Spending Time with Family Members: How COVID-19 has Changed the Family Member Relationship
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1. INTRODUCTION
The epidemic of COVID-19 does not just limit to affect people’s health condition on their lungs. It has a wider sphere of influence on the social health of people. With the dramatic increases in the number of cases, many regions and people experience a high level of public anxieties and worries [6]. Since the explosion of the epidemic, not only China initiated serious lock-down and quarantine to control the diseases, but also countries around the world have done similar things. One of the most obvious outcomes of month-long lock-down is the increase in time spent with family and family members. There are frequent interactions and communications occurring and relationships between individuals also changed during this time. These close interactions could easily cause or exacerbate tensions [5]. One form of the result of the increase in interaction is the rising of domestic violence around the globe. Children in regions across the world experience a high risk of physical, emotional, sexual, and domestic abuses [9]. An estimation of 1.38 billions children are out of school, according to United Nations Educational, Scientific and Cultural Organization [4]. For those families have low-experience, economic stresses are another reason for the increase of domestic abuses. Another target of the domestic abuses is women in the households. Beijing-based NGO called for protecting women from domestic violence as early as the start of February in 2020 [8]. Anti-domestic violence nonprofit organization in JingZhou, Hubei has reported a three-time increase in domestic violence in February in 2020 compared to previous years [1]. In Britain, Avon and Somerset have experienced an increase of 20% of domestic violence, one week after the COVID-19 lock-down [8]. In the United State, Seattle saw an increase of 21% in domestic abuse since the outbreak of COVID-19 in March [2]. These domestic abuses both targeted females and children in the household. The result of domestic violence further leads to an increase in the divorce rate. China, especially Xi’an, experienced a record high in divorced applicants during the COVID-19 epidemic [7]. What’s more, the lack of scrutiny and consequence from outside grant people who abuse with greater freedom to act [3]. Despite the increase in domestic violence, there are more forms of outcomes of the result of a long period of lock-down. Therefore, this paper analysis the change in the relationship between various family members, which included wife and husband relationship, parent to children relationship, siblings to siblings, and children to grandparents relationship, children to parent relationship and adults to parent relationships. These relationships
experience various degrees of change. The questionnaire that was sent out by the author was designed to investigate in the change of six different family relationships. Questions are asked about degree of changes and comparisons between current relationship to the previous ones. Through the questionnaire that was created by the author, the paper analyzes the effects of spending a long period on the relationship within the family. Respondents also provided with some solution they think are effective in address the issues occur between family members. The study was divided into various age groups and relationship group to better examine the results.

2. RESEARCH METHOD

A questionnaire that contains 116 questions was sent to citizens in Liaoning, China. The questionnaire was created by the author and was aimed to gather information about the change in the various relationship between family members before and during the COVID-19 pandemic. The basic requirement for the respondents of the questionnaire is that they need to live together or have close contact with the family members that they choose to answer in the questionnaire. This can eliminate the decrease in closeness between certain family members because of the lost of communication and interaction. This way the research can better illustrate the effect of family members spending a long time together.

There are five distinctive age groups that cover people who are still students to people who have already retired from work. Moreover, there are six different kinds of family relationships that are focused on in this questionnaire. There are children to parents, adults to parents, siblings to siblings, conjugal relationships, parents to children, and children to grandparents. The respondent was required to define their relationship with other family members before the COVID-19 pandemic. Then the same respondent was required to define their relationship with those family members during the COVID-19 pandemic. Within these five different relationships, more specific questions were asked about some various reasons for the changes or no changes between each family member. Ways of effectively solving the conflicts that occur between family members are also asked. There was a total of 177 responses to the questionnaire.

3. DATA & RESULTS & EXPLANATIONS

The respondents are in five different age groups. So the total of 177 responses is not large enough to provide comprehensive results. In figure 1, most of the respondents are accumulates in age groups of Below 18, 18-30, 30-42, and 42-54. The majority of the respondents are students and adults who are still working.

