

Children's Well-Being Post the Pandemic and Amid the Economic Crisis in Lebanon

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Abstract

Background: The outbreak of coronavirus in 2020 prompted schools to shift their classes from a physical learning environment to an online one to implement measures of social distancing to limit the spread of the pandemic. This disruption negatively influenced the social interaction of children and their well-being. In Lebanon, the situation was further exacerbated due to the severe economic crisis that had and still has obvious negative effects on the well-being of children. This study aims to investigate the impact of the coronavirus pandemic and the economic crisis on the mental health of Lebanese children aged 5 to 14 years old and to assess their well-being in a post-pandemic world.

Method: A quantitative research design was adopted, and the validated Strengths and Difficulties Questionnaire (SDQ) was used to collect data. 966 responses were collected, among which 627 parental reports and 339 teacher reports. Descriptive analysis was conducted for categorical variables and continuous measures. Means were compared using the independent-sample t-test and the analysis of variance (ANOVA) test. Pearson correlation test was used to evaluate the association between continuous variables. And a multivariate analysis of covariance (MANCOVA) was conducted to compare the total SDQ difficulties score and sub-scores between the teacher and parents.

Results: 34% of the study population are categorized as abnormal and 14.9% as borderline according to the SDQ score, and an expansion of mental health problems among these children is indicated. The study reveals that the most common mental health problems identified among these children are respectively conduct problems, peer, emotional, and hyperactivity problems, and prosocial problems. The main factors impacting the high rates of mental health problems among Lebanese children are gender, parental control, lack of discipline, poor-quality education background, parenting problems, low family income, physical defects among children, and the political situation of the country.

Conclusion: This study highlights the necessity of promoting mental health awareness among parents and teachers and adopting intervention and prevention measures to help children in Lebanon deal with mental health challenges caused by the pandemic and the ongoing economic crisis.

Introduction

Studies identify that there is a strong existing link between children's life and their ever-changing world [1]. Societies are constantly transforming, which is reflected in changing of many factors that are believed to affect, positively or negatively, the well-being of children. Factors like parents' values and beliefs, parents' culture, technological advancement, peer relationships, and socioeconomic situation, are all considered basic when it comes to assessing children's well-being [2, 3]. Additionally, ever since December 2019, Covid-19 has been rapidly spreading worldwide causing not only death but also affecting mental health [4]. A review of Low and middle-income countries has shown various effects of Covid-19 on mental wellness reflecting an increase in distress and alarming signs of mental disorders, leading to the integration of new strategies to sustain mental wellness targeting the neglected needs of the people of such countries, especially children [5].

Research shows that Covid-19 has no aggressive medical impact on children like on adults. Most children who are infected appear to be asymptomatic [6] or show only minor clinical manifestations [7]. However, although the fatality rate of Covid-19 in children is very low [8], their mental health is likely to be affected by the pandemic similarly to adults. It has been shown that in comparison to adults, the pandemic may continue to have an increased long-term adverse significance on children and adolescents [9], mainly in light of the school closure in many countries and confining children to their homes [10] to promote social distancing as one of the most effective prevention strategies for Covid-19 infection [9]. In addition to social isolation, the nature of this impact is further accelerated by many vulnerability features such as the developmental age, current educational status, having special needs, pre-existing mental health conditions, being economically underprivileged and child/parent being quarantined due to infection or fear of infection [11]. Moreover, Banati et al. (2020) [12] showed that adolescents suffering from anxiety and stress have no access to mental health treatments and services due to the economic crisis in low and middle-income countries, suggesting an intensive follow-up in the long term to guarantee mental wellness for those who are the most vulnerable in society.

In Lebanon, more factors come into the equation when trying to study children's well-being, such as the economic crisis the country has been passing through since 2019 [13]. This crisis is considered a global issue and it cripples those who seek health care, as Jaspal et al. (2020) [4] indicated that the currency has lost its value, unemployment has increased, and poverty has prevailed, leaving the Lebanese in a great need to provide care for their mental health, yet this is considered excessively expensive and out of reach for many since mental

health treatment is not covered by the government or by insurance companies in Lebanon. The instability in the country has also affected children's education, and it is obvious that their mental wellness is deteriorating being affected by the increase in violence among adults [14]. Covid-19, in addition to the 2020 Beirut explosion, and the rise in fuel prices have further imposed devastating effects on the Lebanese, for most families are unable to afford private medical care, and they even cannot commute to medical centers [13]. Accordingly, the impact of the economic meltdown and Covid-19 on mental health is a challenge that the Lebanese must encounter since the country has no strategies or plans to deal with this issue, except for a few social organizations that are still in their development phase [4].

