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Parents' perceptions of life and family relationships among school-aged children during the COVID-19 pandemic in Hokuriku area

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Abstract

Objective: The purpose of this study was to (1) examine the perceptions of life and family relationships of parents caring for school-aged children over the past year and (2) clarify the associations between parents' life perceptions and family relationships.

Methods: A cross-sectional study was conducted using the Internet from May to June 2021. The target demographic for this study was parents of children who were elementary school students at the time of the national temporary closure following the declaration of the state of emergency on April 16, 2020. The survey items were the perception of the parents' lives, their relationships with their children and with their spouse/partner during the COVID-19 pandemic.

Results: The number of respondents was 214 (response rate: 38.8%). The parents who had experienced telecommuting due to COVID-19 accounted for 23.4%. Although there was a slight increase in the household chores of fathers and children during the school closure period, mothers were responsible for more than 70% of the household chores throughout all periods. More than 40% of parents felt that physical fatigue and financial stress had increased, and 70% of parents felt that mental stress had increased. Of the parents in the study, 42.1% felt that their family relationship had become better as a result of COVID-19, and the associated factor was that they had gone through various experiences with their children and partners.

Conclusion: This study suggests that if we can recognize our family experiences as positive despite the stress, we have an opportunity to grow as families even in difficult situations.

KEY WORDS

Parents of school-aged children, Family relationship, COVID-19

Introduction

Since December 2019, the spread of COVID-19 has required a nationwide refrain from action following the declaration of a state of emergency in Japan. Japanese government took infection control measures, such as requesting companies to work remotely and to stagger working hours. In Hokuriku area, schools were also requested to close temporarily from 2 to 19 March and 9 April to end of May. As a result, the

entire population was forced to change their lifestyles, as well as children spending more time at home. The COVID-19 survey reported that parents and children spending long hours in enclosed spaces has increased parental anxiety and burden, showing a tendency toward depression.^{1,2)} Previous study also showed an increase in irritability, sleep and dietary habits alterations, attention disturbances and excessive use of digital technologies for children.^{3,4)}

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On the other hand, the increased time spent together with family members may have provided people with more opportunities for communication and a chance to rethink family relationships. USA study reported that COVID-related stress for adolescent influenced by patients, sibling and best friends.⁵⁾ For example, the school closures and people refraining from going out due to COVID-19 may have allowed parents to see their children learning and children to see their parents working. This may have brought about a different kind of parent-child time and also family relationship may have changed.

A study has reported that in about 55% of families, there was a change in the division of housework and childcare roles between fathers and mothers as a result of the self-restraint.¹⁾ It is conceivable that the change in life during the COVID-19 pandemic may have triggered a consideration of the roles of men and women in the division of household chores and childcare.

To date, most studies of children and their parents during COVID-19 have focused on infants and toddlers,^{2,6)} and few studies have focused on school-aged children and their parents. School-aged children begin to live in groups at school, build relationships with other children and teachers, and become more independent away from their parents. In addition, the employment rate increases with maternal age,⁷⁾ suggesting that a higher proportion of mothers raising school-aged children are employed compared to those raising infants and toddlers. Therefore, it is assumed that parents and children of school-aged children spend more time together than in infancy during school closures. Moreover, higher family resilience associated with lower COVID-19 psychological impact⁸⁾ and Australian parents of children aged 0-18 years reported not only mental health difficulties but also positive benefits including opportunities for strengthening relationships.⁹⁾ Thus, parents' perception of family relationship is seemingly important for healthy growth of children. However, it is unclear how parents spent at home together and how felt their family relationship during COVID-19 pandemic.

Also, their perceptions and acceptance of these changes in their lives and the degree of burden they feel are considered to be influenced by a variety of

factors, including the gap between their present lives and their previous lives and their original attitudes toward housework and child-rearing. For these reasons, understanding how parents spent their time with children during COVID-19 is important to consider support measures for family under disruptive situation.

Therefore, the present study (1) examined the perceptions of life and family relationships of parents caring for school-aged children over the past year and (2) clarified the associations between parents' life perceptions and family relationship.

Methods

Study design

This cross-sectional study was conducted using the Internet in the Hokuriku area of Japan from May to June 2021.

Participants

The target population for this study was parents of children who were elementary school students at the time of the national temporary closure following the declaration of the state of emergency on April 16, 2020. Therefore, parents of children in grades two to six attending two public elementary schools who were able to cooperate with the study were asked to complete the survey. We used a snow-boll sampling to recruit two elementary schools located suburb of core city in Hokuriku area, Japan.

Study method

1. Procedures

The survey was conducted online using the Internet. The purpose of the study was explained orally and in writing to school principals, and the survey was conducted in elementary schools where the principals agreed to cooperate with the survey.

