

AN OVERVIEW OF SPANISH STUDENTS' PSYCHOLOGICAL ADJUSTMENT DURING COVID PANDEMIC

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Abstract

Introduction. All world had suffered the consequences of a health crisis due to Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). More specifically, Madrid was one of the cities most affected by this health crisis and where the restrictions have been the harshest. All population suffered psychological consequences of social isolation. Previous research on the effects of social isolation in children shows important effects on aspects, such as feelings of sadness, anger, frustration, and apathy (Biordi and Nicholson, 2013; Brooks et al., 2020). Other indicative aspects of well-being and regulation during childhood have also been found to be altered, such as sleep patterns, potty training, or challenging behaviors (Simon and Walker, 2018). Changes have also been observed in the levels of anxiety (increased fear, worry, obsession, or rumination) and depression (depressed mood, lack of interest and motivation, or sadness; Teo et al., 2013; Urbina, 2020). The objective of the present study was to verify whether the psychological adjustment of Spanish preschoolers and primary students has changed since the health crisis started.

Method. A total of 291 families with children aged between 3.2 and 11.1 years (53,9% girls) participated in the study. These families have a medium socioeconomic background. The sample was divided into two age groups: 76 preschool families (59% girls) and 215 primary families (52% girls). The first measurement point was in February 2020 (just before health crisis started), the second point of measurement was during confinement in Madrid in March 2020 and the last measurement point was in February 2021 (one year after the health crisis started). Some scales of the questionnaire System of Evaluation of Children and Adolescents (SENA, Fernández-Pinto et al., 2015) were used. The selected scales were Attentional Problems, Depression, Challenging Behaviors, Emotional Regulation, Hyperactivity, and Willingness to study.

Results. Comparison between the pretest and posttest scores for the Early Childhood Education group indicated very little variation in the mean scores of the five dimensions between T1-T2. In the same way, no differences between T1-T3 and T2-T3 were found in preschoolers. The situation for primary students were slightly different but in general no differences were found between T1-T3 and some improvement were found between T2-T3.

Discussion. These results show that the children apparently were able to emerge unscathed from the extreme situation that they had to live through.

Keywords: *Preschoolers, primary education, mental health, pandemic, psychological adjustment.*

1. Introduction

All world had suffered the consequences of a health crisis due to Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Madrid was one of the cities most affected by this health crisis and where the restrictions have been the harshest. All population suffered psychological consequences of social isolation.

More specifically as the United Nations Committee on the Rights of the Child (2020) points out children and adolescents are one of the most vulnerable populations in the pandemic, as they are exposed to serious physical, emotional and psychological product of the restrictions that mean the closure of

schools and kindergartens; loss of contact with peer groups; limitations for the movement and recreation activities; and difficulties in accessing contexts of protection against situations that threaten their rights.

Previous research on the effects of social isolation in children shows important effects on aspects such as feelings of sadness, anger, frustration, and apathy (Biordi and Nicholson, 2013; Brooks et al., 2020). Other indicative aspects of well-being and regulation during childhood have also been found to be altered, such as sleep patterns, potty training, or challenging behaviors (Simon and Walker, 2018). Changes have also been observed in the levels of anxiety (increased fear, worry, obsession, or rumination) and depression (depressed mood, lack of interest and motivation, or sadness; Teo et al., 2013; Urbina, 2020). Reinoso-Mena (2022) reviewed 52 articles that analyzed the symptoms and conditions that have affected the mental health of children and adolescents under 18 during the pandemic: stress, depression, anguish and anxiety were found.

More specifically in Spanish and Italian population, Orgilés et al. (2020) found that 85.7% of the parents perceived changes in their children's emotional state and behaviors during the quarantine. The most frequent symptoms reported were difficulty concentrating, boredom, irritability, restlessness, nervousness, feelings of loneliness, uneasiness, and worries. The Spanish parents reported more symptoms than Italians.

The objective of the present study was to verify whether the psychological adjustment of Spanish preschoolers and primary students has changed since the health crisis started in March/2020. We have had the opportunity of analyzing changes during confinement but also changes in the "new normality" once confinement finished.