The first relationship that was examined was the children to parents relationship. All the respondents in this relationship are under age 18. Respondents were asked to rate their relationship with their parents before and during the COVID-19 pandemic in one of the five scales. Figure 2 shows the distribution of the response of children to parents’ relationships. Most of the respondents falls into the more positive relationship categories, with a few in negative relationships category. 50% of the people under age 18 rate their relationship with their parents as Relatively Good.

Then the respondents were asked to rate their relationship with their parents during the COVID-19 pandemic on the same scale. The trend for the relationship appears similar before and during COVID-19. There is an increase of 4.17% and 4.16% in the state of relationship of Relative Good and Good, respectively. Even though there is a increase of 4.16% in the option Bad, the positive increase in Relatively Good and Good outweigh the decreases. Overall, the changes of this kind of relationship show a positive trend.
To examine what happened between people under age 18 and their parents, a further question was asked and the results are shown in figure 3. There are obvious increases in quarrels during the COVID-19 pandemic. There is an increase of 4.17% of Always having "Quarrel with Parents during COVID-19". This trend is developing along "Having Negative Feeling During COVID-19" with parents. There is an increase in negative feelings shows in figure 3. The negative feelings are likely the results of quarrels. Both "Time Spent Together" and "Interaction and Communication" have some increases during COVID-19 compares to before COVID-19 pandemic. What is interesting is the decrease in "Mutual Trust" between children and parents. This increase in interaction leads to a decrease in trust between them. When asking respondents what is the reasons for conflicts arose with parents, Electronic Device Usage and Studying Issues are not major problems. About 60% of respondents do not have any conflicts that result from issues with studying or electronic devices usage during COVID-19. Instead, Living Habits is the main reason why people under age 18 are having conflicts with parents.

The second relationship that the author examined is people over age 18 and their parents before and during the COVID-19 pandemic. The same sets of questions were asked to this group of the respondent. Compare with the first relationship group, this group the respondents are adults and can stay independent of parents. Adults tend to have more respect and care for the parents, especially in Chinese culture. In figure 4, all the respondents report their relationship with parents is in the Fair, Relative Good, and Good status. Not a single respondents report their relationship as Bad or Relative Bad. Both data for Before COVID-19 and During COVID-19 are in the positive state of relationships. There are 4% of the respondents experience a change in relationship with their parents. There is a 4% decrease in Good. However, there is no increase in Bad and Relatively Bad relationships. Thus, the changes are relatively less significant and most relationships remain unchanged. Overall the relationship between people over age 18 and their parents has a positive relationship. Within the respondents of this relationship, 97.4% are under the national retirement age and receive incomes.

Figure 5 demonstrates the closer interaction between adults and their parents before and during the COVID-19 pandemic. Similar to the first relationship, children to parents, there is an increase in "Quarrel with Parents", with about 6.9%. The same patterns also show in figure 5 of the increase in "Having Negative Feeling". However, people over age 18 show a less dramatic change than people under age 18 in relation to their parents. Adults are better at handling issues and conflicts than children overall. "Time Spent Together During COVID-19" and "Interaction and Communication During COVID-19" indicate a clear increase results of the quarantine. Dalian, Liaoning was not heavily affected by the COVID-19 pandemic. Most people were able to stay inside the home with family members. "Mutual Trust" experiences a little decrease during COVID-19 pandemic.
and most parts stay the same. These trends correspond to the results observed in Children to Parents relationships.

![Figure 5](image_url)  
**Figure 5** Adults to parents relationship before and during COVID-19.

The third relationship that the questionnaire focused on is siblings to siblings relationship. Only the people who have spent a long time and had interactions are qualified to answer. The overall state of the relationship between siblings indicates minor decreases in their relationship. It experienced a drop of 5.35% of Good relationships between siblings. Most of data accumulate in the more positive categories and indicates a healthy relationship both before and during COVID-19. Figure 6 shows an increase in Relatively Good status, while the numbers are dropped from Good status. It is reasonable to conclude most of the siblings' relationships remain unchanged.

![Figure 6](image_url)  
**Figure 6** Siblings' view on relationship with their parents before and during COVID-19.