The parents of the children who were the participants of the study were given a written explanation of the purpose of the study, the method of implementation, and the QR codes of the questionnaire items to the target children through their homeroom teachers.

If there was more than one parent in the same household, both were included in the survey, but they were asked to enter a serial number to be able to identify that they were part of the same household.

2. Instruments

This online questionnaire was structured based on the

literature review^{1,2,10,11}); two experts in children's living environments reviewed the questions. Respondents were asked to provide characteristics data such as age, relationship with children, marital status, number and age of children, and employment status.

1) Perceptions of life due to COVID-19

Respondents were asked about perceptions of their own lives, including changes in their working style (going at work (50% or more) and sometimes remote work, remote work (50% or more), remote work (mostly), going at work, was not work/other), lifestyle changes (better, slightly better, no change, slightly worse, worse), the time they have available for themselves (increased very much, increased, no change, decreased, decreased very much), frequency of interacting with others outside the family (increased very much, increased, no change, decreased, decreased very much), who they consult regarding childcare, and burden associated with housework and childcare (increased very much, increased, no change, decreased, decreased very much). The proportion of household chores divided among family members was categorized into three time periods: "before February 2020," "during school closure," and "at present." Participants were asked about the degree of division of daily household chores within the family so that the sum of chores done by "mother," "father," "child," and "other family members" each accounted for 100%.

2) Family relationship

Regarding the parents' relationships with their children, we asked about their perceptions of these relationships as a result of the increased time spent together (strongly agree, agree, neither, disagree, strongly disagree). Respondents were also asked to provide multiple responses regarding what was bothering them about their children during the school closures, what they experienced together as parents and children, and how their children were when they saw the respondent working at home including doing household chores ("yes", "no"). If there was more than one elementary school child, respondents were asked to respond assuming one child.

Regarding their relationship with their spouse/partner, respondents provided responses about the nature of their communication via multiple answers, including "There are more opportunities to discuss children" and

"There are more opportunities to discuss the division of household chores and childcare."

Reflecting on the year, respondents were asked whether they found their relationships with their children and spouse/partner enjoyable or stressful (strongly agree, agree, neither, disagree, strongly disagree) and about the reasons for this via an open-ended question. They were also asked about perceptions of physical fatigue, financial stress, and emotional stress (increased very much, increased, no change, decreased, decreased very much), as well as whether their family relationship had changed (much better than before, better than before, same as before, worse than before, much worse than before). Family ties is common perception as family relationship in Japan, thus parents were asked whether their family ties had deepened.

3. Data analysis

From previous study, the anxieties and influence of COVID-19 among children were expected to be different between 3rd grade and below and 4th grade and above.^{10,11} Therefore, children were categorized as 3rd grade and below and 4th grade and above in this study. The number of respondents who answered yes was calculated for "concerns about the child's condition during the school closure," "experiences together as parents and children," and "communication with partner."

A chi-squared test was used to compare perceptions of life during the COVID-19 pandemic between relationship with child and between with family relationship. For open-ended question, the data were coded and grouping similar codes by researchers.

The statistical software IBM SPSS Statistics version 27 was used to analyze the data, and the significance level was 5%.

4. Ethical considerations

The explanation to the parents of the children who were the research subjects included the following: the purpose and method of the research, the fact that participation in the research is voluntary and that there will be no disadvantages for not participating, that individuals will not be identified because it is an anonymous study, that consent to participate in the research is given by returning the Internet survey, and that the parents will be informed of the purpose and method of the research. The instructions clearly stated

that the responses could be interrupted during the survey but could not be withdrawn once sent because it was an anonymous study, as well as that the data on the Web would be deleted from the Web immediately after the study period ended. To match the responses of the couples, we asked them to enter their serial numbers. To avoid the identification of individuals or schools, serial numbers were randomly assigned so that there was no bias toward schools, grades, classes, and so on.

This study was conducted with the approval of the Kanazawa University Medical Ethics Review Committee (review number 1012-1).

Results

The number of respondents was 214, with a response rate of 38.8%. All responses were provided by either the mother or the father. Therefore, in this paper, the responses of the respondents were analyzed as the responses of each family.

1. Participant characteristics (Table 1)

The characteristics of the parents were 86.4% mothers and 13.6% fathers, the mean age was 41.4 ± 6.4 years, and 79.4% of the parents were working together. The most common number of children was two. There were no significant differences between participant characteristics and family relationship.

2. Perceptions of life due to COVID-19

1) Lifestyle in parents

Table 2 shows the respondents' perceptions of their lives in terms of COVID-19. Regarding the changes in working style, 23.4% of the respondents experienced telecommuting, which is "going at work (50% or more) and sometimes remote work," "remote work (50% or more)," or "remote work (mostly)," while 53.7% of the respondents "going at work" as usual.