2. Methods

A total of 291 families with children aged between 3.2 and 11.1 years (53,9% girls) participated in the study. These families have a medium socioeconomic background. The sample was divided into two age groups: 76 preschool families (59% girls) and 215 primary families (52% girls). The first measurement point was in February 2020 (just before health crisis started), the second point of measurement was during confinement in Madrid in March 2020 and the last measurement point was in February 2021 (one year after the health crisis started).

The questionnaire used was the System of Evaluation of Children and Adolescents (SENA, Fernández-Pinto et al., 2015), validated and scaled for the Spanish population. The selected scales were Attentional Problems, Depression, Challenging Behaviors, Emotional Regulation, Hyperactivity, and Willingness to study. The score for each item ranged from 1 (never or almost never) to 5 (always or almost always). For all dimensions, except for Willingness to study, the lowest scores indicate absence of problems and scores above 3 indicate the presence of some type of difficulty. For the Willingness to study scale, a score lower than 3 indicates a problem.

3. Results

Comparison between the scores before, during and after confinement for preschoolers indicated very little variation in the mean scores (Table 1). Since the comparison between T1 and T2 has already been published (Giménez-Dasí et al., 2020), only the T1-T3 and T2-T3 comparisons are referred to in this paper. No differences between T1-T3 (Pillai's trace: $F(6, 8) = 0,43, p = .84, \eta_p^2 = .24$) and T2-T3 (Pillai's trace, $F(5, 12) = 0,534, p = .747, \eta_p^2 = .182, 1-\beta = .143$) were found in preschoolers. No gender differences were found.

Table 1. Mean and SD at three measurement points for preschoolers.

Dimensions	T1		T2		T3	
	Mean	SD	Mean	SD	Mean	SD
Challenging behaviors	2.31	0.72	2.55	0.83	2.44	0.89
Depression	1.23	0.28	1.28	0.47	1.23	0.36
Hyperactivity	2.66	0.70	2.79	0.89	2.57	0.84
Attentional problems	2.11	0.69	2.41	0.80	2.12	0.77
Emotion regulation	2.29	0.66	2.48	0.89	2.38	0.65
Anxiety	1.68	0.41	--	--	1.88	0.83

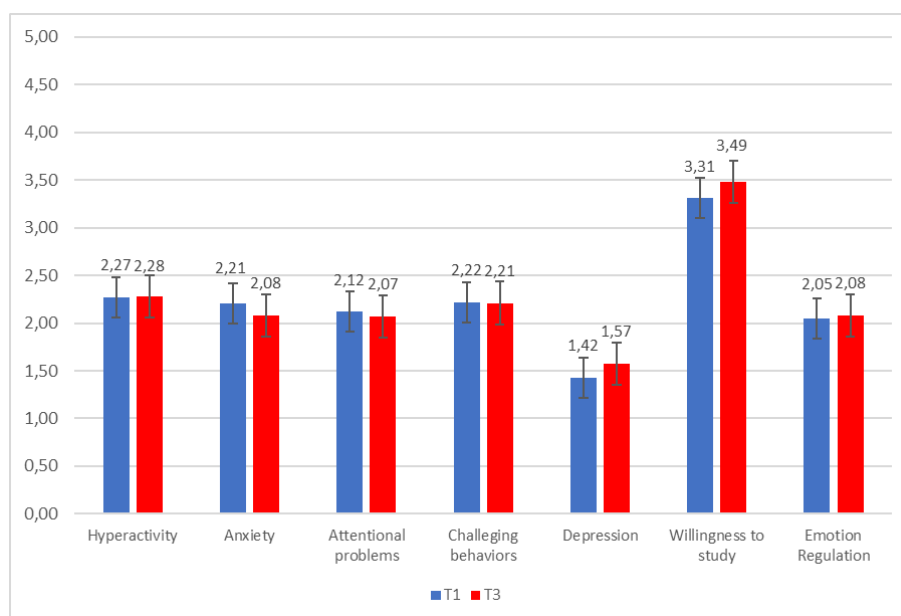
The situation for primary students were slightly different. In first place, results per grade were analyzed. As it can be seen in table 2, there were significant differences between grades in T1: attentional problems, challenging behavior, depression and hyperactivity. Those in third grade showed higher scores in attentional problems, challenging behaviors and hyperactivity. On the other hand, students from fifth grade showed higher scores in depression, In T2 and T3 significant differences per grades were found in attentional problems and hyperactivity. Once more students from third grade showed higher scores in both dimensions. In all cases the effect size was weak ($\eta^2 < .03$).