The specific interactions between siblings shows relatively different trends than the previous two relationships. Figure 7 still shows an increase in "Having Negative Feelings" during the pandemic. However, "Quarrel With Siblings" experience fewer changes and some decrease. This trend is different from the obvious increase that shows in relationships with parents of any age group. "Time Spent Together" and "Interaction and Communication" undergo the same trend because of the quarantine. People who live with siblings are forced to have some level of interaction by the restrictions."Mutual Trust", again, shows a different pattern. Instead of the get worse, "Mutual Trust" between siblings during the COVID-19 pandemic experience an increase. This can contribute to the absence of an age gap. The overall change is little towards negative but it results in a closer connection at other perspectives which is mutual trust. This results in partial matches with the author's hypothesis of the positive increase in the relationship during the COVID-19 pandemic.
The fourth relationship is conjugal relationships. This part of the questionnaire is answered by a mix of wives and husbands. The responses are not divided by gender. In all the responses, only 1.69% of respondents experience breakups or divorce. The smaller sample size does not reveal the same level of divorce rate shown in other research papers that focus on the divorce rate during the COVID-19 pandemic. The crude marriage quality in Dalian, Liaoning remains stable. In figure 8, both conjugal relationships before and during COVID-19 appears to show in the positives categories, with some portion in the negative state like Bad.

When looking at the specific relations and interaction within the conjugal relationship, it appears differently than the overall pattern. Both "Quarrels With Partners and", "Having Negative Feeling" experiences a decrease during COVID-19 pandemic than before COVID-19. These data reflect that there are fewer physical and emotional conflicts overall. The number of people choose "Quarrels With Partners During COVID-19" and "Always" decrease 66.8% compared with that of "Quarrels With Partner Before COVID-19". The number of people choose "Having Negative Feeling During COVID-19" and "Always" data also decreases by 50% compared to that of "Having Negative Feeling Before COVID-19". These data indicate positive trends. "Time Spent Together" and "Interaction and Communication" both increase, just like all the previous relationships, because of the quarantine. "Mutual Trust" between partners has a minor increase during the COVID-19 pandemic. In Dalian, Liaoning, it appears the conjugal relationships stayed mostly unchanged. With these conjugal relationships, the issues that caused the most conflicts and problems are on Living Habits and Conflicts of Ideas. 35.84% of respondents have conflicts that resulted from "Living Habits" and 32.07% of respondents have conflicts that resulted from "Conflicts of Ideas". The most agreed method of keeping good conjugal relationships, supported by 85.85% of the respondents, is to "Communicate in a Timely and Adequate Manners". Through effective communications, partners can solve
problems and conflict in their conjugal relationships.

The fifth relationship is parents to children relationships. This part of the questionnaire asks parents' views on their relationship with their children. Figure 10 shows the overall view from parents of their relation to their children. There is an obvious increase and positive trend. There is a 6.49% increase in the option "Good" of their relationship with children. During the COVID-19, the parents to children relationship show a positive trend with the options "Bad", "Relatively Bad" and "Fair" decreasing to 0, 0, and 7.79%, respectively, and the option "Good" increasing to 67.53%. Besides, the proportion of people who consider the relationship as "Relatively Good" stays the same.

The detailed examination of the relationship of parents to children demonstrates the same pattern. As shown in figure 11, "Quarrel With Children" and "Having Negative Feeling" experience decrease during the COVID-19 pandemic. Even though there are some increases in "Always" data for both categories, there are more decreases in the overall examination. There is more increase in the percentage of the "Never" category. Not surprisingly, "Time Spent Together" and "Interaction and Communication" experience increases. "Always" in "Time Spent Together" and "Interaction and Communication" during COVID-19 experience an increase of 12.99% and 9.09% respectively. "Mutual Trust" also experience a large increase during the COVID-19 pandemic. With decreases in "Relatively Bad", "Sometimes", and "Usually" category, "Always" experience a 6.49% increases as shown in figure 11. All the specific interaction demonstrates positive trends on Parents' view on their relationship with their children. Not surprisingly, the two most popular reasons why there are conflicts between parents and children are electronic devices usage and studying issues. With the large scale of online studying during quarantine, parents have the opportunity to monitor children's studying. 24.35% of respondents experience frequent issues with studying issues and 32.05% of them experience frequent issues with electronic devices usage. The most popular way of solving the issues with their children is through the mindset of cherish the time spent together and tolerate each other. 93.59% of the respondents think this is the most useful strategy to solve conflict with their children in comparison to other strategies.
The sixth and the last relationship is children to grandparents relationship. The questionnaire asked children who live or have close contact with their grandparents during the quarantine. Figure 12 shows the distributions are in the positive categories of relationships. The relationship does not change from the overall data and result. Some individuals might experience a change in a relationship that the figure does not account for. The status of the relationship is the same between before COVID-19 and during the COVID-19 pandemic. Overall no changes occur.