Finally, as the impact of Covid-19 and the economic crisis on the mental health of Lebanese children is still unfolding, it is crucial to assess children's well-being in Lebanon based on currently accepted and agreed-upon indicators, including emotional and behavioral indicators in a world enduring continuous changes affecting children's wellbeing.

Materials & Methods

Study Design & Sampling Method

A quantitative research approach was applied in this study, targeting parents and teachers of children aged 5 to 14 years old from different regions in Lebanon. Due to the practical difficulty of accessing participants from different geographical locations, a convenience sampling technique took place through networking by posting an online-based survey created on Google forms throughout different social media platforms. Data collection took place from March 2022 until May 2022 to capture the situation of children's well-being during the challenging time of the pandemic in Lebanon.

All teachers and parents of children aged 5–14 years old were eligible of participating and no exclusion criteria were applied. A total of 966 responses were collected. In the case of multiple children, the parent was asked to report on each child individually.

Population & Sample Size

The final sample constituted a total of 627 parental reports and 339 teachers' reports of 966 children distributed among both genders. The sample size of 966 was considered enough, by adopting a confidence interval of (95%) using the G-Power software version 3.0.10.

Ethical Considerations

Approval from the ethical committee of the Modern University of Business and Science (MU-20220323-31, March 23rd, 2022) was received for this study. Parents and teachers filled out an anonymous online survey, after reading the explanation of the topic and the written consent form ensuring their confidentiality and anonymity were protected and explicitly agreeing to take part in the study. The collected data were merely used for scientific and research purposes.

Study Tool

The online survey was available and distributed in both Arabic, the native language in Lebanon, and English, to reach a wider range of participants. The survey was completed by a caregiver, either the parent or the teacher of a child. In the context of the present study, the structure of the survey included (1) sociodemographic data; (2) the validated Strengths and Difficulties Questionnaire SDQ; (3) parental consent regarding child interview approval.

The demographic questions focused on information about the parent or teacher, and the child. Concerning the parent or teacher, we assessed gender and age, area of residency, marital status, and background education. Questions further assessed the number of children and work status of parents and the years of experience of teachers. Concerning the child, demographic questions assessed the child's name, age, gender, and grade level.

Emotional and behavioral problems in children were investigated using the parent/teacher-report form of the Strengths and Difficulties Questionnaire (SDQ) [15]. The SDQ is a well-known psychiatric screening tool for children's well-being. It constitutes 25 items, divided into five sub-scales: emotional problems, conduct problems, hyperactivity, peer problems, and prosocial behavior. All the sub-scales were reported by the caregiver for this study.

Data Coding

Numbers were assigned to the verbal markers of the SDQ 25 items through a three-point scale (0 = Not True, 1 = Somewhat True, and 2 = Certainly True). Each of the five SDQ sub-scales (emotional problems, conduct problems, hyperactivity, peer problems, and prosocial behavior) includes five items in total [16]. A 10 points score can be mostly reached on each sub-scale. Higher scores on the first four scales (emotional problems, conduct problems, hyperactivity, and peer problems scales) and a lower score on the fifth scale (prosocial behavior scale) indicates poorer mental health outcomes [17].

The total difficulties score, ranging from 0 to 40, is generated by adding the scores of all the scales except the prosocial scale [17]. The externalizing score constitutes the sum of the conduct and hyperactivity scales and ranges from 0 to 20. Similarly, the internalizing score ranges from 0 to 20 and is the sum of the emotional and peer problems scales [17].

The score obtained on each sub-scale and the total score allows for categorizing children into one of three categories: normal, borderline, or abnormal [18]. Scores that are considered “abnormal” shows that children are at greater risk of having mental health problems compared with their peers [16]. The abnormal scores ranges are determined as 17–40 for the total difficulties score, 7–10 for the hyperactivity score, 5–10 for the emotional problems score, 4–10 for the conduct and peer problems scores, and 0–4 for the prosocial score [16].

Statistical Analysis

Data were analyzed using SPSS software version 25. A descriptive analysis was done using counts and percentages for categorical variables and means and standard deviations for continuous measures. The sample was normally distributed, as checked by visual inspection of the histogram, and skewness and kurtosis were below |1.96| [19]. After checking the normality of the dependent variable, the independent-sample t-test was used to compare the means between two groups, and the ANOVA test was applied to compare three or more means. The Pearson correlation test was used to evaluate the association between continuous variables.

A multivariate analysis of covariance (MANCOVA) was conducted, to compare the total SDQ difficulties score and sub-scores between the teacher and parents, taking into account potential confounding variables: age, gender, region of living, and education level. A p-value less than 0.05 was considered significant.

