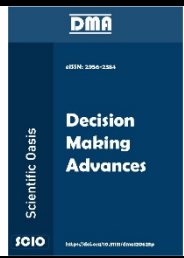




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Quality of Life of Indian Youth during 3rd Year of COVID-19 Pandemic

Shayana Deb¹, Jayashankar Reddy¹, Samarjit Kar^{2,*}, Aleena Maria Sunny³, Sibnath Deb³¹ Department of Psychology, CHRIST (Deemed to be University), Bengaluru, India² Department of Mathematics, National Institute of Technology, Durgapur, West Bengal, India³ Rajiv Gandhi National Institute of Youth Development, Pennalur, Sriperumbudur, Tamil Nadu, India

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ABSTRACT

COVID-19 adversely impacted the overall well-being of the youth like others. Perceived Quality of Life (QoL) is one of the determinants of the effective involvement of youth in their studies and career success. No Indian study reported on the QoL of youth. Given this background, the present study attempted to examine the perceived QoL of Indian Youth during 3rd year of COVID-19 pandemic and its association with their background, perceived stress, worries, online teaching mode and physical activities. Seven hypotheses were formulated for verification. Data were collected using a specially designed Structured Questionnaire and WHO QoL Questionnaire after ascertaining the face validity. A group of 334 youth aged between 21-24 participated in the online study (Mean age: 22.51; SD: 2.154). Findings disclosed that the overall QoL of 19.16% (64/334) of youth was poor, while it was average for 19.16% (64/334) and high for 20.7% (69/334) youth. However, male and female youth differed significantly with respect to physical QoL only ($p < 0.000$). The youth who perceived stress from attending continuous online classes and staying at home had lower scores in all four domains of QoL ($p < 0.001$). The findings also confirmed an association between worries about future careers and catching COVID-19 and QoL. The effectiveness of the online teaching mode and clarification of queries were positively associated with QoL ($p < 0.001$). Interestingly, social support from family members and friends and physical exercise were found to be stress relieving and reflected in overall improved QoL ($p < 0.001$). The study's findings talk about promoting physical activities and introducing institution-based mental health support facilities for the youth who lack support facilities.

1. Introduction

Different types of pandemics have been witnessed in several periods throughout the history of the modern age. Pandemics are known to cause many diseases that disrupt the lives of millions of people and have huge negative impacts on the psychological health of society. The COVID-19

* Corresponding author.

E-mail address: samarjit.kar@maths.nitdgp.ac.in

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pandemic has rapidly spread and ruled over the entire globe, which forced human society to follow social distancing religiously for their own safety. The majority of the Indian population, which largely comprises youth, are facing psychological distress due to social isolation, poor quality of education on account of poor internet connection or lack of computer facilities, and loss of job, especially the youth who were working in the private sectors causing economic crisis and so on. Nevertheless, during the pandemic, virtual environments, online public spaces and online communities have completely replaced physical public spaces [1] although it has its own disadvantages. A number of studies reported about advantages and disadvantages of online mode of teaching [2,3]. However, the pandemic significantly caused lots of disruption to humanity and especially the education sector, which is a vital factor in any country's economic future. In general, open spaces promote physical and mental rejuvenation of every individual; it helps them to feel calm and relaxed, improve mood and reduce stress. Public spaces contribute to the physical and mental health of community members [4,5]. Social distancing measures implemented during the Covid-19 pandemic have restricted access to public spaces and significantly limited social and physical activities in the open air [6,7]. This unprecedented new crisis has affected public sentiment and behavior. Changes in daily life, social distancing, partial or complete isolation and existing health risks cause emotional stress, dullness and mood swings among the youth population, which in turn, deteriorates their quality of life significantly [8].

Empirical evidence demonstrates that individuals show elevated degrees of perceived susceptibility, anxiety and depression [9] to COVID-19 pandemic leading to several kinds of behavioural issues. These elements work out at an individual level. A number of studies reported about psychological distress like anxiety and depression among youth during the COVID-19 pandemic [10-13].

One German study reported low health-related quality of life (HRQoL) among children and adolescents during the pandemic [14]. Another study observed that children and adolescents experienced significantly lower HRQoL, more mental health problems and higher anxiety levels than before the pandemic. Further the study revealed that poor socioeconomic background, migration status and limited living space were associated with poor HRQoL [15]. Gaining weight, sleeping for a longer time and excess use of the internet were common phenomena among children and youth during the pandemic [16]. A systematic review study concluded that COVID-19 has a negative impact on the HRQoL of children and/or adolescents [17]. Most of the global studies focused on physical QoL leaving sufficient scope to carry out a study to examine the overall QoL of youth during the third year of COVID-19 pandemic. At the same time, data concerning QoL of children and youth from India is scanty.