The detailed examination of the children to grandparents' relationship still shows a relatively unchanged positive trend. In figure 13, "Quarrel With Grandparents" and "Having Negative Feeling" experience decreases during COVID-19. There are not single data in "Always" of those two categories. This partial is because of the culture of respect for elderly people. "Time Spent Together" and "Interaction and Communication" experience small increases during COVID-19 compared with before COVID-19. Interestingly, "Mutual Trust" experience small decreases. "Usually" and "Always" in "Mutual Trust During COVID-19" both experience drop of 2.94%. The data are similar to the mutual trust between adults and their parents. Relationship with elderly people tends to have a decrease in "Mutual Trust" during the COVID-19 pandemic. It appears in the result of the questionnaire, similar to the Parents to Children relationship, children think the best method to solve issues with grandparents is through the mindset of cherish the time spent together and tolerate each other. 82.35% of the respondents agree with this method in comparison to other methods. Interestingly, the most disagreed method is Similar Viewpoints and Ideas. Respondents think having similar viewpoints and ideas with grandparents is not necessarily useful in keeping a good relationship. It is difficult to have similar ideas with people of large age gaps. Cherishing the time and tolerating each other is the most important thing.
All the respondents were asked to state whether the COVID-19 pandemic has an impact on their relationship with family overall. 64.04% of the respondents state they COVID-19 pandemic has not exerted influence or changes on their relationship with different family members. 28.09% of the respondents state that the COVID-19 pandemic has brought positive influence and changes to their relationships. The relationship between other family members become better. Still, 7.87% of the respondents report COVID-19 to bring a negative influence on their overall family relationship. Their relationships become worse because of the COVID-19 pandemic.

4. DISCUSSION

The purpose of the experiments was designed to examine the change of relationship between family members during the COVID-19 pandemic. Looking at the individual relationship, the author can better examine how the changes varied among different people. The results of the questionnaire partially supported the hypothesis which was quarantine negatively impacted the relationship among family members. The result of the questionnaire can be divided into three categories. The first category are ones that show a different trend than the original hypothesis. The second category is the change of relationship matches with the hypothesis. The third category is the ones with an interesting trend of the overall relationship and specific interactions.

The relationships that belong to the first category are siblings to siblings Relationship, parents to children Relationships. In these two relationships during the COVID-19 pandemic, a clear and positive trend appeared in their relationships. From their overall rating of the relationship to specific interaction within the relationship, most people in this category experienced a good time. One reason that contribute to the increase in relationships between siblings is due to the lack of age gap. Siblings share the same ideas and values so they can communicate and understand each other better. They would share more of their secrets and personal information. With the parents to children relationships, most the parents in China has a tendency to give more attention and care to their children. They would feel they are having a close relationship even though it is perfectly true in reality. This category contradicts with the author’s original hypothesis which COVID-19 quarantine negative impact on the family relationship. This shows different relationships might have a different trends. The original hypothesis was based on the previous reports on the increase of domestic violence and divorce rate. The results from this questionnaire show more carings and positive attitudes. The no conflicts of interest among these two relationships might contribute to the positive change of their relationship during COVID-19 pandemic.