Results

The sociodemographic characteristics of the participants are summarized in Table 1. The data consisted of 966 total children that were reported by 627 parents and 339 teachers. Children who were reported in the present study were aged between 5 to 14 years with a mean age of 9.00 (\pm SD 2.67) and with an approximately equal distribution of males (55.2%) and females (44.8%). Female parents (83.3%) and teachers (91.4%) were dominant compared to male parents (16.7%) and teachers (8.6%). Participants primarily resided in Mount Lebanon (60% of parents and 59.3% of teachers) and were mostly married with kids (93% of parents and 43.4% of teachers) compared to other marital statuses. Higher education was the most common level among parents (61.1%) and teachers (90.6%). Moreover, the work status of parents was almost equally distributed between working (47.2%) and staying at home (52.8%). The mean age of the parents was 36.15 (\pm SD 6.56) years, and the mean age of teachers was 29.63 (\pm SD 8.96). Further, the mean scores of parent number of children and teacher year of experience were 2.37 (\pm SD 1.04) and 7.95 (\pm SD 6.72) respectively.

Table 1
Sociodemographic Characteristics of the Participants

	Parents (N = 627)	Teacher (N = 339)	Child (N = 966)
	Frequency (%)	Frequency (%)	Frequency (%)
Gender			
Male	105 (16.7%)	29 (8.6%)	533 (55.2%)
Female	522 (83.3%)	310 (91.4%)	433 (44.8%)
Region of living			
Beirut	39 (6.2%)	40 (11.8%)	
Mount Lebanon	376 (60%)	201 (59.3%)	
North	4 (0.6%)	2 (0.6%)	
South	87 (13.9%)	44 (13.0%)	
Beqaa	121 (19.3%)	52 (15.3%)	
Marital status			
Married	583 (93.0%)	147 (43.4%)	
Widowed	13 (2.1%)	4 (1.2%)	
Divorced	31 (4.9%)	9 (2.7%)	
Single		131 (38.6%)	
In a relationship		24 (7.1%)	
Married without kids		24 (7.1%)	
Education level			
Elementary	74 (11.8%)	10 (2.9%)	
Intermediate	70 (11.2%)	4 (1.2%)	
Secondary	100 (15.9%)	18 (5.3%)	
Higher	383 (61.1%)	307 (90.6%)	
Work Status			
Working	296 (47.2%)		
Stay at home	331 (52.8%)		
	Mean ± SD	Mean ± SD	Mean ± SD
Age	36.15 ± 6.56	29.63 ± 8.96	9.00 ± 2.67
Parent number of children	2.37 ± 1.04		
Teacher year of experience		7.95 ± 6.72	

Table 2 reports the percentage of mental health problems measured by the distribution of the SDQ scores and the abnormal, borderline, and normal scores. The mean total SDQ difficulties score was 13.76 (\pm SD 6.86), compared to 7.73 (\pm SD 4.09) for the externalizing score and 6.03 (\pm SD 3.80) for the internalizing score. Based on the total difficulties SDQ score, 34% (328 children) of the study population were categorized as abnormal. Meanwhile, 14.9% (144 children) were categorized as borderline and 51.1% (494 children) were categorized as normal. Conduct problems were found to have the highest rates among participants, with a percentage of 40.6% in the abnormal category. Meanwhile, peer, emotional, and hyperactivity problems came with a percentage of 31.7%, 30.7%, and 23.8% in the abnormal category respectively, while prosocial problems were present only in 15.1% of the study population. A low percentage of

internalizing and externalizing scores was detected in this study sample, where 33.4% of children were in the abnormal category of internalizing problems and 26.4% were in the abnormal category of externalizing problems.

Table 2
Distribution of the Strengths and Difficulties Questionnaire Scores and the Abnormal, Borderline, and Normal Scores

Scales	Mean \pm SD	Median	Minimum	Maximum	Abnormal N (%)	Borderline N (%)	Normal N (%)
Total SDQ difficulties score	13.76 \pm 6.86	13.00	0	36	328 (34.0%)	144 (14.9%)	494 (51.1%)
Emotional problems score	3.32 \pm 2.47	3.00	0	10	297 (30.7%)	135 (14.0%)	534 (55.3%)
Conduct problems score	3.15 \pm 2.08	3.00	0	10	392 (40.6%)	163 (16.9%)	411 (42.5%)
Hyperactivity score	4.57 \pm 2.57	4.00	0	10	230 (23.8%)	109 (11.3%)	627 (64.9%)
Peer problems score	2.70 \pm 1.98	2.00	0	10	306 (31.7%)	175 (18.1%)	485 (50.2%)
Prosocial score	7.06 \pm 2.37	7.50	0	10	146 (15.1%)	101 (10.5%)	719 (74.4%)
Externalizing score	7.73 \pm 4.09	7.00	0	20	255 (26.4%)	218 (22.6%)	493 (51.0%)
Internalizing score	6.03 \pm 3.80	6.00	0	18	323 (33.4%)	352 (36.4%)	291 (30.1%)