Twenty-two percent of the respondents answered that their lifestyle had "better" or "slightly better," while 24.8% answered that it had "worse" or "slightly worse." Respondents who answered that their time available for themselves had "decreased" or "decreased very much" comprised 29.9%, while 19.2% answered that it had "increased" or "increased very much." Respondents who answered that the frequency of interacting with others outside the family had "decreased" or "decreased very much" comprised 53.7%. The most frequent person

with whom both parents consulted about childcare was their "spouse/partner." Mothers also listed a wide range of other consultants, including "family members other than spouse/partner" and "friends," while 20.7% of fathers answered "none in particular." Parents who answered that their burden related to housework and childcare had "increased" or "increased very much" made up 40.2%. There were no significant differences between mothers and fathers in "change in lifestyle," "time available for myself," and "burden related to housework and childcare."

The results for the proportion of household chores at home are shown in Figure 1; mothers were responsible for more than 70% of the household chores in all three time periods. The proportion of help from fathers and children increased slightly during the period of school closure when the children were absent from school, but the situation was now returned to the before school closure. For all three time periods, father perceived their proportion of household chores as around 30%.

2) Perceptions of children's lives

In terms of what was bothering their children during the school closures, the most common concern was "lack of exercise due to refraining from going out" at 75.7%, followed by "delayed learning" at 57.1%, and "excessive use or trouble with electronic media" at 51.9% (Table 3).

3) Family relationship and relationships with children

Looking back over the past year, 42.1% of parents felt that "family relationship" had better as a result of COVID-19. Parents who responded that their family relationship had much better and better than before were categorized into the group whose family relationship had better than before, and parents who responded that their family relationship had been same, worse and much worse than before were categorized into the group whose family relationship had worse than/same as before; their relationships with their children were confirmed (Table 4).

In terms of parent-child relationships that increased as a result of COVID-19, "doing household chores together" was the most common response at 50.5%, followed by "watching TV or playing games together" at 49.5%, "being involved in the child's studies" at 46.3%, and "taking walks or exercising together" at 45.8%. Regarding children's reactions to seeing their parents working at home, the most common response

Table 1 Family relationship and participant characteristics

Items	(n=214)			p-value
	Mean±SD/ n (%)			
	Total (n=214)	Family relationship		
		better than before (n=90)	worse than/same as before (n=124)	
Relationship with child				.937
Mother	185 (86.4)	78 (86.7)	107 (86.3)	
Father	29 (13.6)	12 (13.3)	17 (13.7)	
Age [†]				.247
Mean age	41.4±6.4	41.6±7.5	41.3±5.5	
Family structure				.833
Nuclear family	182 (85.0)	76 (84.4)	105 (85.5)	
Extended family	32 (15.0)	14 (15.6)	18 (14.5)	
Spouse/Partner				.791
Yes	199 (93.0)	84 (94.4)	115 (93.5)	
No	13 (6.1)	5 (5.6)	8 (6.5)	
Living with spouse/partner [‡]				.745
Yes	189 (95.0)	79 (94.0)	110 (95.7)	
No	10 (5.0)	5 (6.0)	5 (4.3)	
Employment situation				
Total	178 (83.2)	77 (85.6)	101 (83.2)	.428
Mother (n=185)	149 (80.5)	65 (83.3)	84 (78.5)	.413
Father (n=29)	29 (100.0)	12 (100.0)	17 (100.0)	—
Number of children				.095
One	36 (16.8)	21 (23.3)	15 (12.1)	
Two	111 (51.9)	43 (47.8)	68 (54.8)	
Three or more	67 (31.4)	26 (28.9)	41 (33.1)	
Assumed child's grade				.736
Grade 2	47 (22.0)	17 (18.9)	30 (24.2)	
Grade 3	33 (15.4)	12 (13.3)	21 (16.9)	
Grade 4	51 (23.8)	23 (25.6)	28 (22.6)	
Grade 5	46 (21.5)	20 (22.2)	26 (21.0)	
Grade 6	37 (17.3)	18 (20.0)	19 (15.3)	

Chi-square test.

—; Chi-square test not be used.

[†]; Mann-Whitney U test.

[‡]; Respondents who answered "Yes, I have a spouse/partner".

(40.0%) was “showed no particular interest,” but 21.0% said “asked me questions about my work,” 13.7% said “told me ‘You’re great, Mom and Dad,’” and 10.2% talked about the career they wanted to pursue in the future. Some families received some feedback from their children. On the other hand, in relation to family relationship, those who answered “showed no particular interest” were 47.5% for whom family relationship had worse than/same as before.