The second category includes conjugal relationship. Although most of the conjugal relationships are in good condition, still there is a decrease in their relationship condition from the result of the questionnaire. More interactions indeed happen, but there is a minor increase in quarrels. This result fits with the previous research on domestic violence conduct by other researchers. In Xi’an, there was a record-high increase in divorce applications [7]. The increase in conflicts and dissatisfaction through the frequent contact between people worsen their relationship. The author’s own data do not show a clear pattern but a slight trend. This might due to the small sample size. For most the responses, Liaoning, China shows a relatively unchanged relationships. There weren’t any major economic issues which was reported by respondents as their main causes of conflicts. Nonetheless, most husbands and wives in Liaoning, China appears to be relatively happy and peace. Liaoning was not a area that severely impacted by the pandemic.

The third category includes children to parents relationship, adults to parents relationship, and children to grandparents relationship. These three relationships show an increase in their closeness of relationship during the COVID-19 pandemic, except for children to grandparents relationship which is approximately unchanged with a slight increase. Among all the positive increase interaction and relationship, their mutual trust goes the opposite way. Despite the
decrease in conflicts and an increase in communication and interaction, mutual trust experiences a clear decrease. The decrease in mutual trust could be correlated with a decrease in quarrel and having negative feeling. The reason for decrease in quarrel and having negative feeling could be family members share less of their personal opinion an express less of their altitude. As family members share less of their real feeling, mutual trust also decreases as a consequence. The author previously did not expect this result, so there is no further part of the questionnaire that invest in for what reasons the mutual trust decreases. Another thing that is worth noticing is the type of relationship in this third category. All of the three relationships that include in this category are children to parents relationship. Children, due to their relatively young age, have more temper and opinion, especially for teenagers. Unlike children, adults are thoughtful and show less attitude toward parents. Partially because some of them are parents and the embedding Chinese culture teach them to show respect and trust to adults. Children are taught to have no complaints or attitudes toward their grandparents. They need to always show respect and cares to grandparents. The conversation around grandparents is mostly greeting and chat around domestic trivia. Still, there is a tendency of lack of in-depth communications in younger generations to older generations. The conversation around grandparents or older generations is mostly greeting and chat around domestic trivia. Younger generations would share as much as personal feelings and thoughts to older generations as they would to same generations. The age gap between family members also plays a role in affecting the change in family relationships. The relatively small overlap sample size and a small individual sample of the questionnaire don’t have strong evidence to support the author’s prediction of the trend. Further questions about why mutual trust decrease and children’s general altitude to adults and elder need to be investigated.

The questionnaire reaches its potential and target subjects. The sample size for some individual relationship is not large enough to a valid conclusion. Another point worth noticing is the continuity of the COVID-19 pandemic. COVID-19 pandemic is still happening across the world. The impacts of COVID-19 is still growing in a different household. It could be too early to draw a strong conclusion about the change that COVID-19 brings to people. A better result could be found when the COVID-19 pandemic is over for most places around the world.

5. CONCLUSION

This paper mainly focuses on the change of family relationship during the COVID-19 pandemic compared with the previous time and several potential factors that contribute to the changes. Through the questionnaire, the author can analyze some trends and patterns in the six relationships. Change of the relationship and specific interactions that occurred between family members are observed. At the same time, possible solutions to address the conflicts between family members are also proposed by the respondent in the end part of the questionnaire. The importance of this paper is to examine the current quality and state of the modern family. In the fast-paced society, people spend relatively less time with their families compare to the past. This long quarantine is a chance to examine and challenge their relationship and closeness. People might find some deficiencies and issues that are not previously exposed. Problems can only be fully exposed from long time interaction. Some close interaction could bring more closeness because the decrease in secrets and be more open to each other. And some people would show less of their real feelings which bring further away from their family members. The author divides the respondents into different age groups to help the author better examine how different people react differently. Children age under 18 would act differently than adults who are still working. This division of age group gives higher accuracy. Nonetheless, the relatively small sample size did not provide enough and convincing evidence for the pattern that was observed in the questionnaire. Furthermore, some relationships that can happen across ages, like siblings to siblings (both people under 18 or above 18 can have siblings), the questionnaire did not divide those up among the same relationship. This might affect accuracy. For further research, closer interaction and communication should be recorded. This way the research could examine in-depth about the causes of those results. Complete research should be done when the COVID-19 pandemic is ended. The COVID-19 pandemic is still going so people’s relationship is still changing. The respondents and researchers could provide and present a more comprehensive explanation.

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