Table 3 shows the bivariate analysis taking the SDQ total scale and subscales as the dependent variables. Female participants reported higher mean scores in children on the SDQ total difficulties scale (14.02 \pm 6.96) and the externalizing (7.85 \pm 4.14) and internalizing (6.16 \pm 3.83) scores than male participants. This association also applies to the SDQ subscales including the emotional problems (3.46 \pm 2.49), conduct problems (3.20 \pm 2.12), and hyperactivity (4.65 \pm 2.60) scores in children. However, gender did not influence peer problems and prosocial scores in children ($p = 0.886$ and $p = 0.143$ respectively). All SDQ scales and scores reported in children were not influenced by the region of living ($p > 0.05$), except for the peer problems scale where a higher mean score of peer problems in children was reported by participants from Beirut (3.22 \pm 1.85) as compared to the other regions. Likewise, the prosocial scale was the only scale influenced by the education level of participants, as a higher mean of prosocial problems in children was more commonly reported by participants having intermediate (7.63 \pm 2.05) and elementary (7.54 \pm 2.01) education levels. Significantly, the age of participants was negatively correlated with the reported SDQ total difficulties ($r = -0.069$) and the externalizing ($r = -0.074$) scores in children, in addition to the conduct problems subscale ($r = -0.086$). In contrast, age was positively correlated with the prosocial score ($r = 0.096$) in children. No significant association was found between the internalizing score and the emotional, hyperactivity, and peer problems subscales with participants' age ($p > 0.05$).

Table 3
Bivariate Analysis Taking the SDQ Total Scale and Subscales as the Dependent Variables

	Total difficulties score	Emotional problems score	Conduct problems score	Hyperactivity score	Peer problems score	Prosocial score	Externalizing score	Internalizing score
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Gender								
Male	12.13 ± 6.01	2.51 ± 2.16	2.82 ± 1.76	4.11 ± 2.33	2.67 ± 1.83	6.78 ± 2.34	6.94 ± 3.61	5.19 ± 3.47
Female	14.02 ± 6.96	3.46 ± 2.49	3.20 ± 2.12	4.65 ± 2.60	2.70 ± 2.00	7.10 ± 2.37	7.85 ± 4.14	6.16 ± 3.83
<i>p-value</i>	<0.001	<0.001	0.027	0.024	0.886	0.143	0.008	0.006
Region of living								
Beirut	14.94 ± 6.84	3.41 ± 2.62	3.45 ± 2.06	4.84 ± 2.56	3.22 ± 1.85	6.51 ± 2.50	8.30 ± 4.11	6.64 ± 3.76
Mount Lebanon	13.97 ± 6.93	3.46 ± 2.48	3.21 ± 2.11	4.56 ± 2.53	2.72 ± 2.06	7.06 ± 2.37	7.78 ± 4.04	6.19 ± 3.91
North	10.66 ± 8.47	2.50 ± 2.73	3.50 ± 2.25	2.83 ± 3.37	1.83 ± 1.60	7.16 ± 3.18	6.33 ± 5.39	4.33 ± 3.93
South	13.13 ± 6.61	3.19 ± 2.47	2.92 ± 2.04	4.61 ± 2.48	2.39 ± 1.93	7.02 ± 2.27	7.54 ± 3.91	5.59 ± 3.78
Beqaa	13.08 ± 6.75	2.95 ± 2.33	2.96 ± 2.02	4.51 ± 2.75	2.64 ± 1.77	7.32 ± 2.32	7.47 ± 4.32	5.60 ± 3.39
<i>p-value</i>	0.142	0.149	0.250	0.438	0.040	0.178	0.512	0.086
Education level								
Elementary	12.71 ± 6.25	3.03 ± 2.44	2.89 ± 1.85	4.45 ± 2.35	2.33 ± 1.64	7.54 ± 2.01	7.34 ± 3.76	5.36 ± 3.50
Intermediate	12.43 ± 6.08	3.13 ± 2.49	2.71 ± 1.67	4.28 ± 2.58	2.29 ± 1.55	7.63 ± 2.05	7.00 ± 3.82	5.43 ± 3.39
Secondary	13.32 ± 6.28	3.01 ± 2.34	3.05 ± 2.02	4.45 ± 2.60	2.78 ± 1.65	6.96 ± 2.46	7.51 ± 4.11	5.80 ± 3.43
Higher	14.10 ± 7.08	3.43 ± 2.49	3.24 ± 2.15	4.64 ± 2.59	2.77 ± 2.10	6.95 ± 2.41	7.89 ± 4.14	6.21 ± 3.92
<i>p-value</i>	0.073	0.181	0.099	0.600	0.067	0.025	0.211	0.094
	Correlation coefficient	Correlation coefficient	Correlation coefficient	Correlation coefficient	Correlation coefficient	Correlation coefficient	Correlation coefficient	Correlation coefficient
Age	-0.069	-0.021	-0.086	-0.048	-0.060	0.096	-0.074	-0.045
<i>p-value</i>	0.040	0.533	0.011	0.158	0.074	0.004	0.028	0.181