Table 2. Results for primary schoolers per grade.

Dimension	T1					T2				T3			
	Grade	N	M	SD	F(2, 71)	N	M	SD	F(2, 101)	N	M	SD	F(2, 47)
Anxiety	1º	28	2,05	,69	2,184	This dimension was not assessed during confinement.				19	2,04	,61	2,722
	3º	24	2,55	1,0	$p = .120$	16	2,48	,93		16	2,48	,93	$p = .076$
	5º	22	2,27	,85		15	1,87	,71					
Attentional problems	1º	28	2,02	,72	4,639	40	2,49	,81	4,025	19	1,91	,57	6,312
	3º	24	2,60	,83	$p = .013$	35	2,65	,89	$p = .021$	16	2,55	,84	$p = .004$
	5º	23	1,98	,75		29	2,09	,68		15	1,73	,62	
Challenging behaviors	1º	28	2,26	,61	3,144	40	2,42	,72	1,975	19	2,19	,68	1,022
	3º	24	2,37	,65	$p = .049$	35	2,51	,75	$p = .144$	16	2,43	,83	$p = .368$
	5º	23	2,10	,73		29	2,17	,66		15	2,06	,70	
Depression	1º	28	1,22	,27	4,287	40	1,66	,72	0,155	19	1,42	,41	1,751
	3º	24	1,47	,44	$p = .017$	35	1,59	,72	$p = .857$	16	1,65	,54	$p = .185$
	5º	23	1,58	,57		29	1,57	,62		15	1,85	,97	
Hyperactivity	1º	28	2,34	,66	5,112	40	2,76	,81	6,815	19	2,26	,66	6,864
	3º	24	2,61	,87	$p = .008$	35	2,86	,94	$p = .002$	16	2,66	,90	$p = .002$
	5º	23	1,96	,66		29	2,14	,73		15	1,72	,52	
Willingness to study	1º	28	3,39	,60	2,698	40	2,41	,94	2,241	19	3,54	,52	0,677
	3º	24	3,15	,49	$p = .074$	35	2,63	,90	$p = .112$	16	3,36	,57	$p = .513$
	5º	23	3,54	,52		29	2,07	,88		15	3,55	,48	
Emotion regulation	1º	28	1,96	,69	2,783	40	2,94	,72	2,972	19	1,94	,72	2,706
	3º	24	2,42	,74	$p = .069$	35	3,08	,45	$p = .056$	16	2,48	,996	$p = .077$
	5º	23	2,13	,79		29	3,23	,48		15	1,82	,842	

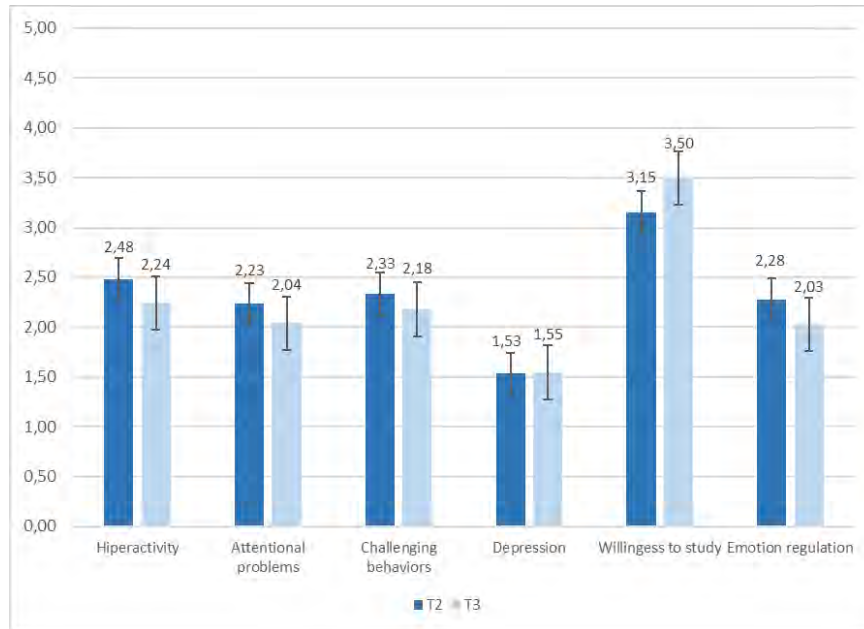
There were significant differences between T1-T2 in the following dimensions: attentional problems, emotion regulation, hyperactivity, and willingness to study (Giménez-Dasí et al., 2020). Although no differences were found between T1-T3 (Pillai's trace, $F(7, 26) = 0,653, p = .708$) there were significant differences between T2-T3 (Pillai's trace, $F(6, 37) = 2,414, p = .045$).