Regarding parents’ perceptions of their children spending time together with their parents during the period of self-restraint, 29.4% said that it was an opportunity for their children to learn from their parents, and 34.1% said that it was an opportunity for their children to understand their parents, indicating that they recognized the impact of spending time together with their children on their own. There were 58.4% of respondents who recognized that this was an

Table 2 Parent's lifestyle during COVID-19 pandemic

Items	Total (n=214)	Mother (n=185)	Father (n=29)	p-value
Changes of the working style				—
Going at work (50%or more) and sometimes remote work	32 (15.0)	27 (14.6)	5 (17.2)	
Remote work (50% or more)	5 (2.3)	4 (2.2)	1 (3.4)	
Remote work (Mostly)	13 (6.1)	10 (5.4)	3 (10.3)	
Going at work	115 (53.7)	95 (51.4)	20 (69.0)	
Was not work/other	36 (16.8)	36 (19.5)	0 (0.0)	
Lifestyle changes*				.845
Better than before	47 (22.0)	40 (21.6)	7 (24.1)	
No change	114 (53.3)	100 (54.1)	14 (48.3)	
Worse than before	53 (24.8)	45 (24.3)	8 (27.6)	
Time available for yourself‡				.196
Decreased	64 (29.9)	59 (31.9)	5 (17.2)	
No change	109 (50.9)	90 (48.6)	19 (65.5)	
Increased	41 (19.2)	36 (19.5)	5 (17.2)	
Frequency of interacting with others outside the family†				—
Decreased	115 (53.7)	99 (53.5)	16 (55.2)	
No change	77 (36.0)	65 (35.1)	12 (41.4)	
Increased	22 (10.3)	21 (11.4)	1 (3.4)	
Persons with whom you consulted about childcare (multiple answers)‡				
Spouse/Partner	157 (73.7)	137 (74.5)	20 (69.0)	
Family members other than spouse/partner	113 (53.1)	103 (56.0)	10 (34.5)	
Friends	116 (54.5)	113 (61.4)	3 (10.3)	
Colleagues and supervisors at work	56 (26.3)	51 (27.7)	5 (17.2)	
Health professionals (e.g., medical professionals)	13 (6.1)	13 (7.1)	0 (0.0)	
School Teachers	23 (10.8)	19 (10.3)	4 (13.8)	
Neighborhood	10 (4.7)	10 (5.4)	0 (0.0)	
Online acquaintances	4 (1.9)	3 (1.6)	1 (3.4)	
No opportunity	20 (9.4)	14 (7.6)	6 (20.7)	
Burden associated with housework and childcare§				.584
Increased	86 (40.2)	73 (39.5)	13 (44.8)	
No change	128 (59.8)	112 (60.5)	16 (55.2)	

Number(%)

Chi-square test.

—: Chi-square test not be used due to small expected frequency.

*: Better than before: those who answered "better" or "slightly better"; Worse than before: those who answered "slightly worse" or "worse."

‡: Decreased: those who answered "decreased" or "decreased very much"; Increased: those who answered "increased" or "increased very much."

†: The number of "Yes"(%). Respondents were as below; mother=184, father=29, total=213. No test had been used due to multiple answers.

§: Increased: those who answered "increased very much" or "increased"; No change: those who answered "no change" or "decreased" or "decreased very much."

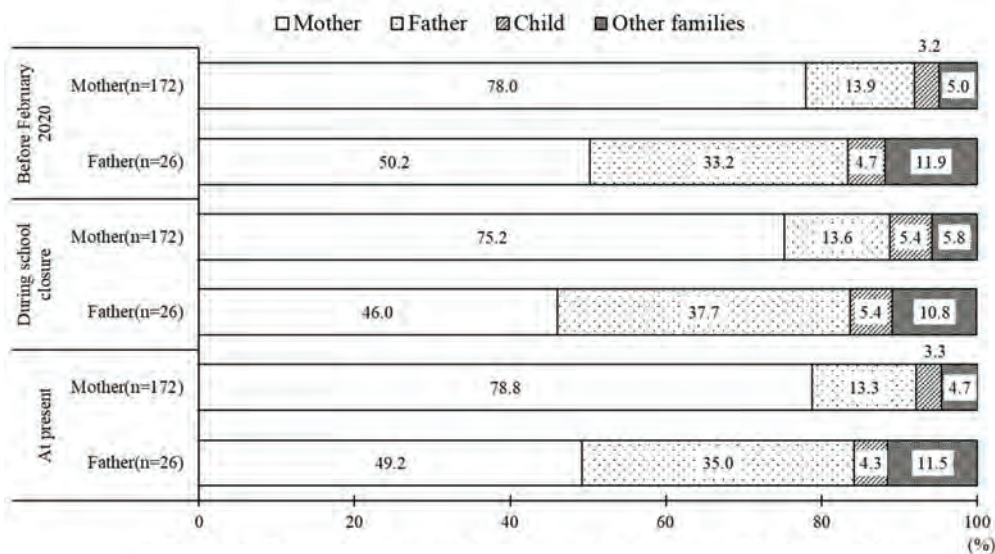


Figure 1 Parents' perception for proportion of household chores at home

opportunity for them to better understand their children, and 66.4% felt that they enjoyed spending time with their children, while 31.8% felt that their relationships

with their children were stressful. There were 35.5% of respondents who felt that their relationships with their children had improved as they spent more time