To estimate the probability of association between SDQ scores and sociodemographic characteristics among parents and teachers, a multivariable analysis using the GLM method was conducted as shown in Table 4. Participants who were residing in the North were 7.819 times less likely to report the SDQ total difficulties score ($\beta = -7.819$) and 4.423 times less likely to report internalizing scores ($\beta = -4.423$) in children. Similarly, those who were residing in the South were 0.690 times less likely to report peer problems ($\beta = -0.690$) in children. A positive association between the gender of participants and the emotional and prosocial problems reported in children was determined ($\beta = 0.792$ and $\beta = 0.612$ respectively). Likewise, the age of participants was positively associated with reported hyperactivity in children ($\beta = 0.023$). The negative β coefficient for parents compared to teachers with a *p*-value of <0.05 indicated that parents were less likely to report the SDQ total difficulties, externalizing, and internalizing scores, in addition to emotional, conduct, hyperactivity, and

peer problems in children than teachers. In contrast, parents were more likely to report prosocial problems in children than teachers ($\beta = 1.592$). In fact, the associations between the other independent variables and the dependent variables represented were statistically insignificant ($p > 0.05$).

Table 4
Multivariable Analysis Using the GLM Method

	Beta	P-value	Confidence interval	
			Lower	Upper
Total difficulties score				
Age	0.043	0.143	-0.015	0.102
Gender	1.269	0.081	-0.156	2.693
Education level Intermediate	0.720	0.542	-1.596	3.036
Education level Secondary	0.825	0.427	-1.212	2.861
Education level Higher	0.043	0.961	-1.669	1.755
Region of living Mount Lebanon	-0.125	0.879	-1.738	1.487
Region of living North	-7.819	0.044	-15.422	-0.216
Region of living South	-0.960	0.327	-2.882	0.963
Region of living Bekaa	-0.973	0.301	-2.817	0.872
Parent vs teacher*	-4.666	< 0.001	-5.669	-3.664
Emotional problems score				
Age	0.016	0.152	-0.006	0.037
Gender	0.792	0.003	0.262	1.321
Education level Intermediate	0.494	0.261	-0.367	1.355
Education level Secondary	0.149	0.700	-0.608	0.906
Education level Higher	0.157	0.628	-0.479	0.794
Region of living Mount Lebanon	0.226	0.459	-0.373	0.826
Region of living North	-2.748	0.057	-5.575	0.078
Region of living South	-0.006	0.986	-0.721	0.708
Region of living Bekaa	-0.258	0.461	-0.943	0.428
Parent vs teacher*	-0.984	< 0.001	-1.357	-0.611
Conduct problems score				
Age	-0.001	0.876	-0.020	0.017
Gender	0.353	0.123	-0.095	0.802
Education level Intermediate	0.090	0.809	-0.640	0.819
Education level Secondary	0.231	0.480	-0.411	0.872
Education level Higher	0.126	0.646	-0.413	0.665
Region of living Mount Lebanon	-0.057	0.827	-0.564	0.451
Region of living North	-0.902	0.460	-3.296	1.492
Region of living South	-0.315	0.308	-0.920	0.291
Region of living Bekaa	-0.312	0.292	-0.893	0.269
Parent vs teacher*	-0.886	< 0.001	-1.202	-0.570
Hyperactivity score				

