

Psychological Study on the Relationship between Covid-19-Related Stressors and Child Maltreatment

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Abstract

Introduction: It is common knowledge that during catastrophes and disasters, children are a vulnerable demographic. The COVID-19 epidemic, like a usual catastrophe, created uncertainty and uncertainty in the social and financial growth of the community and public estrangement, which might result in child abuse. The purpose of this research is to determine how parenting and factors like job loss, decreased income, and parenting style impact child abuse.

Methods: Between May 29 and June 16, 2020, we performed a cross-sectional online survey with 600 casually selected parents in Hong Kong, age 18 or older, who had and resided with a kid under the age of ten. A panel of parents' mobile phone numbers was chosen at random to form the participant list. After getting their online agreement to participate in the survey, 600 out of the 779 employed aim parents successfully finished the study using a web-based approach.

Results: Work loss or significant salary decrease were also strongly connected to serious (odds ratio OR= 4.68, 95% confidence interval CI = 2.35, 11.20) and serious physical attacks (OR= 3.06, 95% CI = 2.19, 14.09) against children, but neither of these variables was significantly associated with mild physical assaults (OR = .30, 95% CI = .16, .54) or serious physical attacks (OR = 8.70, 95% CI = 3.25, 27.43).

Conclusions: Financial instability, such as a drop in income or a loss of employment, increased the probability of severe and extremely serious physical attacks but guarded kids against physical abuse. Also, there was a strong negative correlation between using physical punishment during the pandemic and the ability to successfully manage preventive COVID-19 behaviors with children and teaching COVID-19.

Keywords: Covid-19, child, maltreatment, stressors, parenting, income instability

1. Introduction

In practically every aspect of parents and children's life, COVID-19 has presented new difficulties. There is a chance that parental stress may grow as a result of economic hardship, physical and mental health issues, difficulties with homeschooling, juggling work and personal obligations, children's maltreatment, and violence. The likelihood of child abuse is anticipated to be rising, given that stress has grown during the COVID-19 epidemic, and the majority of kids are remaining home. Recently, discovered that during the first two weeks of the epidemic, parents shouted at their kids with greater frequency than they did before the outbreak (Wu and Xu, 2020). For parents who do continue to work, moreover, one-third (35%) say they find it difficult to manage childcare obligations. Many people now have to juggle working from home while still being parents and homeschooling their children full-time. Those who do continue to work outside the house are likely to do so in establishments like pharmacies, clinics, grocery shops, and hospitals that expose them to high levels of personal danger. These elements are probably leading to a great deal of stress in the home environment for all families (Griffith 2022).

However, not all parents who are exposed to accumulated stress from COVID-19 are going to be in danger of greater perceived tension or ineffective being a parent, indicating that shielding variables may lessen the effect of COVID-19 on parent stress and the possibility of child mistreatment. Particularly, supportive family settings and adaptive coping mechanisms may operate as protective variables for relationships under stress and may

differently impact the likelihood of abuse (Brown et al., 2020). Child abuse has detrimental effects on a child's health, including early death, morbidity from chronic disease, and mental health issues. COVID-19 is regarded as a natural disaster that has interrupted society's functioning and economic activity, causing bad economic circumstances and employment losses. Child physical and psychological abuse has a history of increasing during times of crisis and economic recession (Kisely et al., 2018).