Table 3 Issues of concern to children by grade level

Items	Total(n=210)	3rd grade and below(n=76)	4th grade and above(n=134)
Lack of exercise due to refraining from going out	159 (75.7)	50 (65.8)	109 (81.3)
Delayed learning	120 (57.1)	46 (60.5)	74 (55.2)
Excessive use or trouble with electronic media	109 (51.9)	32 (42.1)	77 (57.5)
Lifestyle disruption	94 (44.8)	27 (35.5)	67 (50.0)
Risk of infection in children	77 (36.7)	35 (46.1)	42 (31.3)
Trouble with friends	14 (6.7)	8 (10.5)	6 (4.5)

Number(%)

No test had been used due to multiple answers.

The number of "Yes"(%).

3rd grade and below : 2nd/3rd grade, 4th grade and above : 4th/5th/6th grade

together. All items were significantly related to family relationship.

Additionally, in the free answers about why they enjoyed working with their children, some of the comments included "I enjoy talking to them every day," "It makes me think from the children's point of view," "I was able to help them with homework," and "COVID-19 gave me more opportunities to recognize the children's growth," among others (87 cases out of 123 cases). The participants spent more time with their children during the period of self-restraint due to COVID-19, and they seemed to enjoy working with their children because they were able to monitor the children's learning status and recognize their growth through teaching them. On the other hand, in terms of reasons for feeling stress in their relationships with their children, the respondents reported that "they are asked to play while I am at work," "I am strict with them about what they can't do, which causes a little more fighting and anxiety," and "the whole family is always irritated because there is no place to vent (stress), I cannot live at my own pace and no good things happened" (34 cases out of 49 cases). Some parents said that they felt oppressed in their relationships with their children due to spending long periods of time together in a situation that restricted their ability to leave the house.

4) Family relationship and relationship with spouse/partner

In terms of perceptions of their relationship with their spouse/partner, the most frequent communication with their spouse/partner included "more opportunities to discuss children" at 36.1%, "more opportunities to listen to spouse/partner's thoughts and feelings" at 22.2%, "more opportunities to talk about their own thoughts

and feelings" at 21.1%. They also said they had "more opportunities to discuss the division of housework and childcare" at 10.8%.

While 32.7% of the respondents felt that their relationship with their spouse/partner was enjoyable, 28.9% of the respondents felt that their relationship with their spouse/partner was stressful. Those who felt that their relationship with their spouse/partner was enjoyable were significantly different from family relationship.

The reasons given for enjoying the relationship with their spouse/partner included "I have more opportunities to have conversations," "I have more opportunities to hear their thoughts and opinions," "I cooked dinner together for the first time," and "I have more people to take care of the children, which was helpful" (30 cases out of 34 cases). The respondents expressed their enjoyment of the fact that they were able to spend more time together due to the telecommuting and self-restraint, which led to more conversations and functioning as a spouse/partner who did household chores and childcare together. On the other hand, as reasons for feeling stress in their relationship with their spouse/partner, some of the respondents commented that their spouse/partner was "uncooperative, looking at his/her phone all the time," "I felt that I had to prepare lunch properly, which was a daily hassle while I was also working," "He/she doesn't think housework and childcare were own job but complained about what I could not do. He/she doesn't understand my work," and "It's easier if he is not here" (30 cases out of 40 cases). Dissatisfaction and resentment were expressed due to a lack of cooperation in housework and childcare and a feeling that their situation was not understood.