	Beta	P-value	Confidence interval	
			Lower	Upper
Age	0.023	0.043	0.001	0.045
Gender	0.357	0.193	-0.181	0.895
Education level Intermediate	-0.104	0.815	-0.979	0.770
Education level Secondary	-0.107	0.785	-0.875	0.662
Education level Higher	-0.402	0.223	-1.048	0.244
Region of living Mount Lebanon	0.039	0.901	-0.570	0.647
Region of living North	-2.494	0.088	-5.364	0.376
Region of living South	0.052	0.889	-0.674	0.777
Region of living Bekaa	0.007	0.984	-0.689	0.703
Parent vs teacher*	-1.757	< 0.001	-2.136	-1.379
Peer problems score				
Age	0.006	0.462	-0.011	0.024
Gender	-0.233	0.276	-0.653	0.187
Education level Intermediate	0.241	0.489	-0.442	0.924
Education level Secondary	0.552	0.071	-0.048	1.153
Education level Higher	0.162	0.530	-0.343	0.667
Region of living Mount Lebanon	-0.334	0.169	-0.809	0.142
Region of living North	-1.674	0.143	-3.917	0.568
Region of living South	-0.690	0.017	-1.257	-0.123
Region of living Bekaa	-0.410	0.139	-0.954	0.134
Parent vs teacher*	-1.039	< 0.001	-1.334	-0.743
Prosocial score				
Age	-0.005	0.640	-0.025	0.015
Gender	0.612	0.015	0.121	1.103
Education level Intermediate	0.150	0.712	-0.648	0.948
Education level Secondary	-0.432	0.228	-1.133	0.270
Education level Higher	-0.016	0.958	-0.606	0.574
Region of living Mount Lebanon	0.178	0.529	-0.377	0.734
Region of living North	1.861	0.164	-0.759	4.481
Region of living South	0.244	0.469	-0.418	0.907
Region of living Bekaa	0.536	0.098	-0.099	1.172
Parent vs teacher*	1.592	< 0.001	1.246	1.938
Externalizing score				
Age	0.021	0.234	-0.014	0.056
Gender	0.710	0.104	-0.147	1.567
Education level Intermediate	-0.015	0.984	-1.408	1.378

	Beta	P-value	Confidence interval	
			Lower	Upper
Education level Secondary	0.124	0.843	-1.101	1.348
Education level Higher	-0.276	0.599	-1.306	0.754
Region of living Mount Lebanon	-0.018	0.971	-0.988	0.952
Region of living North	-3.396	0.145	-7.968	1.177
Region of living South	-0.263	0.655	-1.419	0.893
Region of living Bekaa	-0.305	0.590	-1.414	0.804
Parent vs teacher*	-2.644	< 0.001	-3.247	-2.041
Internalizing score				
Age	0.022	0.185	-0.011	0.055
Gender	0.558	0.174	-0.247	1.364
Education level Intermediate	0.734	0.271	-0.575	2.044
Education level Secondary	0.701	0.232	-0.450	1.852
Education level Higher	0.319	0.518	-0.649	1.287
Region of living Mount Lebanon	-0.107	0.817	-1.019	0.804
Region of living North	-4.423	0.044	-8.721	-0.124
Region of living South	-0.697	0.209	-1.784	0.390
Region of living Bekaa	-0.668	0.209	-1.711	0.375
Parent vs teacher*	-2.023	< 0.001	-2.590	-1.456
*Reference group				

Figure 1 shows the adjusted means of the SDQ total scale and subscales between teacher and parent participants. Teachers had higher means of reporting the total difficulties (16.75 vs 12.09, $p < 0.001$), internalizing (7.33 vs 5.3, $p < 0.001$), externalizing (9.42 vs 6.78, $p < 0.001$), peer problems (3.35 vs 2.31, $p < 0.001$), hyperactivity (5.72 vs 3.96, $p < 0.001$), conduct problems (3.7 vs 2.81, $p < 0.001$), and emotional problems (3.97 vs 2.99, $p < 0.001$) scores in children than parents. On the other hand, a higher mean of reporting the prosocial score in children (7.61 vs 6.02, $p < 0.001$) was indicated among parents/carers than among teachers.

Discussion

This study explored the current state of Lebanese children's well-being in a post-pandemic world and after experiencing the economic crisis. Children who were reported in the present study were aged between 5 to 14 years with a mean age of 9.00 and equally distributed between males and females. This uniform distribution by gender and age conformed to other studies examining the effect of Covid-19 on children's mental health [20–22]. The mean age of the parents and teachers was 36.15 and 29.63 years, respectively. Female parents and teachers were dominant among the participants. Respondents also primarily resided in Mount Lebanon, were mostly married with kids, had higher education, and were equally distributed between working and staying at home. These sociodemographic results were similar to other studies conducted by Salameh et al. (2020) [23] assessing the effects of Covid-19 and economic variables on the stress and anxiety of Lebanese adults, and by Orgilés et al. (2020) [24] examining the emotional effect of the quarantine on children and youth in Italy and Spain, where the majority of participants were females, married, had a university degree, and had a job. Further, the mean score for teacher years of experience in our study was 7.95, showing that the participating teachers are experienced (more than 5 years) in the educational field [25], which enables them to accurately identify changes in children's behaviors.

