

School Functioning in Adolescents with Chronic Pain

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AIM OF INVESTIGATION

This study sought to examine the differences in school functioning between adolescents with and without chronic pain. We also explored the associations between school functioning and pain intensity and other pain-related variables (depression, anxiety and pain catastrophizing) and examined the role that these variables might play in school functioning in the group of adolescents with chronic pain.

METHODS

Procedure

256 adolescents of 2 schools from Catalonia (Spain) participated in this study. Participants completed the assessment form during 45 minutes of school time following the instructions provided by research staff.

Measures

Demographics	Age, sex, school grade
Maximum pain intensity in the last 3 months	Numeric Rating Scale (NRS-11)[1]
Usual pain intensity in the last month	
School functioning	School Functioning scale of the Pediatric Quality of Life Inventory (PedsQL) [2]
School absenteeism	Participants were asked about the number of days they had been absent from school during the last month due to pain (e.g. staying at home or attending clinical appointments).
Depression symptoms	Children Depression Inventory (CDI) [3]
Anxiety	Trait form of the State-Trait Anxiety Inventory for Children (STAI-C) [4]
Pain catastrophizing	Internalizing/Catastrophizing scale of the Pediatric Pain Coping Questionnaire (PCQ) [5]

RESULTS

Table 1. Sample characteristics

Age (Mean, SD)	13.98 (1.75)
Sex (% , N)	
- Boys	54 (139)
- Girls	46 (117)
School year (% , N)	
- 1 st SE	38 (97)
- 2 nd SE	40 (102)
- 1 st BAT	13 (32)
- 2 nd BAT	10 (25)
Pain in the last 3 months (% , N)	86 (220)
Chronic pain (% , N)	46 (118)
- Continuous (% , N)	11 (13)
- Recurrent (% , N)	89 (105)
- Everyday	14.5 (16)
- More 1/week	44.5 (49)
- 1 / week	14.5 (16)
- 1-2 /month	26.4 (29)

SE= Secondary Education; BAT= Batxillerat (a specific period of Spanish Secondary Education for students from 16 to 18 years of age).

Figure 1 and figure 2. Differences in school functioning and absenteeism between participants with and without chronic pain

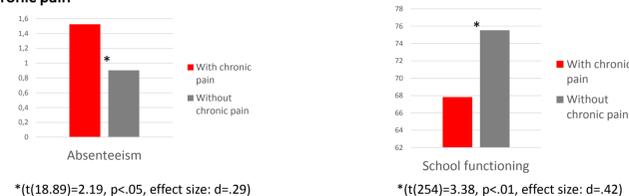


Table 2. Pearson's correlations coefficients for absenteeism and school functioning

	Absenteeism	School Functioning
Maximum pain intensity (the last 3 months)	.26*	-.24*
Usual pain intensity (the last month)	.08	-.24*
Pain catastrophizing	.08	-.25*
Anxiety	.04	-.41*
Depression symptoms	.09	-.43*

*Correlation is significant at the 0.01 level (2-tailed).

Table 3. Multiple regression analysis results predicting school functioning and absenteeism

Criterion Variable	Step	Predictor Variable	β	R^2_{Change}	R^2	Adj R^2
School functioning	1	Depression	-.43**	.182	.182	.174
		Max pain intensity	-.42*	.064	.245	.231
		Anxiety	-.25*			
		Depression	-.29			
	3	Max pain intensity	-.24	.018	.263	.243
		Anxiety	-.19			
		Depression	-.30			
		Max pain intensity	-.24	.001	.264	.237
	4	Anxiety	-.20			
		Catastrophizing	.04			
		Max pain intensity	.23	.052	.052	.030
		Anxiety	-.19			
Absenteeism	1	Max pain intensity	-.24	.037	.090	.045
		Anxiety	-.19			
	3	Max pain intensity	.26	.038	.128	.062
		Anxiety	-.39			
4	Depression	.28				
	Max pain intensity	.28	.003	.130	.041	
4	Anxiety	-.37				
	Depression	.30				
4	Catastrophizing	-.07				
	Catastrophizing	-.07				

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

CONCLUSIONS

- The chronic pain group showed worst school functioning and higher absenteeism.
- We found negative and significant associations between school functioning, and pain intensity, pain catastrophizing, anxiety and depression in the group of participants with chronic pain. However, absenteeism was only significantly related to the maximum pain intensity.
- Depressive symptoms and pain intensity levels emerged as the sole predictors of school functioning in adolescents with chronic pain.
- The results provide additional evidence of the role of modifiable psychosocial factors in school functioning.
- This information provides useful insights for helping adolescents with chronic pain to learn more effective pain coping strategies in the school setting.
- Furthermore, this information could help to develop preventive treatment programs aimed at reducing absenteeism and improving school functioning among adolescents with chronic pain.

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