Table 4 Family relationship and relationships with children

Items	Total (n=214)	Family relationship		p-value
		better than before (n=90)	worse than/same as before (n=124)	
Parent-child relationships that increased as a result of COVID-19 (multiple answer) [†]				
Doing household chores together	108 (50.5)	61 (67.8)	47 (37.9)	
Watching TV or playing games together	106 (49.5)	56 (62.2)	50 (40.3)	
Being involved in the child's studies	99 (46.3)	48 (53.3)	51 (41.1)	
Take a walk and exercise together	98 (45.8)	56 (62.2)	42 (33.9)	
Have meals together	88 (41.1)	53 (58.9)	35 (28.2)	
Have conversation	77 (36.0)	48 (53.3)	29 (23.4)	
Take a bath together	23 (10.7)	17 (18.9)	6 (4.8)	
No opportunity	19 (8.9)	2 (2.2)	17 (13.7)	
Children's reactions to seeing their parents working at home(multiple answer) [†]				
Asked me questions about my work	43 (21.0)	23 (27.1)	20 (16.7)	
Told me 'You're great, Mom and Dad'	28 (13.7)	14 (16.5)	14 (11.7)	
Talked about the career they wanted to pursue in the future	21 (10.2)	11 (12.9)	10 (8.3)	
Complained "All you do is work"	12 (5.9)	5 (5.9)	7 (5.8)	
Showed no particular interest	82 (40.0)	25 (29.4)	57 (47.5)	
Did not work in front of child	53 (25.9)	23 (27.1)	30 (25.0)	
It was an opportunity for their children to learn from their parents [‡]				
Agree	63 (29.4)	44 (48.9)	19 (15.3)	<.001
Neither	109 (50.9)	40 (44.4)	69 (55.6)	
Disagree	42 (19.6)	6 (6.7)	36 (29.0)	
It was an opportunity for their children to understand their parents [‡]				
Agree	73 (34.1)	51 (56.7)	22 (17.7)	<.001
Neither	109 (50.9)	35 (38.9)	74 (59.7)	
Disagree	32 (15.0)	4 (4.4)	28 (22.6)	
It was an opportunity for them to understand their children [‡]				
Agree	125 (58.4)	80 (88.9)	45 (36.3)	<.001
Neither	66 (30.8)	9 (10.0)	57 (46.0)	
Disagree	23 (10.7)	1 (1.1)	22 (17.7)	
Enjoyed spending time with their children [‡]				
Agree	142 (66.4)	76 (84.4)	66 (53.2)	<.001
Neither	59 (27.6)	12 (13.3)	47 (37.9)	
Disagree	13 (6.1)	2 (2.2)	11 (8.9)	
Relationship with their children was stressful [‡]				
Agree	68 (31.8)	21 (23.3)	47 (37.9)	.001
Neither	76 (35.5)	27 (30.0)	49 (39.5)	
Disagree	70 (32.7)	42 (46.7)	28 (22.6)	
Relationship with their children had improved [‡]				
Agree	76 (35.5)	54 (60.0)	22 (17.7)	<.001
Disagree	117 (54.7)	30 (33.3)	87 (70.2)	
spending time has not changed	21 (9.8)	6 (6.7)	15 (12.1)	

Number(%)

Chi-square test.

[†]: The number of "Yes"(%). No test had been used due to multiple answers.

[‡]: Agree : those who responded "strongly agree", "agree", Disagree : those who answered "disagree", "strongly disagree."

5) Family relationship and perceptions in life and stress

In relation to family relationship and life, there was a significant difference in the frequency of keeping in touch with others outside the family (15.6% for better than before vs. 6.5% for worse than/same as before, $p=0.015$), but no significant difference was found between the burden related to housework and childcare (43.3% for better than before vs. 37.9% for worse than/

same as before, $p=0.424$).

Looking back over the past year, 58.9% of the respondents reported an increase in physical fatigue, 43.9% reported an increase in financial stress, and 70.6% reported an increase in emotional stress as a result of COVID-19. Parents who felt that family relationship had better than before had a significantly higher sense of physical fatigue, and there was also a significant difference between this and perceptions of

Table 5 Family relationship and relationships with spouse/partner

Items	Total (n=199)	Family relationship		p-value
		better than before (n=84)	worse than/ same as before (n=115)	
Communication with spouse/partner (multiple answer) [†]				
More opportunities to discuss children	70 (36.1)	42 (50.0)	28 (25.5)	
More opportunities to listen to spouse/partner's thoughts and feelings	43 (22.2)	31 (36.9)	12 (10.9)	
More opportunities to talk about their own thoughts and feelings	41 (21.1)	29 (34.5)	12 (10.9)	
More opportunities to discuss the division of housework and childcare	21 (10.8)	12 (14.3)	9 (8.2)	
None of the items applied	102 (52.6)	32 (38.1)	70 (63.6)	
Relationship with spouse/partner was enjoyable [‡]				<.001
Agree	65 (32.7)	42 (50.0)	23 (20.0)	
Neither	91 (45.7)	33 (39.3)	58 (50.4)	
Disagree	43 (21.6)	9 (10.7)	34 (29.6)	
Relationship with spouse/partner was stressful ^{‡§}				<.370
Agree	57 (28.9)	20 (23.8)	37 (32.7)	
Neither	70 (35.5)	33 (39.3)	37 (32.7)	
Disagree	70 (35.5)	31 (36.9)	39 (34.5)	

Number(%)

No test had been used due to multiple answers.