The broad objective of the study was to examine the perceived Quality of Life of Indian Youth and its association with their background, perceived stress, worries, online mode of teaching and physical activities.

Hypotheses: There were seven hypotheses for verification, and they include.

- i. Hypothesis 1: Quality of Life (QoL) of youth differs significantly in terms of gender, type of family and siblings.
- ii. Hypothesis 2: There exists an association between perception about online learning and QoL.
- iii. Hypothesis 3: There exists an association between perceived stress on account of staying at home for a long time during the COVID-19 pandemic and their QoL.
- iv. Hypothesis 4: There exists an association between worries about catching COVID-19 and future career and their QoL.

- v. Hypothesis 5: There exists an association between social support from family and friends and QoL.
- vi. Hypothesis 6: There exists an association between perception about effectiveness of online mode of teaching, clarification of queries and QoL,
- vii. Hypothesis 7: There exists an association between physical activities and QoL.

2. Methods

Study Design

An online cross-sectional study was carried out by using a Google Form.

Participants

The participants of the study were youth aged between 21-25 especially those who are pursuing their post-graduation.

Study Tools

The following study tools were used to collect data from the participants:

(i) Structured Questionnaire [18]: This tool consists of three sections viz., Section I: Background Information. It consist of 7 questions related to gender, age, education, sibling and family monthly income, Section II: Online Mode of Teaching and Physical Activities: It consists of 6 questions concerning effectiveness of online mode of teaching, clarification of queries during online teaching, level of motivation in attending online classes, physical activities during COVID-19 pandemic and so on and Section III: Perceived Stress, Worried and Support Facilities. It consists of 5 questions like whether feeling stressed attending online classes, for staying at home for a long period, having worries about future career, receiving support from friends and family members during the pandemic and so on. Mode of response for question varies. For some of the questions like Do you get emotional support from your family when you need it? it was like 'Always - 5' to 'Never - 1' while for some questions like Do you feel stressed while attending online mode of classes continuously? It was 'Highly Stressed - 5' to 'No so Stressed - 1'. The questionnaire was modified based on output of pilot study. Further, the face validity of the questionnaire was ascertained by two experts.

(ii) The WHOQOL-BREF: It is a self-report questionnaire that was developed by the World Health Organization to assess an individual's quality of life within the context of their culture, personal goals, value systems, and standards. It has 26 items that assess four domains of quality of life: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items). There are two separate items to measure the overall general health of the test taker. Each item is marked on a response scale of 1 to 5 on a five-point ordinal scale. The scores of each domain as well as the overall score can be used to draw an inference. A higher score means a better quality of life. The questionnaire has been found to have moderate to high inter-rater reliability ranging from 0.56 to 0.95, high intra-rater reliability ranging from 0.84 to 0.93, and a moderate internal consistency value of 0.79 [19]. The Cronbach's alpha coefficient of the WHOQOL-BREF was ascertained by a number of other Indian studies and found the tool to be suitable to use for Indian study [1,20]. The Cronbach's alpha coefficient of the WHOQOL-BREF for the present study was ascertained to be 0.90.

3. Data Collection and Analysis

Data collected through online surveys was subjected to scrutiny. After scrutiny 7 data were found incomplete and final analysis was carried out based on 334 complete set of data. In addition to descriptive analysis t and f test were carried out for meaning analysis of data.

Ethical Issues Considered

All the respondents who participated in this study were treated according to the ethical guidelines of “American Psychological Association.” The ethical approval for carrying out the present study was received from the concerned authority. Participation in this study was completed voluntarily and confidentiality of the data was ensured to all the study subjects well in advance. As per the convenience of the institution authorities, the date and time for the data collection from the enrolled students were decided.

4. Results

4.1 Background Information

The sociodemographic details of the participants are described using frequencies and percentage. Table 1 indicates that 60% of participants were females and 76% of them belonged to joint families. About half of them (50%) had grown up with one sibling, and only 11.7% of the participants were single children of their respective families. Family income was less than 50,000 INR for 28% of participants, while 73% belonged to the category whose monthly income was between 50,001 INR to 100,000 INR.

Table 1

The Background Information of the Participants (*n*=334)

Variables		f	%
Gender	Male	136	40.7
	Female	198	59.3
	Transgender	0	0
Type of family	Joint family	81	24.3
	Single family	253	75.7
	Staying with relative family	0	0
Siblings	Only child	39	11.7
	One sibling	167	50
	Two and more siblings	128	38.3
Family monthly income	< Rs 50,000	92	27.5
	Rs 50,000 to 100,000	242	72.5
	Rs 100,001 to 150,000	0	0
	Rs 150,001 and above	0	0

Data concerning nature of QoL with respect to four domains is presented in Table 2. It has been observed that the overall OoL of 19.16% of youth was poor while it was average for 19.16% and high for 20.7% youth.