The average total difficulties score in our study (13.76) was higher than scores obtained in developed countries [26–29] while similar to scores obtained in rural areas of developing countries [30, 31]. 34% of the study population were categorized as abnormal according to the total difficulties SDQ score, indicating that they might be suffering from mental health problems. Conduct problems were found to

have the highest rates among participants, followed by peer, emotional, and hyperactivity problems, while prosocial problems were present only in 15.1% of the children. The high rates of conduct problems obtained can be linked to low socioeconomic status and depression in Lebanese parents in socially-disadvantaged areas [32] and may be justified by parental control, lack of discipline, and poor-quality education background, while emotional problems may be mainly due to parenting problems or physical defects, making the children feel different from others [33–35]. Only 33.4% of children were in the abnormal category of internalizing problems and 26.4% were in the abnormal category of externalizing problems. The internalizing and externalizing problems displayed in children can be linked to having parents suffering from mental illnesses and a low socioeconomic status which is attributed to the current economic crisis in Lebanon [36].

This prevalence of mental health problems obtained in our study was higher than those obtained among children in rural China [16, 20], Egypt [37], and other countries all over the world [38–40]. The findings, however, conform to other studies indicating that children and younger age are at risk of mental problems [41], which was approved, mainly during Covid-19, in different countries such as China [22], Italy and Spain [24], and Norway [42]. The high prevalence of mental health problems, mainly in developing countries, is strongly attributed to health and development worries in young people [43], in addition to the underestimation of child mental health problems [37, 44]. According to the report issued by Save the Children in 2021, Lebanese children have specifically experienced the impact of the economic crisis on their mental health more profoundly than the pandemic [14] and are faced with immense challenges and adversities [45] that would affect their mental health.

A positive association between the gender of participants and the emotional and prosocial problems reported in children was determined in our study. Female parents and teachers reported higher mean scores on the SDQ total difficulties scale and the externalizing and internalizing scores in children than male participants, in addition to the emotional problems, conduct problems, and hyperactivity scores. This can be explained by the fact that children spend most of their time with their mothers who enjoy dominance within their households and have a practical influence on their families in Arab countries [46], and with their teachers who are majorly females in Lebanon [47], which allows female adults to closely understand their mental health status. However, gender did not influence peer problems and prosocial scores in children.

The peer problems scale was the only SDQ scale influenced by the region of living where a higher mean score of peer problems in children was reported by participants from Beirut as compared to the other regions. This may be attributed to the Beirut blast which caused children from the surrounding areas to experience multiple psychological impacts [48–50]. A higher mean of prosocial problems in children was also more commonly reported by participants having intermediate and elementary education levels, similar to the findings of Wang et al. (2021) [16] where higher SDQ total difficulties scores were associated with having a parent with a lower education level. Having parents with a higher educational level may be thus a protective factor for children's mental health [51]. Such problems can be also deteriorated by the current situation in Lebanon, as the Lebanese massive economic collapse characterized by garbage crisis, cancer clusters, failure to provide reliable electricity supply, and lack of access to healthcare has had adverse consequences on children's mental health and wellbeing [52].

The age of participants was significantly and negatively correlated with the reported SDQ total difficulties, externalizing, and the conduct problems subscale scores in children. This confirms the research findings that lower parental age is often associated with emotional and behavioral problems in children [53, 54]. In contrast, age was positively correlated with the prosocial score and the reported hyperactivity in children. Participants who were residing in the North were less likely to report the SDQ total difficulties and the internalizing scores, and those who were residing in the South were less likely to report peer problems in children. This may be attributed to the high poverty rates mainly in northern Lebanon [55], which in consequence decreases mental health awareness while increasing well-being problems. Results also showed that parents were less likely to report the SDQ scales in children than teachers, except for the prosocial problems, which supports research findings that teachers might be the first adults to identify emotional and behavioral problems in children [56], as they can observe their behavioral changes and atypical behaviors over time [57].