[†]: The number of "Yes"(%). Respondents were as below; better than before=84, worse than/ same as before=110, total=194.

[‡]: Agree : those who responded "strongly agree", "agree", Disagree : those who answered "disagree", "strongly disagree."

[§]: Respondents were as below; better than before=84, worse than/ same as before=113, total=197.

Table 6 Family relationship and perceptions in life and stress

Items	Total (n=214)	Family relationship		p-value
		better than before (n=90)	worse than/ same as before (n=124)	
Burden associated with housework and childcare [†]				.424
Increased	86 (40.2)	39 (43.3)	47 (37.9)	
No change	128 (59.8)	51 (56.7)	77 (62.1)	
Physical fatigue [†]				.049
Increased	126 (58.9)	60 (66.7)	66 (53.2)	
No change	88 (41.1)	30 (33.3)	58 (46.8)	
Financial stress [†]				.071
Increased	94 (43.9)	46 (51.1)	48 (38.7)	
No change	120 (56.1)	44 (48.9)	76 (61.3)	
Emotional stress [†]				.288
Increased	151 (70.6)	67 (74.4)	84 (67.7)	
No change	63 (29.4)	23 (25.6)	40 (32.3)	
Lifestyle changes [‡]				.008
Better than before	47 (22.0)	29 (32.2)	18 (14.5)	
No change	114 (53.3)	42 (46.7)	72 (58.1)	
Worse than before	53 (24.8)	19 (21.1)	34 (27.4)	

Number(%)

Chi-square test.

[†]: Increased: those who answered "increased very much" or "increased"; No change: those who answered "no change" or "decreased" or "decreased very much."

[‡]: Better than before: those who answered "better" or "slightly better"; Worse than before: those who answered "slightly worse" or "worse."

lifestyle changes.

Looking back on the past year in which they were forced to live a life of self-restraint due to COVID-19, some expressed anxiety about their children's future lives, such as "Media time has increased, but I am worried about whether it can be reduced once

COVID-19 settles down." Some of the comments included: "I miss not being able to travel with my child because it is something we can only enjoy together now"; "It was difficult to see the gap between the request for school closure and self-restraint by the children and the request for the same work as before";

“It seems like the adults are doing whatever they want because they are restricted from doing various things only at school”; and “I feel that the children are not allowed to do what they want to do.” Parents expressed sorrow and apologies for the restrictions on their children’s lives and experiences.

On the other hand, parents expressed their hopes for their future family life: “I was impressed that my child became interested in the news and became interested in information about things that she had not been interested in with the flu”; “I am positive that she was born in an age when she encountered unknown viruses and that she was able to face things that she had not had the opportunity to face before, such as differences in values regarding self-restraint”; “The most important thing is that we have more time to spend together as a family, so I think the relationship between parents and children has improved, as well as between sisters and brothers”; “I was able to rediscover my way of thinking about work” (29 cases out of 84 cases). Parents realized the importance of their children’s growth and the life they took for granted, as well as rediscovered the power of family by viewing the time spent together as a family in a positive light.

Discussion

1. Parents’ perceptions of life with child during COVID-19

About 80% of the parents in this study were working parents, and 23.4% of them experienced telecommuting during the COVID-19 pandemic. This was similar to the 26.0% teleworking implementation rate in rural areas reported by the Ministry of Health, Labour, and Welfare.¹²⁾

In terms of the impact of COVID-19 on their children’s lives, parents reported a wide range of concerns about their children during the school closure period, with a particularly high proportion of parents with children in the fourth grade and above. This situation has been reported in previous literature,¹⁰⁾ and it is thought that the disruption to the rhythm of life caused by not going to school during the school closure period may be interfering with the healthy development of children’s minds and bodies. In addition, 24.8% of parents felt that their own lifestyle had also worsened. It has been reported that Japanese people’s lifetime

has regressed due to the self-restraint required during COVID-19,¹³⁾ and both parents and children may have been affected by this in the families in the present study. Furthermore, 40.2% of the respondents felt that the burden of housework and childcare had “increased,” suggesting that the situation in which they had to care for the lives of their children at home while they themselves were working was extremely burdensome.

It was found that parents of school-aged children felt various stresses due to the increased burden at home, as their connection with the community was weakened by the self-restraint lifestyle. Ochiai et al. noted that both parents and children spent more time at home during the school closure period, and the total amount of household chores increased.¹⁴⁾ Hence, we believe that the situation in which there was little change in the division of household roles despite the increase in the total amount of household chores may have been particularly burdensome for the mothers. In addition, in a survey of parents of infants and toddlers, care for children and family, COVID-19 measures, and work were cited as reasons for the decrease in time available for themselves.²⁾ The declaration of the state of emergency forced the closure of elementary schools, and it was thought that educational institutions were facing various difficulties due to the unprecedented situation. Furthermore, approximately 30% of the parents were reported to have moderate or severe depressive symptoms,¹¹⁾ suggesting that decreases in the frequency of interaction with non-family members made parents unable to cope with stress sufficiently, thus increasing their stress.

