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How Super Skills for Life may help children to cope with the COVID-19: Psychological impact and coping styles after the program

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Abstract

As this is the first time that a pandemic has occurred in our recent history, preventive interventions for children's emotional problems during confinement were not planned. A main goal of Super Skills for Life Program (SSL) is to provide children with skills to build emotional resilience and coping strategies for daily and difficult life situations, so examining how the program may help children to face the COVID-19 situation could be appropriate. The aim of this research was to compare parents' perception of immediate psychological reactions to confinement and coping styles in children who received the SSL program before home confinement (n = 48) with an equivalent sample of children who did not attend the program (n = 48). Another objective was to study the relationship between children's immediate psychological reactions to confinement and their coping styles. Parents (n = 96) completed an online survey providing information on sociodemographic variables, children's immediate psychological reactions (anxiety/activation, mood, sleep, behavioral alterations, eating and cognitive alterations), and children's coping styles (task-oriented, emotion-oriented, and avoidance-oriented strategies). Results indicated that the control group presented more symptoms of anxiety ($p \le .001$), worse mood ($p \le .001$), more sleep problems ($p \le .01$), and more cognitive alterations ($p \le .01$) during home confinement than children who received the program. Children in the control group were also more likely to use emotion-oriented strategies (p = .001), which were associated with presenting more psychological alterations. Although the SSL program was not created specifically for coping with the COVID-19 situation, it seems to provide children with skills to cope with this unexpected event. *Keywords: children; coping; COVID-19; psychological reactions; Super Skills for Life*.

Resumen

Cómo Super Skills puede ayudar a los niños a afrontar el COVID-19: Impacto psicológico y estilos de afrontamiento después de recibir el programa. Puesto que ésta es la primera vez que ocurre una pandemia en nuestra historia reciente, no ha sido posible planificar intervenciones para prevenir los problemas emocionales infantiles durante el confinamiento. Un objetivo principal del programa Super Skills for Life (SSL) es proporcionar a los niños habilidades para desarrollar resiliencia emocional y hacer frente a situaciones diarias y difíciles en su vida, por lo que parece interesante examinar cómo el programa podría ayudar a los niños a afrontar la situación del COVID-19. El objetivo de este estudio fue comparar el impacto psicológico durante el confinamiento y los estilos de afrontamiento de los niños que recibieron el programa SSL antes del confinamiento (n = 48), en comparación con una muestra equivalente de niños que no habían recibido el programa (n = 48). La información se obtuvo a través de los padres (n = 96), quienes respondieron a unos cuestionarios online sobre variables sociodemográficas, reacciones psicológicas de los niños (ansiedad/activación, estado de ánimo, sueño, alteraciones conductuales, cambios en la alimentación y alteraciones cognitivas) y estilos de afrontamiento (orientados a la tarea, a la emoción y a la evitación). Los resultados indicaron que durante el confinamiento el grupo control presentó más síntomas de ansiedad ($p \le .001$), meor estado de ánimo ($p \le .001$), más problemas de sueño ($p \le .01$) y más alteraciones cognitivas ($p \le .01$), que los niños que recibieron el programa. Los niños que recibieron el programa SSL no se creó específicamente para hacer frente a la situación del COVID-19, parece proporcionar a los niños habilidades para hacer frente a este evento inesperado.

Palabras clave: niños; afrontamiento; COVID-19; reacciones psicológicas; Super Skills for Life.

In 2020, children around the world have experienced an unexpected and stressful situation due to the home confinement imposed

to control the spread of the coronavirus. Spain is one of the most affected countries in the world, with more than 364.000 detected cases

up to 18th August and more than 28.600 deaths. Due to the high rate of infections in the Spanish population, home confinement was implemented by the government on March 16th, closing schools and public spaces. Children were allowed to go outdoors as of April 26th, following restrictive rules; walks outside were only permitted for children under 14 years old, one hour a day, and accompanied by only one adult. A study developed with Spanish children and adolescents during the first weeks of confinement showed that emotional and behavioral changes were observed by parents in 88.9% of their children (Orgilés, Morales, Delvecchio, Mazzeschi, & Espada, 2020). Difficulty concentrating, boring, irritability, restlessness, and arguing with the rest of the family were reported as the most frequent symptoms in the sample.