Conclusion

This study provides an overview of the well-being of the Children in Lebanon in a post-pandemic world occurring parallelly with a severe economic crisis impacting intensely the lives of Lebanese families. Given the comparatively high percentages reported by the parents and the teachers of children aged from 5–14 years old categorized as abnormal and as borderline, according to the SDQ score, an expansion of mental health problems among Lebanese children is indicated. The study reveals that the most common mental health problems identified among these children are respectively conduct problems, peer, emotional, and hyperactivity problems, and prosocial

problems. Additionally, the results of this study allow a better understanding of the factors impacting the high rates of mental health problems among Lebanese children in a post-pandemic world, including gender, parental control, lack of discipline, poor-quality education background, parenting problems, low family income, physical defects among children, and the political situation of the country. Also, the results of this study highlight the necessity of, firstly, promoting mental health awareness among parents and teachers, so they are capable of identifying early indicators of mental health issues among children, and secondly, adopting intervention and prevention measures to help children in Lebanon deal with mental health challenges caused by the pandemic and the ongoing economic crisis in Lebanon.

This study has several limitations that should be addressed in future studies. First, the data collected in this research may be distorted or biased because the questionnaire was filled out by the teachers and parents instead of the children themselves. In future studies, other methodologies, such as the observation of the children and their behavior are needed for more direct results. Secondly, the results of the current study cannot be generalized to children in other countries because the study of the children in a post-pandemic world in Lebanon is also influenced by factors such as the economic crisis and the occurrence of the Beirut blast. Finally, because we used a handy tool like the online survey to obtain the data, our results may have been biased. All of the aforementioned limitations are to be addressed in future studies.

Abbreviations

COVID-19: Coronavirus Disease 2019; SDQ: Strengths and Difficulties Questionnaire; SPSS: Statistical Package for Social Sciences; SD: Standard deviation; GLM: generalized linear model; MANCOVA: Multivariate analysis of covariance; ANOVA: Analysis of variance.

Declarations

Ethical Approval & Consent to participate

Approval from the ethical committee of the Modern University for Business and Science (MU-20220323-31, March 23rd, 2022) was received for this study. Written informed consent was obtained from all the participants in the study and the study was carried out in line with the Declaration of Helsinki.

Consent for publication

Not applicable.

Availability of data and materials

Data can be made available under reasonable request from the corresponding author.

Competing interests

The authors have nothing to disclose.

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None.

Authors' contribution

RN, ES, NR, CH, SA, JK designed the study; RN, CH, ES, NR drafted the manuscript; CH carried out the analysis and interpreted the results; ES, NR, SA, JK assisted in drafting and reviewing the manuscript; all authors contributed in data collection; JK supervised the course of the article; JK revised the paper for English editing. All authors reviewed and approved the final version of the manuscript.

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Figures

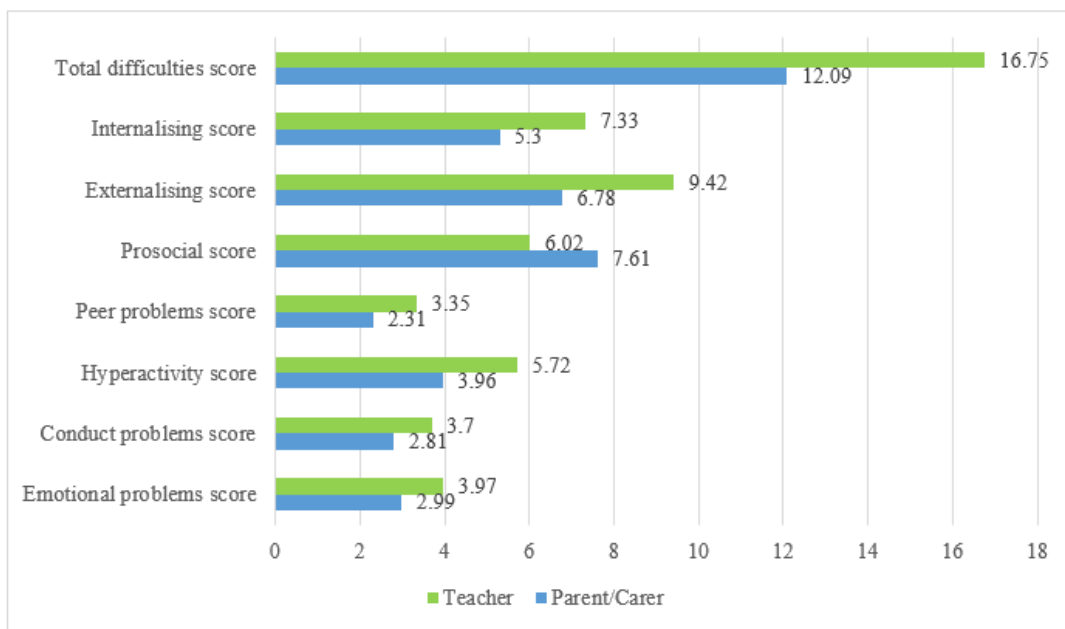


Figure 1

Adjusted Means of the SDQ Total Scale and Subscales between Teacher and Parent