Figure 1. Mean scores for primary students in T1 and T3.



In T2-T3 a score decrease was observed in all dimensions except in willingness to study, which increases slightly (Figure 2). Some statistically significant differences were found indicating a reduction in Hyperactivity in T3 ($F_{\text{Hyperactivity}}(1, 42) = 3,930, p = ,028, \eta_p^2 = .110$), decrease in emotion regulation difficulties scores in T3 ($F_{\text{P.Emotion Regulation}}(1, 42) = 3,992, p = ,005, \eta_p^2 = ,173$) as well as small improvement of willingness to study ($F_{\text{Willingness to study}}(1, 42) = 5,772, p = .021, \eta_p^2 = .121$).

Figure 2. Mean scores for primary students in T2 and T3.



4. Discussion

The objective of the present study was to verify whether the psychological adjustment of Spanish preschoolers and primary students had changed since the health crisis started. In general, the results of allow us to establish two conclusions: 1) preschoolers did not experience changes due to the pandemic. Neither the confinement nor the “new normality” seemed to impact their psychological adjustment; 2) Primary School children in our sample have recovered from the impact of confinement and it does not seem that the pandemic is affecting their psychological adjustment.

The lack of impact on preschoolers is consistent with that obtained in our previous study, where the psychological adjustment was compared in February 2020, before confinement, and in April of the same year after six weeks of confinement (Giménez-Dasí et al., 2020). As already argued in the previous study, it seems that young children are more protected from reality than older ones. This protection comes from external agents such as their family and school environment. On the other hand, it can come from internal factors such as the cognitive system of young children. In this sense, the care that young children receive from their families and teachers has the objective of promoting the stability of their lives and that the restrictions and concerns derived from the pandemic situation affect these minors minimally.

For the primary students we found no differences between T1 and T3 on any scale. The number of restrictive measures to which the children have been subjected seemed not to impact on their psychological adjustment or it has not caused them significant stress. Perhaps these stressors are compensated by other protective factors already mentioned in the scientific literature (Marchi et al., 2021). Regarding the comparison between the time of confinement (T2) and the “new normality” (T3), some improvements have been found, specifically in the reduction of Hyperactivity, Emotional Regulation difficulties and Willingness to study (remember that this scale scores inversely and a higher score indicates fewer problems). It is possible that some protective factors have had an impact on these improvements (i.e. contact with peers, physical exercise, return to certain normal routines and greater social support) and that the reduction of some risk factors has also been positive (i.e. excessive use of devices and exposure to information and news) (Marchi et al., 2021).

In short, the results of this study support the hypothesis that returning to “new normality” would have contributed to improving the psychological adjustment of children and that neither the pandemic nor the restrictive measures had a negative effect on the children in our sample. These results differ from

studies that indicate that the pandemic has brought more social and emotional instability to children. The clearest hypothesis that would explain those results can be attributed to the socioeconomic situation of the sample. Previous studies have shown that socioeconomic status (SES) has proven to be a key protective factor regarding the impact of the pandemic in all settings (Bryant et al., 2020; Panagouli et al., 2021)

This study has some limitations that need to be considered. Firstly, the sample size is small and it is a convenience sample. It would be important to consider studies with more representative and larger samples.

Besides the limitations this study presents, our results show a very positive view of mental health of our students as it seems that preschoolers and primary students apparently were able to emerge unscathed from the extreme situation that they had to live through.

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