As this is the first time that a pandemic has occurred in our recent history, strategies to prevent emotional problems in children during home confinement were not planned. Coping behaviors could explain why some children develop emotional and behavioral problems in stressful situations whereas others confront the situation without consequences in their mental health (Compas et al., 2017). As the COVID-19 home confinement was an unexpected event, children probably did not have the ability to cope with such a stressful situation. The literature on the behaviors that children use to face a stressful event is vast, but to our knowledge, only one study to date has explored how children coped with the COVID-19 situation. Orgilés et al. (2020) examined the coping strategies used by a sample of 1,480 Italian, Spanish, and Portuguese children and adolescents, finding that children from Spain were more likely to act as if nothing was happening, collaborating with social activities, and seeking comfort from others compared to children from other countries. Although Spanish children used some strategies considered adaptive, such as collaborating with social activities (e.g., applauses from the balconies), they were more likely to seek comfort from other family members, maybe due to the interruption of their social contact, which was limited indoors due to the long confinement they experienced.

Children's coping behaviors for the COVID-19 situation could be influenced by previously learned strategies. Some intervention programs, developed to provide children with skills to confront stressful situations, could be suitable for children to cope with the confinement imposed by COVID-19. Among the available programs, we highlight the Super Skills for Life Program (SSL) for having demonstrated its efficacy in the short and long term with Spanish children (Fernández-Martínez, Morales, Espada, Essau, & Orgilés, 2019; Fernández-Martínez, Morales, Espada, Essau, & Orgilés, 2020; Orgilés, Fernández-Martínez, Espada, & Morales, 2019). SSL is a transdiagnostic program developed to help children from 6 to 12 years of age to cope with emotional problems. As the authors of the original version emphasize (Essau & Ollendick, 2013), the program provides youth with skills to build emotional resilience and cope with stressful situations, including life changes. The intervention focuses on training useful skills to confront not only daily situations but also difficult situations that children, unfortunately, must cope with in their lifetime. Previous studies have shown that children who received the program reduced their anxiety and depression symptoms, and these results improved in a 12-month follow-up (Fernández-Martínez, Orgilés, Morales, Espada, & Essau, 2020). Besides, the program achieved good results for reducing behavioral problems that were comorbid to emotional problems (Essau, Conradt, Sasagawa, & Ollendick, 2012; Orgilés et al., 2019).

Considering that a main goal of the SSL program is to provide children with skills to cope with stressful life situations, examining how the program could help children to face the COVID-19 situation could be appropriate. This study aimed to compare children's immediate psychological reactions to home confinement in participants who had received the SSL program with an equivalent sample of children who had not attended the program (control). The specific objectives were: a) to describe parents' perception of their children's immediate psychological reactions to quarantine (anxiety, mood, sleep, behavioral, feeding, and cognitive alterations) and to analyze differences between the SSL group and the control group; b) to examine parental perception of their children' coping styles during home confinement and to analyze the differences between the two conditions; and c) to examine the relationship between parents' perception of their children's immediate psychological reactions and their perception of their children's coping styles during home confinement. We hypothesized that children who received the intervention program would show less emotional and behavioral symptoms, and would use more adaptive behaviors to cope with the COVID-19 situation.

Method

Participants

The sample was made up of 96 parents of children aged 6 to 12 (M = 10.52, SD = 2.22). Of them, 50% of the children (n = 48) had received the SSL program in the last two years. The rest was a subsample of children who were equivalent in sociodemographic variables to the participants of the intervention program (Table 1). Most of the participants were mothers (82.3%), married (81.3%), and the group's mean age was 43.50 years (SD = 5.14). All educational and socioeconomic levels were represented. During home confinement, 30.2% of the families lived in a house with a balcony, 27.1% with a terrace, 21.9% with only windows, and 18.8% had a garden. The useful square meters of the house ranged from 30 to 300 (M = 124.30, SD = 55.46). Almost half of the parents worked during the COVID-19 health crisis, and the rest informed that they only left home to buy groceries or to do other allowed activities. Seventy percent of the sample had at-risk friends or family for COVID-19, but these people were not living with them, and only 2.1% had friends or family who were hospitalized for this illness. Three-quarters of the participants were not affected by the virus.