Hypothesis 1 proposed that Quality of Life (QoL) of youth differs significantly in terms of gender, type of family and siblings. Table 3 shows the mean, standard deviation and p-value of the t test. As can be seen from the table, the quality of life of the youth differs significantly ($p = 0.000$) in terms of social QoL only. Therefore, hypothesis I is partially accepted.

4.2 Information Related to Perceived Stress, Emotional Support and Worries

Table 4 shows the percentage and frequency of responses given by participants on perceived stress, emotional support and worries during COVID-19 pandemic. More than two-fifths (43%)

reported to be highly stressed while attending online classes continuously while 43% were highly stressed for staying at home for a long period during the period. About one-third of the youth 31% and 29% of participants shared that they were highly worried (31%) and worried (29%) about their future career. High worry about fear of arching COVID was reported by 43 % of the youth. Only 21.3% reported that they ‘always’ had support of their family and 37% reported to have ‘always’ received the support of their friends during any crisis or challenge.

Table 2

Frequency and Percentage of male & female Youth in QoL Scale ($n=334$)

Gender	Scores	Quality of Life									
		Physical QoL		Psychological QoL		Social QoL		Environmental QoL		Total QoL	
		Frequen cy	Perce nt	Frequen cy	Perce nt	Frequen cy	Perce nt	Frequen cy	Perce nt	Frequen cy	Perce nt
Male	Low	32	24	26	19	43	32	38	28	46	34
	Avera ge	25	18	19	14	52	38	47	35	39	29
	High	72	53	91	67	41	30	51	38	51	38
Female	Low	43	22	56	28	68	34	58	29	67	34
	Avera ge	31	16	24	12	81	41	79	40	70	35
	High	108	55	118	60	49	25	61	31	61	31

WHO Quality of Life Scale: Median=92, Score < 86- Low, 87-96- Average, 97-120- High; Physical QOL Scale: Median=14, Score < 13- Low, 14-17- Average, 18-20- High; Psychological QOL Scale: Median=14, Score < 13- Low, 14-17- Average, 18-20- High; Social QOL Scale: Median=14, Score < 12- Low, 13-14- Average, 15-20- High; Environmental QOL Scale: Median=14, Score < 12- Low, 13-14- Average, 15-20- High.

Table 5 shows the mean, standard deviation and p-value of QoL in relation to online teaching, stress of staying at home during COVID-19, worry about the future and social support from friends and family. Hypothesis 2 proposed an association between perception about online learning and QoL. As can be seen from Table 5, there was a significant relation stress and QoL on all domains as well as total QoL score. Youth who reported to be highly stressed had poorer Physical QoL (p-value = 0.001), Psychological QoL (p-value = 0.000), Social QoL (p-value = 0.001), and environmental QoL (p-value = 0.000). Therefore hypothesis 2 is accepted.

Similar findings could be seen while checking the relationship between feeling stressed for staying at home for a long period during the COVID-19 pandemic, and QoL. However, there was no relationship between feeling of stress and psychological QoL, while participants who reported to be highly stressed had poorer Physical QoL (p-value= 0.000), Social QoL (p-value = 0.008), and environmental QoL (p-value = 0.003). Therefore hypothesis 3 is also accepted in case of three domains of QoL.

The findings in Table 6 confirmed the association between worries about catching COVID-19 and future career of the youth with all domains of QoL, namely, Physical QoL (p-value = 0.000), Psychological QoL (p-value = 0.001), Social QoL (p-value = 0.046), and environmental QoL (p-value = 0.000). Additionally, the findings supported hypothesis 4, that there an association between worries about catching COVID-19 and future career of the youth with all domains of QoL (Physical QoL (p-value = 0.001), Psychological QoL (p-value = 0.000), Social QoL (p-value = 0.000), and environmental QoL (p-value = 0.000). Youth who were highly stressed secured lower scores in the domains of QoL. Hence, hypothesis 4 is accepted. Also, the result showed an association between social support from family and friends, and QoL in Physical QoL (p-value = 0.000), Psychological QoL (p-value = 0.000),

and environmental QoL (p-value = 0.000). Therefore, hypothesis 5 is also accepted. The results showed that youth who have always had good social support from family and friends had better QoL.

