional

problems are found according to countries. Children with a higher level of anxiety tended to be from Spain. Although further research is needed, differences in confinement rules among countries could explain these findings. Spain imposed the most restrictive confinement, not allowing children to go outside until six weeks after the lockdown. Spanish children were allowed to go outdoors only one week before data collection and following a restriction rule: only one hour a day, once a day, and accompanied by only one parent. However, Italian children were allowed to take walks four weeks before data collection, and Portuguese children did not follow any mandatory confinement. The more restricted rules, compared to Italy and Portugal, could explain why Spanish youths were more affected than the children from the other countries. Also, compared to Portugal, Spanish and Italian youths reached higher levels of depression. Whereas Spain and Italy imposed mandatory confinement to interrupt the spread of COVID-19, Portugal recommended voluntary confinement, justified by the low rate of infections in this country. The less severe surrounding environment in Portugal (e.g., much lower number of deaths and infections) than in Italy and Spain may help to explain why the Portuguese children are the best adapted to the COVID-19 situation. Also, cultural differences and the degree of social alarm (due to the numbers of infected and deaths across countries) may have influenced the results of this study.

Also, an interesting finding of the study is the relationship between parents' stress and their children's emotional state. The results of the present study show that anxiety and depression symptoms were more likely in children whose parents reported a higher level of stress due to the COVID-19 situation. Previous studies have shown associations between parental stress and child psychopathology (e.g., Ashford et al., 2008). It seems that higher levels of parental stress are related to poor parenting responses, such as inconsistent or harsh discipline, overprotection, or poor supervision (e.g., Pinderhughes et al., 2000), which may negatively affect children's well-being (e.g., Affrunti & Ginsburg, 2012; Aguilar-Yamuza et al., 2019). The COVID-19 confinement implied many stressors for parents, so it is not surprising that parenting style may have changed during the lockdown, influencing children's and adolescent's emotional status. In a study on immediate psychological effects of the COVID-19 quarantine in youth from Italy and Spain, Orgilés et al. (2020) found that primary caregivers' level of stress was related to 25 of the 31 child symptoms, and recommended that parents do not constantly express their concerns in front of their children to protect their well-being and mental health. It is also possible that most stressed parents evaluated more negatively their children's mental health. Therefore, more research in this line to clarify this finding is needed.

The practical implications for the study are clear. Parental stress is a variable related to anxiety and depressive symptoms, so measures helping families to cope with the stress due to the COVID-19 situation will facilitate a more adequate family climate. Also, rules affecting children should be reviewed in future confinements to preserve not only their physical health but also their mental health. This study has some limitations. Mainly, the sample size, which limits the generalization of the results. A higher proportion of mothers (compared to fathers) responded to the survey, so this aspect may have influenced the results. This is common in family research studies; therefore, specific strategies to encourage fathers' participation are needed. Also, the parents, and not the children, completed the scales. However, although a multisource assessment would be preferable, parents have been shown to be good informants of their children's well-being, especially when instruments with good psychometric properties are applied. It is possible that parents more concerned about their children's mental health were more likely to complete the evaluation compared to those who were not. However, given that the recruitment process of the sample was equivalent between the three countries, it would not be expected that there would be differences in this aspect among Italy, Spain and Portugal. Despite the limitations, our findings provide useful information, adding evidence for the need to implement measures protecting the emotional status of youths.

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References

Affrunti, N. W., & Ginsburg, G. S. (2012). Maternal overcontrol and child anxiety: The mediating role of perceived competence. *Child Psychiatry and Human Development, 43*(1), 102-112. https://doi.org/10.1007/s10578-011-0248-z

Aguilar-Yamuza, B., Raya-Trenas, A. F., Pino-Osuna, M. J., & Herruzo-Cabrera, J. (2019). Relationship among parenting style and depression and anxiety in children aged 3-13 years old. *Revista de Psicología Clínica con Niños y Adolescentes, 6*(1), 36-43.

Angold, A., Costello, E. J., Messer, S. C., & Pickles, A. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research, 5*(4), 237-249.

Ashford, J., Smit, F., Van Lier, P. A. C., Cuijpers, P., & Koot, H. M. (2008). Early risk indicators of internalizing problems in late childhood: A 9-year longitudinal study. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 49*(7), 774-780. https://doi.org/10.1111/j.1469-7610.2008.01889.x

Babore, A., Trumello, C., Candelori, C., Paciello, M., & Cerniglia, L. (2016). Depressive symptoms, self-esteem and perceived parent-chidl relationship in early adolescence. *Frontiers in Psychology, 7*, 982. https://doi.org/10.3389/fpsyg.2016.00982

Bronsard, G., Alessandrini, M., Fond, G., Loundou, A., Auquier, P., Tordjman, S., & Boyer, L. (2016). The prevalence of mental disorders among children and adolescents in the child welfare system a systematic review and meta-analysis. *Medicine, 95*(7), e2622. https://doi.org/10.1097/MD.0000000000002622