Table 1. Distribution of Key Sociodemographic Variables and by Group

	Total	SSL	Control	T
	(N = 96)	(<i>n</i> = 48)	(<i>n</i> = 48)	Test ^a
Parents				
Female, N (%)	79 (82.3)	37 (77.1)	42 (87.5)	1.78
Age, M (SD)	43.50	44.02	42.98	.36
	(5.14)	(5.25)	(5.03)	
Marital status, N (%)				
Married	78 (81.3)	40 (83.3)	38 (79.2)	.30
Single	16 (16.7)	7 (14.6)	9 (18.8)	
Other	2 (2.1)	1 (2.1)	1 (2.1)	
Educational level				
Doctor's or Master's	14 (14.6)	4 (8.3)	10 (20.8)	6.42
Undergraduate	50 (52.1)	23 (47.9)	27 (56.3)	
Secondary school	20 (20.8)	14 (29.2)	6 (12.5)	
Primary school	12 (12.5)	7 (14.6)	5 (10.4)	
Monthly family income (euro	s)			
Up to 999	9 (9.4)	4 (8.3)	5 (10.4)	3.41
Between 1,000 and 1,999	22 (22.9)	12 (25)	10 (20.8)	

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Square meters home, <i>M</i> (<i>SD</i>) 124.30 123.85 124.75 .85	Square meters home, <i>M</i> (<i>SD</i>)				.85
(55.46) (52.90) (58.46)	1 (02)				
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Female, N (%) 41 (42.7) 18 (37.5) 23 (47.9) 1.06		41 (42.7)	18 (37.5)	23 (47.9)	1.06
Age, M (SD) 10.52 10.52 .86					
(2.22) (2.33) (2.14)					

Note. SSL = Super Skills for Life program; M = Mean; SD = Standard Deviation; ^a Cross-table (χ 2) for categorical variables and Mann-Whitney U-test for continuous variables. *p < .05. **p < .01. ***p < .001.

Measures

Parents completed an online survey during the first 15 days of home confinement in Spain due to the state of alarm, when restrictions forced citizens to remain at home except for essential matters, such as purchasing food or medicines. All the non-essential businesses were closed, as well as schools and public spaces. During the dates that the information was collected, children were not allowed to go outside. Based on measures to assess the psychological effects of quarantine in adults and previous literature on the effects of home confinement, the authors elaborated an *ad hoc* survey, which included sociodemographic measures for parents and children (see Table 1), and two scales. The Impact Scale of the COVID-19 and Home Confinement on Children and Adolescents (Orgilés, Morales, & Espada, 2020a) included 31 items rated from 1 (much less than before the quarantine) to 5 (much more than before the quarantine). The scale obtained information on the parents' perception of their children's immediate psychological reactions to the quarantine, through six areas: anxiety/activation (10 items), mood (6 items), sleep (5 items), behavioral alterations (6 items), eating (2 items), and cognitive alterations (2 items). The ordinal alpha of this scale in the current study was .93 (see Table 2). The Coping Inventory to COVID-19 and Home Confinement in Children and Adolescents (Orgilés, Morales, & Espada, 2020b) assessed the children's coping strategies through the parents' perception. It consists of 11 items divided into 3 domains: task-oriented (5 items; ordinal $\alpha = .79$ in the current study), emotion-oriented (3 items; ordinal $\alpha = .60$ in the current study), and avoidance-oriented strategies (3 items; ordinal α = .67 in the current study). Items required binary "yes-no" responses (see Table 3).