Table 3

Means, Standard Deviation and t/F Scores of Quality of Life With Respect to Background Information (n = 334)

Characteristics	Physical QoL Mean (SD)	p Value	Psychological QoL Mean (SD)	p Value	Social QoL Mean (SD)	p Value
Gender						
Male	14.41 (2.33)	0.264	13.69 (2.113)	0.756	13.67 (3.645)	0.000
Female	14.07 (2.599)		13.27 (2.193)		14.10 (2.258)	
Type of family						
Joint	14.14 (2.740)	0.076	13.37 (2.014)	0.186	14.02 (3.012)	0.450
Single	14.23 (2.420)		13.46 (2.217)		13.90 (2.870)	
Characteristics	Environmental QoL Mean (SD)	p Value	Total QoL Mean (SD)	p Value		
Gender						
Male	13.33 (2.680)	0.118	3.47 (0.530)	0.583		
Female	13.63 (2.312)		3.45 (0.513)			
Type of family						
Joint	13.38 (2.368)	0.779	3.45 (5.18)	0.866		
Single	13.55 (2.501)		3.46 (0.521)			
Siblings						
Only child	13.83 (2.352)	0.642	3.55 (0.486)	0.434		
One sibling	13.43 (2.57)		3.44 (0.539)			
Two and more siblings	13.51 (2.373)		3.45 (0.505)			

Table 4

Perceived Stress, Emotional Support and Worries (*provided 'yes' responses only*)

Item/Question	f	%
Do you feel stressed while attending online mode of classes continuously? (n=318)		
1. Highly stress	136	42.8
2. Stressed	94	29.6
3. Moderately stressed	46	14.4
4. Rarely stressed	17	5.3
5. Not so stressed	25	7.8
Do you feel stressed for staying at home for a long period during COVID-19 pandemic? (n=334)		
1. Highly stress	142	42.5
2. Stressed	101	30.2
3. Moderately stressed	55	16.5
4. Rarely stressed	11	3.3
5. Not so stressed	25	7.5
Are you worried about your future career? (n=334)		
1. Highly worried	103	30.8
2. Worried	97	29
3. Moderately worried	54	16.2

Item/Question	f	%
4. Rarely worried	55	16.5
5. Not so worried	25	7.5
Are you worried that you will catch COVID-19? (n=334)		
1. Highly worried	144	43.1
2. Worried	118	35.3
3. Moderately worried	49	14.7
4. Rarely worried	10	3.0
5. Not so worried	13	3.8
Do you get emotional support from your family when you need it? (n=334)		
1. Always	71	21.3
2. Often	69	20.7
3. Sometimes	68	20.4
4. Rarely	94	28.1
5. Never	32	9.6
Item/Question	f	%
Do you have friends who extend support at times of any crisis or challenge? (n=334)		
1. Always	125	37.4
2. Often	102	30.5
3. Sometimes	66	19.8
4. Rarely	32	9.6
5. Never	9	2.7

Table 7 shows the percentage and frequency of responses given by participants on questions related to online mode of teaching, their level of motivation and their physical activities. Of the 318 (95%) of the participants whose institution offered online classes during COVID-19, 53% could 'always' attend their classes online. Only 5.4% has found online teaching to be very effective, followed by 34% who found it to be effective. More than one-fifth (23.4%) reported that they could always clarify their doubts to be resolved through asking questions during online teaching. Only 5.4% reported to be highly motivated followed by 22% who were motivated during the lack down phase in relation to their studies. Finally, 20.4% reported that they were physically active every day during COVID-19 followed by 21% of the participants who reported to have been active for three to four days a week.

Table 5

Means, Standard Deviation and t/F Scores of Quality of Life With Respect to Stress, Worries and Social Support (n = 334)