2. Perceptions in family relationships during the COVID-19 pandemic

It was found that parents who had previously had a variety of experiences with their children and partners felt that COVID-19 had strengthened their family relationship. In the fourth survey conducted by the National Center for Child Health and Development which conducted from November to December 2020, approximately 40% of parents of elementary school children felt burdened regarding childcare,¹¹⁾ but in this study, approximately 30% of parents felt stress in their relationship with their children. This may be due to the fact that the timing of the survey was not during the period of the spread of the infection and that the

responses were requested as a comprehensive look back over the year. It is thought that some parents, despite the burden and anxiety of housework and childcare, were positive that they found meaning in their relationship with their children and were able to have meaningful time as a family because they had more time for their children and their parents. In addition, parents who felt that they had more opportunities to talk with their partners about their children and themselves and enjoyed being involved with their partners felt that their family relationship had strengthened. On the other hand, only 10% of parents discussed the division of housework and childcare, and no association with family relationship was found. It has been reported that men in their forties and older are less gender conscious than the younger generation.¹⁵⁾ Since the parents in this study were mainly in their forties to fifties, it is likely that gender norms regarding the division of housework and childcare were internalized and did not lead to discussion. Therefore, we believe that for the parents, it was not a reexamination of the degree of housework and childcare sharing, but rather a family experience together and mutual understanding of each other that led to a better family relationship.

These findings suggest that stressful situations such as COVID-19 can be an opportunity to grow as a family if we can view various experiences with our families in a positive way. In order to promote experiences, support from nurses in school and classroom teacher for both children and parents is needed including provide information about implementable experiences such as cooking or exercising together.

3. Research limitations

The study covered parents of children attending two elementary schools in the Hokuriku area, and the possibility that the response of the schools during the school closure period may have affected the results

cannot be ruled out, thus limiting the generalizability of the results. In addition, the number of fathers and single parents who responded to the survey was low, and comparisons by gender and family type could not be made. It is considered necessary to increase the number of parents and conduct surveys in multiple regions in the future. Furthermore, since both mothers' and fathers' responses were subjective, it is needed in the future to compare the differences in perception objectively by comparing the respective perceptions through the matched responses of married couples.

Conclusion

The purpose of this study was to clarify the associations between parents' life perceptions and family relationship among school-aged children during COVID-19 pandemic over the past year. The following have come to light given the results of our research:

1. More than 80% of the respondents were working families, and 23.4% of them had experienced telecommuting according to COVID-19. Although there was a slight increase in the household chores of fathers and children during the school closure period, mothers were responsible for more than 70% of the household chores throughout all periods.

2. More than 40% of parents felt that physical fatigue and financial stress had increased, and 70% of parents felt that mental stress had increased.

3. Of the parents in the study, 42.1% felt that family relationship had become better as a result of COVID-19, and the associated factor was that they had gone through various experiences with their children and partners.

These results suggest that if we can recognize our family experiences as positive despite stress, we have an opportunity to grow as families even in difficult situations.

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北陸地方の COVID-19 状況下における学童期の親の生活と家族関係に対する認識

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要 旨

目的:本研究の目的は、COVID-19による休校や外出の自粛が学童期の子どもとその家族にどのような影響を与えていたのか検討するため、学童期の子どもを養育している親を対象に、(1)過去1年間の生活と家族関係の変化に対する認識を調査し、(2)親の生活と家族関係の関連性を明らかにすることであった。

方法:2020年4月16日の緊急事態宣言を受けた全国臨時休業時に小学生であった子どもの親を対象に、2021年5-6月にインターネットを用いたオンライン調査を実施した。調査項目はCOVID-19による生活の変化および子どもや配偶者・パートナーとの関わりに対する認識であった。

結果:214名(回収率38.8%)の親から回答が得られた。COVID-19による在宅勤務の経験があった者は23.4%であった。休校期間には、父親および子どもの家事分担が微増していたが、家事の7割以上を母親が担っていた。4割以上の親が身体的疲労感や経済的ストレスが増えたと感じており、精神的ストレスが増えたと感じた親は70%であった。COVID-19をきっかけに家族関係が良くなったと感じた保護者は42.1%であり、その関連要因は子どもやパートナーと様々な体験を経験したことであった。

結論:学童期の親はCOVID-19状況下により様々なストレスを感じていたが、家族で経験したことをポジティブな経験として認識できれば、困難な状況においても家族として成長できる機会となることが示唆された。