Procedure

This research was supported by the Ethics Board of the Miguel Hernández University, in Spain. After reviewing the scientific literature on the psychological impact of home confinement due to the COVID-19 health crisis on children and adults, a brief survey was designed. The estimated response time was 15 minutes. Because of home confinement restrictions, parents of children aged 6 to 12 were invited to participate in this research through social networks (Facebook and Twitter). Parents of children who had received the SSL program were also invited to participate by email. Out of 257 parents who were invited, 48 (18.6%) provided the informed consent and completed the online survey. The control group was recruited from a large study developed to examine in the general population the psychological impact of the home confinement on children and the coping styles they used to face the situation. Participants included in the control group were aimed to be equivalent in the sociodemographic variables to the participants of the intervention program. No incentives were provided, and confidentiality was assured to the participants.

Data Analyses

Statistical analysis was performed using the SPSS 26 for Windows. Differences in immediate psychological reactions to quarantine between children who received the SSL program and those who did not (control) were tested using non-parametric tests. Children who were evaluated by their parents with a score of 4 or 5 were recoded as 1 (symptoms worsen during quarantine, compared to before this period) and the rest as 0. The Mann-Whitney U-test was used because the data were not normally distributed. Chi-squared tests were used to compare proportions across the two groups. P < 0.05 on two-sided tests was taken as a level of significance. The effect size of the statistically significant differences was estimated using Rosenthal's r, which is interpreted as follows: .10 = small, .30 = medium, and .50 = large(Rosenthal, 1994). Cramer's V was calculated as a measure of association between multi-categorical variables, and interpreted as follows: > 0.25 very strong, > 0.15 strong, > 0.10 moderate, > 0.05 weak, and > 0 none or very weak (Akoglu, 2018). Spearman correlations were calculated to analyze the relationship between parents' perception of their children's immediate psychological reactions to quarantine and parents' perception of their children's coping styles during home confinement. Ordinal alpha was calculated for the measures used in the current study.

Table 2. Parents	Perception of	Children's immediate	Psychological	Reactions to	Confinement and b	v Group

	Total (<i>N</i> = 96)	SSL (<i>n</i> = 48)	Control $(n = 48)$				
	M (SD)	M (SD)	M (SD)	U	Ζ	р	r
Anxiety (0-10)	3.89 (3.07)	2.66 (2.44)	5.12 (3.17)	488	-4.96	≤ .001	.50
Mood (0-6)	1.93 (1.58)	1.12 (1.12)	2.75 (1.57)	630	-3.85	≤ .001	.39
Sleep (0-5)	1.11 (1.44)	.66 (.88)	1.56 (1.73)	837.50	-2.46	.01	.25
Behavioral alterations (0-6)	2.06 (1.85)	1.68 (1.54)	2.43 (2.07)	932.50	-1.64	.10	-
Feeding, range (0-2)	.45 (.59)	.41 (.61)	.50 (.58)	1048	-0.88	.37	-
Cognitive alterations (0-2)	.61 (.74)	.37 (.53)	.85 (.85)	806.50	-2.81	.005	.28

Note. SSL = Super Skills for Life program; M = Mean; SD = Standard Deviation; U = Mann-Whitney U-test; Z = Z-score; r = Rosenthal's r (effect size).

Table 3. Parents	' Perception of Children'	's Copina Styles durir	a Home Confinement	and by Condition

		otal = 96)	-	SL = 48)		ntrol 48)				
	М	SD	М	SD	М	SD	U	Ζ	р	r
Task-Oriented (0-5)	1.21	1.38	1.12	1.39	1.31	1.38	1041	86	.38	-
Emotion-Oriented (0-3)	0.51	0.72	0.27	0.57	0.75	.78	755	-3.36	.001	0.34
Avoidance-Oriented (0-3)	0.78	1.48	0.89	1.83	0.66	1.01	1075	63	.52	-

Note. SSL = Super Skills for Life program; M = Mean; SD = Standard Deviation; U = Mann-Whitney U-test; Z = Z-score; r = Rosenthal's r (effect size).