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). *The psychological impact of quarantine and how to reduce it: Rapid review of the evidence*. *The Lancet, 395*(10227), 912-920. https://doi.org/10.1016/S0140-6736(20)30460-8

Canals-Sans, J., Hernández-Martínez, C., Sáez-Carles, M., & Arija-Val, V. (2018). Prevalence of DSM-5 depressive disorders and comorbidity in Spanish early adolescents: Has there been an increase in the last 20 years? *Psychiatry Research, 268*, 328-334. https://doi.org/10.1016/j.psychres.2018.07.023

Costa, D., Cunha. M., Ferreira, C., Gama, A., Machado-Rodrigues, A.M., Rosado-Marques, V., Nogueira, H., Silva, M., & Padez, C. (2020). Self-reported symptoms of depression, anxiety and stress in Portuguese primary school-aged children. *BMC Psychiatry, 20*(87). https://doi.org/10.1186/s12888-020-02498-z

Delvecchio, E., Orgilés, M., Morales, A., Espada, J. P., Francisco, R., & Pedro, M., & Mazzeschi, C. COVID-19: *Immediate psychological reactions and coping strategies in preschoolers, schoolchildren, and adolescents*. Manuscript submitted for publication.

Fernández-Martínez, I., Morales, A., Méndez, F. J., Espada, J. P., & Orgilés, M. (2020). Spanish adaptation and psychometric properties of the parent version of the Short Mood and Feelings Questionnaire (SMFQ-P) in a non-clinical sample of young school-aged children. *The Spanish Journal of Psychology*.

Francisco, R., Pedro, M., Delvecchio, E., Espada, J. P., Morales, A., Mazzeschi, C., & Orgilés, M. (2020). Psychological symptoms and behavioral changes in children and adolescents during the early phase of COVID-19 quarantine in three European countries. Front. Psychiatry 11:570164. doi: 10.3389/fpsyt.2020.570164

Frigerio, A., Pesenti, S., Molteni, M., Snider, J., & Battaglia, M. (2001). Depressive symptoms as measured by the CDI in a population of northern Italian children. *European Psychiatry, 16*(1), 33-37. https://doi.org/10.1016/S0924-9338(00)00533-2

Gaspar de Matos, M., Barrett, P., Dadds, M., & Shortt, A. (2003). Anxiety, depression, and peer relationships during adolescence: Results from the Portuguese national health behaviour in school-aged children survey. *European Journal of Psychology of Education, 18*, 3-12. https://doi.org/10.1007/BF03173600

Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., Linney, C., McManus, M. N., Borwick, C., & Crawley, E. (2020). Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. *Journal of the American Academy of Child and Adolescent Psychiatry, 59*(11), 1218-1239. https://doi.org/10.1016/j.jaac.2020.05.009

Mazzone, L., Ducci, F., Scoto, M.C., Passaniti, E., D'Arrigo, V., & Vitiello, V. (2007). The role of anxiety symptoms in school performance in a community sample of chidlren and adolescents. *BMC Public Health, 7*, 347. https://doi.org/10.1186/1471-2458-7-347

Orgilés, M., Méndez, X., Espada, J.P., Carballo, J.L., & Piqueras, J.A. (2012). Síntomas de trastornos de ansiedad en niños y adolescentes: diferencias en función de la edad y el sexo en una muestra comunitaria [Symptoms of anxiety disorders in children and adolescents: Differences according to age and sex in a community sample]. *Revista de Psiquiatría y Salud Mental, 5*(2), 115-120.

Orgilés, M., Rodríguez-Menchón, M., Espada, J.P., & Morales, A. Early detection of anxiety problems in childhood: Spanish validation of the brief SCAS for Parents [Unpublished document].

Orgilés, M., Morales, A., Delvecchio, E., Mazzeschi, C., & Espada, J. P. (2020). Immediate psychological effects of the COVID-19 quarantine in youth from Italy and Spain. *Frontiers in Psychology*. doi: 10.3389/fpsyg.2020.579038

Pinderhughes, E. E., Bates, J. E., Dodge, K. A., Pettit, G. S., & Zelli, A. (2000). Discipline responses: Influences of parents' socioeconomic status, ethnicity, beliefs about parenting, stress, and cognitive-emotional processes. *Journal of Family Psychology, 14*(3), 380-400. https://doi.org/10.1037/0893-3200.14.3.380

Reardon, T., Spence, S. H., Hesse, J., Shakir, A., & Creswell, C. (2018). Identifying children with anxiety disorders using brief versions of the Spence children's anxiety scale for children, parents, and teachers. *Psychological Assessment, 30*(10), 1342-1355. https://doi.org/10.1037/pas0000570

Xie, X., Xue, Q., Zhou, Y., Zhu, K., Liu, Q., Zhang, J., & Song, R. (2020). Mental health status among children in home confinement during the coronavirus disease 2019 outbreak in Hubei province, China. *JAMA Pediatrics, 174*(9), 898-900. https://doi.org/10.1001/jamapediatrics.2020.1619