Characteristic	Physical QoL Mean (SD)	p Value	Psychological QoL Mean (SD)	p Value	Social QoL Mean (SD)	p Value	Environmental QoL Mean (SD)	p Value	Total QoL Mean (SD)	p Value
1.Do you feel stressed while attending online mode of classes continuously?										
• Highly stressed	13.71 (2.694)	0.001	12.95 (2.45)	0.000	13.26 (2.956)	0.001	12.67 (2.517)	0.000	3.3 (0.538)	0.000
• Stressed	14.4 (2.361)		14.04 (1.897)		14.48 (2.856)		14.11 (2.188)		3.57 (0.472)	
• Moderately stressed	14.74 (1.923)		13.59 (1.507)		14.07 (2.205)		14.22 (1.915)		3.58 (0.377)	
• Rarely stressed	12.94 (1.626)		11.76 (0.721)		13.14 (1.369)		12.11 (1.417)		3.12 (0.17)	
• Not so stressed	15.37 (2.775)		14.29 (2.376)		15.29 (3.832)		14.63 (3.09)		3.74 (0.666)	
2.Do you feel stressed for staying at home for a long period during COVID-19 pandemic?										
• Highly stress	13.96 (2.458)	0.000	13.46 (2.361)	0.182	13.6 (2.646)	0.008	13.17 (2.581)	0.003	3.4 (0.52)	0.000
• Stressed	13.83 (2.648)		13.18 (2.182)		13.88 (3.154)		13.36 (2.368)		3.4 (0.535)	
• Moderately stressed	15.24 (1.678)		13.7 (1.247)		14.26 (2.96)		14.28 (1.76)		3.62 (0.364)	
• Rarely stressed	16.71 (1.001)		14.83 (0.854)		17.17 (2.41)		15.44 (0.678)		4 (0.09)	
• Not so stressed	15.27 (2.618)		13.86 (2.551)		14.76 (1.989)		14.75 (3.44)		3.71 (0.64)	
3.Are you worried about your future career?										
• Highly worried	12.95 (1.975)	0.000	12.46 (1.878)	0.001	12.55 (2.558)	0.046	12.02 (2.254)	0.000	3.13 (0.437)	0.000
• Worried	13.65 (2.208)		13.24 (2.233)		13.79 (2.143)		12.85 (2.028)		3.33 (0.462)	
• Moderately worried	13.81 (2.217)		13.5 (2.209)		13.82 (2.3)		12.85 (2.028)		3.44 (0.468)	
• Rarely worried	14.33 (2.38)		13.33 (2.117)		14.1 (3.22)		13.67 (2.165)		3.47 (0.525)	
• Not so worried	15.85 (2.986)		14.47 (2.007)		14.58 (3.473)		13.51 (2.52)		3.77 (0.528)	
							14.9 (2.634)			

Characteristic	Physical QoL Mean (SD)	p Value	Psychological QoL Mean (SD)	p Value	Social QoL Mean (SD)	p Value	Environmental QoL Mean (SD)	p Value	Total QoL Mean (SD)	p Value
4.Are you worried that you will catch COVID-19?										
• Highly worried	14.77 (2.372)	0.001	14.08 (2.006)	0.000	14.54 (2.827)	0.000	14.18 (2.037)	0.000	3.62 (0.433)	0.000
• Worried	13.86 (2.335)		13.27 (2.465)		14.17 (2.1)		13.67 (2.482)		3.44 (0.523)	
• Moderately worried	14.24 (2.01)		13.22 (1.579)		13.33 (3.352)		12.95 (2.399)		3.38 (0.451)	
• Rarely worried	13.24 (3.496)		12.02 (1.93)		11.77 (3.193)		11.53 (2.529)		3.06 (0.626)	
• Not so worried	12.29 (2.191)		12 (1.461)		14 (3.651)		12.5 (4.382)		3.1 (0.737)	
5.Do you get emotional support from your family when you need it?										
• Always	14.79 (2.264)	0.028	14.36 (2.003)	0.000	15.05 (2.959)	0.000	14.59 (2.091)	0.000	3.68 (0.45)	0.000
• Often	14.01 (2.562)		13.22 (1.855)		13.92 (2.303)		13.44 (2.309)		3.43 (0.47)	
• Sometimes	14.02 (2.526)		12.87 (2.323)		12.95 (2.442)		12.49 (2.013)		3.3 (0.492)	
• Rarely	14.04 (2.089)		13.88 (1.693)		14.14 (3.411)		14.27 (2.319)		3.52 (0.489)	
• Never	12.84 (3.488)		10.87 (2.283)		11.08 (4.468)		10.62 (4.169)		2.85 (0.784)	
6.Do you have friends who extend support at times of any crisis or challenge?										
• Always	14.13 (2.327)	0.000	14.16 (2.217)	0.002	13.92 (2.661)	0.022	13.23 (2.285)	0.000	3.42 (0.471)	0.000
• Often	13.43 (2.953)		12.99 (2.233)		13.21 (3.201)		12.88 (2.565)		3.30 (0.596)	
• Sometimes	14.42 (1.427)		13.24 (1.577)		14.32 (2.079)		14.00 (1.618)		3.51 (0.504)	
• Rarely	15.58 (2.154)		14.97 (1.742)		13.88 (3.961)		15.00 (2.420)		3.76 (0.504)	
• Never	15.55 (2.561)		14.00 (2.229)		15.30 (2.601)		15.26 (3.155)		3.78 (0.613)	

Note: Figures out of the brackets are the means and those within the brackets are standard deviations; figures after the brackets are t values and F values. Differences in the prevalence across each demographic variable were tested by using independent samples t-test and one-way ANOVA.