Table 4. Spearman correlations between parents' perception of children's immediate psychological reactions to quarantine and parents' perception of children' coping styles during home confinement and children's age

Variable	М	SD	1	2	3	4	5	6	7	8	9
1. Children's age	10.52	2.23									
2. Anxiety symtpoms	3.90	3.08	09								
			[28, .12]								
3. Mood symptoms	1.94	1.59	12	.45**							
			[31, .08]	[.28, .60]							
4. Sleep alterations	1.11	1.44	06	.63**	.42**						
			[26, .14]	[.49, .73]	[.24, .57]						
5. Behavioral alterations	2.06	1.86	17	.62**	.46**	.47**					
			[36, .03]	[.47, .73]	[.28, .60]	[.30, .61]					
6. Feeding alterations	0.46	0.60	.02	.14	.23*	.20	.13				
			[18, .22]	[07, .33]	[.03, .41]	[01, .38]	[08, .32]				
7. Cognitive alterations	0.61	0.75	13	.60**	.48**	.63**	.50**	.14			
			[32, .08]	[.46, .72]	[.31, .62]	[.49, .74]	[.34, .64]	[06, .33]			
8. Task-oriented coping style	1.22	1.39	15	10	12	13	.02	.00	06		
			[34, .05]	[29, .11]	[31, .08]	[32, .07]	[18, .22]	[20, .21]	[26, .14]		
9. Emotion-oriented coping style	0.51	0.73	12	.38**	.33**	.21*	.23*	.01	.21*	.41**	
			[31, .08]	[.20, .54]	[.14, .50]	[.00, .39]	[.04, .41]	[19, .21]	[.01, .40]	[.23, .57]	
10. Avoidance-oriented coping style	0.78	1.48	.05	04	.00	.00	01	.08	.03	.01	14
			[15, .25]	[24, .16]	[20, .20]	[20, .20]	[21, .19]	[12, .28]	[17, .23]	[19, .21]	[33, .06]

Note. M and SD are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation * indicates p < .05. ** indicates p < .01.

Results

Immediate psychological reactions to home confinement

Table 2 presents means and standard deviations for parents' perception of their children's immediate psychological reactions to quarantine, and differences between children who had received the SSL program and the equivalent subsample of children (control). The Mann-Whitney *U*-tests indicated that the control group had a higher mean in symptoms of anxiety ($p \le .001$), mood problems ($p \le .001$), sleep problems ($p \le .01$), and cognitive alterations ($p \le .01$) during confinement, compared to the children who had received the program. Effect sizes ranged from moderate to high. There were no differences in behavioral and feeding alterations between both groups.

Coping styles during home confinement

Table 3 shows means and standard deviations for parents' perception of their children's coping styles during home confinement: task-oriented, emotion-oriented, and avoidance-oriented. Children in the control group were more likely to use emotion-oriented strategies than the intervention group (p = .001), with a moderate effect size. Specifically, children in the control group (n = 19; 39.6%) were more likely to seek affection from others during home confinement, compared to the group who had received the program (n = 6; 12.5%), $\chi^2 = 9.14$; p = .003, OR = 2.46, 95% confidence interval [CI]: 1.19, 5.08. There were no differences in tasked-oriented and avoidance-oriented coping styles between both groups.

Relationship between immediate psychological reactions and coping styles during home confinement

Table 4 informs about the Spearman correlations between parents' perception of their children's immediate psychological reactions to quarantine and parents' perception of their children's coping styles during home confinement and the children's age. Of the three coping styles, only the emotion-oriented style was significantly and directly related to anxiety ($p \le .01$), mood problems ($p \le .01$), sleep problems ($p \le .05$), behavioral problems ($p \le .05$), and cognitive alterations ($p \le .05$). This suggests that children who use the emotion-oriented coping style are more likely to present psychological alterations, except for feeding problems. The other two coping styles – task-oriented and avoidance-oriented styles– were not related to the children's immediate psychological reactions to quarantine. Children's age was indirectly related to psychological symptoms and the use of coping styles but these relationships were not statistically significant.

Discussion

The objective of the present study was to analyze the psychological reactions and coping behaviors to the confinement imposed to slow down COVID-19 in a sample of Spanish children who had previously received an intervention program aimed to help them to cope with emotional problems. As this is the first time that confinement has been implemented in our recent history, specific interventions were not available to help children to manage this situation. The SSL is a transdiagnostic program, originally developed to provide children aged 6 to 12 years old with skills to cope efficiently not with only common daily life situations but also with stressful events that they, unfortunately, must manage (Essau et al., 2012).

The results of this study show differences between the group who had received the SSL program and the control group. Specifically, the children who did not attend the program obtained higher scores in anxiety, mood problems, sleep problems, and cognitive alterations during home confinement. Concerning how children cope with the COVID-19 situation, differences were found in coping behaviors based on emotion, used more frequently by the children who had not participated in the SSL program. In the present study, there was a relationship between symptoms of anxiety, mood problems, sleep problems, behavioral and cognitive alterations and the use of coping behaviors based on emotion. In line with our study, previous studies have shown that emotion-focused coping behaviors are related to internalized symptoms, such as mood problems or anxiety (Carlo et al., 2012).

The present study highlights two main findings. First, children who had received the SSL program showed less psychological effects than the children who had not attended the intervention. In previous research, the SSL has demonstrated its efficacy to reduce anxiety and depression symptoms, as well as behavioral problems in the short and long term (Essau et al., 2012; Fernández-Martínez et al., 2019; Orgilés et al., 2019). As a common psychological response to the home confinement is showing emotional symptoms, such as anxiety or depression (Xinyan Xie, 2020), it is not surprising for the program to be effective to reduce both problems caused by the COVID-19 situation. Second, and related to the first finding, the program seems to be effective to provide children with skills to face the COVID-19 situation more effectively. Coping behaviors were more adaptive in the children who had received the SSL. The program includes some techniques, such as problem-solving training or cognitive restructuring, that could help children to cope with the home confinement. A main objective of the program is building emotional resilience, training children to recognize and control their negative emotions in a specific situation. This emotional education component could have helped the children to use adaptive coping behaviors in the COVID-19 situation. Emotion-focused coping, used more by the children in the control group than by those in the SSL group, implies that children are more focused on their emotional experience than on solving their problems, and this is related to psychological alterations (Sears, Urizar, & Evans, 2000). Learning skills to recognize, calibrate, and control their negative emotions could have been useful for the children who had attended the SSL program to cope with the home confinement using more adaptive coping behaviors. Besides, despite that the children had attended the program at least one year before confinement, it seems that they were able to apply the learned skills. In previous studies, the SSL achieved better results in the long term than in the short term (Orgilés et al., 2019), so it is not surprising that the children who had received the program used those skills efficiently months later. Not all the children experienced situations where they had the opportunity to use the learned skills immediately after receiving the program but they could cope with their daily problems and stressful situations, applying the skills learned months before.

The present study has some limitations and strengths. The main limitation is the sample size. Due to the impossibility of obtaining the information face to face, the parents completed the survey online, and we could not contact some of them. Second, as this is a cross-cultural study, caution is needed when interpreting the results. Due to the situation caused by the pandemic, another type of study could be applied, and some uncontrolled variables may be influencing the results. Despite the limitations, this study provides for the first time evidence of how a psychological intervention may be useful for helping children to cope with the COVID-19 situation. Although the SSL program was not created specifically to cope with the COVID-19 situation, it seems to be effective to provide children with skills to manage this unexpected event. Practical implications are clear. Despite that situations like the COVID-19 and the confinement imposed are rare, programs that provide children with psychological skills could be useful to help them cope with daily or infrequent stressful situations. Specifically, the SSL is focused on building emotional resilience and coping with stressful situations, so it seems to be a very appropriate program for facing the COVID-19 situation that our children are experiencing.

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Conflict of interests

The authors declare no conflict of interest.

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