* $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$

Table 6

Questions Related to Online Mode of Teaching, Level of Motivation and Physical Activities (*provided 'yes' responses only*)

Q. No.	Item/Question	f	%
2.1	Did your institute offer online classes during the Covid-10 pandemic?	318	95.2
2.2	If yes in Question 2.1, did you attend online classes offered by your institute? (<i>n=318</i>)		
	1. Always	178	53.4
	2. Often	113	33.8
	3. Sometimes	3	0.9
	4. Rarely	19	5.7
	5. Very rarely	5	1.5
2.3	How did you find the online mode of teaching? (<i>n=318</i>)		
	1. Most effective	18	5.4
	2. Effective	56	16.8
	3. Moderately effective	94	28.1
	4. Not so effective	91	27.2
	5. Not at all effective	59	17.7
2.4	Could you clarify your doubts, ask questions and got the answers? (<i>n=318</i>)		
	1. Always	78	23.4
	2. Often	78	23.4
	3. Sometimes	105	31.4
	4. Rarely	40	12.0
	5. Never	17	5.3
2.5	How do you rate your level of motivation during the lockdown phase for studies? (<i>n=318</i>)		
	1. Highly motivated	18	5.4
	2. Motivated	70	21.6
	3. Moderately motivated	98	29.6
	4. Rarely motivated	106	31.7
	5. Not at all motivated	26	7.8
2.6	Did you do any physical activities during the COVID-19 lockdown period? (<i>n=318</i>)		
	1. Everyday	67	20.4
	2. Three to four days a week	67	20.7
	3. About 15 days a month	16	4.8
	4. Occasionally	143	42.8
	5. Not at all	25	7.5

Table 7 shows the means, standard deviation and t-scores of qualities of life with respect to effectiveness of online teaching, motivation in studies and physical activities. Hypothesis 6 proposed that there exists an association between perception about effectiveness of online mode of teaching, clarification of queries and QoL, and as can be seen from the table, the hypothesis was proved current across all domains of QoL (Physical QoL (p-value= 0.000), Psychological QoL (p-value = 0.000), Social QoL (p-value = 0.000), and environmental QoL (p-value = 0.000). That is, those who found their online mode of teaching experience to be most effective have secured better scores on QoL. Hypothesis 7 proposed that there exist an association between physical activities and QoL. From the table it can be seen that this hypothesis was accepted as there was a clear association between physical activities and all domains of QoL Physical QoL (p-value= 0.000), Psychological QoL (p-value = 0.001), and environmental QoL (p-value= 0.001), except for social domain of QoL. Those who worked out three to four days a week had better scores on QoL. Therefore hypothesis 7 is also accepted.

Table 7

Means, Standard Deviation and t/F Scores of Quality of Life With Respect to Effectiveness of Online Teaching, and Physical Activities ($n = 334$)

Characteristic	Physical QoL Mean (SD)	p Value	Psychological QoL Mean (SD)	p Value	Social QoL Mean (SD)	p Value	Environmental QoL Mean (SD)	p Value	Total QoL Mean (SD)	p Value
1. How did you find the online mode of teaching? ($n=118$)		0.000		0.000		0.000		0.000		0.000
• Most effective										
• Effective	14.71 (2.519)		14.53 (1.896)		15.07 (3.212)		14.57 (2.5)		3.68 (0.513)	
• Moderately effective	14.6 (1.973)		13.37 (1.751)		13.25 (2.583)		13.37 (2.595)		3.45 (0.476)	
• Not so effective	13.91 (2.378)		12.86 (2.067)		13.4 (3.001)		13.24 (2.192)		3.37 (0.493)	
• Not at all effective	14.11 (3.133)		13.43 (2.1)		14 (2.219)		12.5 (2.679)		3.37 (0.56)	
	11.06 (1.806)		10.86 (2.664)		12.94 (1.93)		12.68 (1.61)		2.93 (0.365)	
2. Could you clarify your doubts, ask questions and got the answers? ($n=118$)		0.052		0.000		0.000		0.004		0.001
• Always	14.25 (2.803)		14.19 (1.883)		16.44 (2.892)		13.47 (2.323)		3.6 (0.522)	
• Often	14.92 (2.537)		14.32 (1.975)		14.51 (2.76)		14.42 (2.922)		3.65 (0.553)	
• Sometimes	14.06 (2.05)		12.86 (1.933)		13.31 (3.154)		13.28 (2.388)		3.38 (0.474)	
• Rarely	13.98 (2.492)		13.43 (2.189)		13.64 (2.6)		13.28 (2.072)		3.41 (0.486)	
• Never	13.58 (3.368)		12.56 (2.658)		14.05 (2.451)		12.75 (2.434)		3.3 (0.588)	
3. Did you do any physical activities during the COVID-19 lockdown period? ($n=118$)		0.000		0.015		0.057		0.001		0.001
• Everyday	13.35 (2.837)		12.98 (2.515)		13.37 (2.856)		12.63 (2.585)		3.27 (0.56)	
• Three to four days a week	14.43 (2.21)		13.79 (2.011)		13.81 (2.885)		13.61 (2.179)		3.5 (0.461)	
	14.98 (2.055)		13.55 (1.847)		14.49 (2.959)		14.02 (2.277)		3.57 (0.468)	
• About 15 days a month	13.71 (2.834)		13.39 (1.246)		13.94 (1.504)		14.09 (2.267)		3.5 (0.428)	
• Occasionally	13.08 (2.108)		11.85 (2.076)		12.44 (2.906)		14 (1.369)		3.31 (0.436)	
• Not at all										

Note: (i) The above questions were asked to those youth who attended the online classes. Out of 124 youth, 118 reported having attended the online classes.

(ii) Figures out of the brackets are the means and those within the brackets are standard deviations; figures after the brackets are t values and F values. Differences in the prevalence across each demographic variable were tested by using independent samples t-test and one-way ANOVA.

* $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$

From Table 8 it is very clear that Quality of Life (QoL) of youth does not differ significantly in terms of gender, type of family and siblings.

Table 8

ANOVA Result

QOL Between	F	Significance Value(p)
Gender	0.093	0.760*
Sibling	0.837	0.434*
Family	0.059	0.808*

*Significant at 0.05 level

From the Tables 9 – 14, we can conclude that there exists negative association between the perception about online learning and QoL, between social support from family and friends and QoL, between perception about effectiveness of online mode of teaching, clarification of queries and QoL, and between physical activities and QoL. Also there exists a positive association between perceived stress on account of staying at home for a long time during the COVID-19 pandemic and their QoL, between worries about catching COVID-19 and future career and their QoL.

Table 9

Correlation Analysis (Who QOL_OMTE)

	Who QOL	OMTE
Who QOL	1	
OMTE	-.276**	1

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

Table 10

Correlation Analysis (Who QOL_Stress)

	Who QOL	Stress
WHO QOL	1	
STRESS	.224**	1

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

Table 11

Correlation Analysis (Who QOL_Future Career_Worries About Catching COVID 19)

	Who QOL	Future career	Worries about catching COVID 19
WHOQOL	1		
Future Career	.202**	1	
Worries about catching COVID 19	.287**	.167**	1

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

Table 12

Correlation Analysis (Who QOL_Family Support_Friend Support)

	Who QOL	Family support	Friend support
Who QOL	1		
Family support	-.325**	1	
Friend support	-.297**	.317**	1

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

Table 13

Correlation Analysis (Who QOL_ Effectiveness of Online Teaching _ Clarification of doubt)

	Who QOL	Effectiveness of online teaching	Clarification of doubt
Who QOL	1		
Effectiveness of online teaching	-.198**	1	
Clarification of doubt	-.293**	.625**	1

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

Table 14

Correlation Analysis (Who QOL_ Effectiveness of Online Teaching _ Clarification of Doubt)

	Who QOL	Physical activity
Who QOL	1	
Physical activity	-.235**	1

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

5. Discussion

The present study achieved its objective in understanding the QoL of Indian youth during the 3rd year of COVID-19 pandemic by collecting online data using google form. Most of the participants out of 334 participated belonged to the 22-24 years of age group (Mean Age: 22.51; SD: 2.154) with little more gender difference i.e., 40.7% (male) vs 59.3% (female). About three-fourth of them came from single families (75.7%) indicating a major trend of family structure in Indian society. About half of them had one sibling and belonged to middle class families. As far as QoL is concerned, it has been observed that male and female youth differed significantly in terms of social quality of life only out of the four domains of QoL. It indicates that male and female youth quality of life was equally affected in terms of other three domains viz., physical, psychological, and environmental QoL as movement of all youth was restricted. In an Indian society, girls are more homebound than their counterparts i.e., boys. Normally girls commute to educational institutions and occasionally visit social gatherings and shopping whereas male members spend more time with friends after attending classes. Hence restricted movement did not cause unhappiness among female youth. Gender disparity regarding allocation of household duties in such periods of confinement also needs to be focussed upon, as women are often expected to devote more time to home-schooling children and doing household chores affecting their academic career [21].

One study by Ravens-Sieberer et al., [14] reported that the rate of children and adolescents experiencing low health-related quality of life was notably higher during the pandemic period than before (40% vs. 15%). The study also reported some psychosomatic common symptoms among children and adolescents aged between 11 and 17 years and they include irritability, sleeplessness, headache, feeling low and stomach ache. Another study carried out in Germany pointed out that two-thirds of the children and adolescents were highly burdened by the COVID-19 pandemic. They experienced significantly more mental health problems (17.8% vs. 9.9%) and higher anxiety levels (24.1% vs. 14.9%) than before the pandemic. Children with low socioeconomic status, migration background and limited living space were affected significantly more [15]. The findings of the present study corroborate with the above studies i.e., the present study found that health-related OoL of 22.4% of Indian youth was poor during the 3rd year of COVID-19. In the previous two studies health-related OoL was much higher and perhaps it was because the study was carried out during the pick of COVID-19 pandemic.

More than two-fifths of youth reported experiencing stress because of attending online classes continuously and for staying at home for a longer period. The findings of the present study are in line with findings of other studies carried out at other geographical locations. An Indian study conducted by Mahapatra and team in 2021 also found out that children and youth underwent constant stress and mild depression due to lengthy hours of monotonous classes [22]. Another Indian study covering school students observed the similar findings [18]. Findings of other studies also highlights that COVID-19 has had an adverse impact on the mental and physical health of people beyond geographical boundaries [23-28]. Adolescents and youth experienced high incidence of distress, depression, and anxiety among adolescents and the youth [29,30].

About one-third of youth expressed their worries about future career because of the pandemic. An apparent fear was reported by more than two-fifth of youth about getting infected with COVID-19. Interestingly, about 21.3 to 37.0% reported enjoying family support at times of challenges which raises a concern for non-availability of support from family and friends for the rest of the youth. The findings of this study talk about the need and importance of institution-based family counselling for the youth during any crisis and even in normal circumstances.

Examining the association between online mode of teaching and quality of life, the findings clearly highlights the association between stress experienced by COVID-19 and QoL i.e., all the four domains of QoL have been affected by the stress caused to the youth. In other words, it may be stated that highly perceived stress on account of attending continuous online classes because of COVID-19 deteriorated the overall QoL. Effectiveness of online classes is always an issue for deliberation and discussion especially in the developing countries where access to prompt internet connection and electronic gadgets are limited. This study also confirmed the same proposition i.e., 6%, 19% and 31% of the participants found online classes to be most effective, effective and moderately effective respectively.

Staying at home was found to be associated with poor QoL except psychological QoL. The mental health of children and youth are impaired during the COVID-19 pandemic [15]. Similarly, the study observed that youth who are worried about their future career, their QoL was also found to be poor. Nevertheless, social support from friends and family has been found to be very beneficial to cope up with stressful situation i.e., youth who enjoyed social support from friends and family were happier compared to their counterparts. A study conducted on American-Indian adults proved that social support in any crisis- situation has been especially effective in the context of stress or adversity [31]. Interestingly, the study highlighted that the seriousness of some students in gathering knowledge from online modes of teaching helped them to remain happy and enjoy a better QoL. The youth who perceived online classes as effective and could clarify their queries had better QoL justifying the positive outlook of youth in studies. Challenges in life are a normal phenomenon and youth who remain focused, determined and utilize their time effectively can have positive and productive outcomes in all situations. Positive emotions broaden the circle of human thinking; spreading creativity, curiosity, and bonding with others; discovering social perspectives and connections; and acquiring physical and social skills [32]. Such positive outlooks in life can help improve QoL of an individual in any situation.

Likewise, physical exercise has been found to be beneficial to remain psychologically happy and enjoy a better quality of life in all respects. A number of past research highlighted positive outcomes of physical activities during the COVID-10 pandemic in terms of psychological, physical, and social well-being [33-36].

6. Conclusions

In a nutshell, male and female youth differed significantly in terms of physical QoL only. There was an association between perceived stress on account of attending online classes and overall QoL i.e., youth who perceived high stress attending online classes and who were worried about their future career had poor QoL. Interestingly, the youth who reported receiving social support facilities and who were engaged in physical activities had better QoL.

Implications

The findings of the present study have a number of implications:

- i. Authorities of educational institutions should take up programs for enhancement of resilience capacity of the students to deal with any adversities in life.
- ii. Authorities of educational institutions should arrange mental health support services engaging trained mental health professionals for youth through online and/or physical mode for those who do not enjoy support from family or friends at times of crisis and even in normal circumstances.
- iii. Physical activities and meditation to be promoted among students during normal time so that the habits inculcated in them help youth remain physically and mentally balanced at times of crisis.
- iv. To make online mode of teaching more effective, every educational institution especially in the developing countries should be well-equipped with electronic gadgets and high-speed internet facilities and both students and teachers should be well trained for having an effective teaching and learning process.

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Conflicts of Interest

Authors declare no conflict of interest in the publication of this research.

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