There hasn't been any information released as of this text, however, on how the COVID-19 epidemic has affected child abuse because of unstable jobs or income. The pertinent results are important for guiding rules and procedures for when under what situations circumstances to prevent or intervene in child maltreatment (Schneideet al., 2017). Additionally, several studies have shown links between parenting styles and financial volatility, with the ensuing impact on the development and health of children. Although there is no suitable investigation study exploring the connection between parenting challenges and self-assurance about health, teaching about COVID-19 child abuse and children exists (Campbell 2020). People are experiencing more stress as a result of anxieties about their own and their loved one's health, as well as concerns about their job security and financial difficulty. However, the degree to which COVID-19 is seen by various people as stressful may vary significantly. The degree to which stressful life circumstances are perceived in a given setting is known as perceived stress. This subjective impression may also be useful in predicting post-stress-exposure psychopathology (Eguren et al., 2023). In this study, we attempt to answer the inquiry of whether work loss or decreased income could impact the maltreatment of children, including both mental and physical abuse, spanking, and severe and extremely serious assaults. We also clarified the conflicting evidence regarding the connection between child maltreatment and COVID-19. We also looked at how parental factors, such as self-assurance in schooling and management of preventative COVID-19 attitudes with children, can impact child abuse.

Following is the remainder of the paper: Related studies are discussed in section 2, the suggested method is presented in section 3, the results and discussion are presented in section 4, and section 5 presents in the paper's conclusion.

2. Literature Review

Kılıme et al., 2022 aimed at recent psychological investigations that have shown that child abuse is a concern during the COVID-19 pandemic and that unfavorable factors increase the probability of mental health issues developing. The connection between psychological abuse and behavioral factors is complicated, however. For those who offer mental health services, understanding the variables that may aid with treatments is a crucial first step. Lawson et al., 2020 looked at research on child maltreatment (CM) in the context of COVID-19 that was published in peer-reviewed publications between March 2020 and October 2020. 25 papers, mostly from the United States but with three researches from other countries, satisfied the inclusion criteria. The bulk of the research used CM reports from COVID-19 that were based on verified information.

The COVID-19 epidemic has faced young people with unexpected difficulties and interruptions in a number of spheres of their lives. The present research looked at how stresses connected to COVID-19 affected young individuals' feelings of sadness and anxiety as well as their contentment with life. Within-person connections among each stressor category and mental health/well-being were identified using multilevel models; young people reported higher levels of depressive/anxiety feelings and worse life satisfaction during months when stressors were comparatively more prominent (Graupensperger et al., 2022). Mental health issues and stress are now compounded by the COVID-19 epidemic. One effective way to lessen perceived stress at home is to plant. The available study data is inadequate to comprehend the connection and influencing elements between intentions, actions, and the advantages of home gardening during brief COVID-19 occurrences. Even though the epidemic only occurred in Taiwan from May to June 2021 for 1.5 months from the beginning to the consolidation of the epidemic, the major pandemic alterations may have had an impact on how stress was experienced as well as the intents, actions, and advantages of home gardening (Wu et al., 2022).

For calculating various profiles of people's suffering associated with COVID-19, a latent profile analysis (LPA) was used. Next, profiles were contrasted in terms of relationship satisfaction, psychopathology, perceived social support, and childhood maltreatment (Hynes et al., 2022).

Child abuse is known to increase in frequency and severity during periods of high stress, and the COVID-19 epidemic brought up severe concerns about this issue. In order to simultaneously analyze changes in the identification and medical evaluation of abuse accusations from before to during COVID-19, a variety of data sets were employed in this research. This shows that the pandemic was linked to a rise in maltreatment instances severe enough to need medical assessments or maybe a rise in the relative number of serious cases discovered (Metcalf et al., 2022). Baron et al., 2022 investigated a hitherto unresearched effect of COVID-19 school closures: the disruption of the relationship between child abuse victims and school officials, the main source of recorded claims of abuse. They calculate a counterfactual distribution of complaints of child abuse during the first two months that Florida schools were closed in 2020, March, and April, using current, county-level data from Florida.

Dion et al., 2022 were to ascertain if the association among CM and health was mediated by distress related to COVID-19. In comparison to females, boys had a bigger decline in life satisfaction and self-esteem. The pandemic had a moderate effect on teenagers with a history of CM, who saw fewer negative effects from it. However, it was linked to a rise in COVID-19-related anxiety. The use of the Pediatric Health Information System was made in a retrospective, cross-sectional research (He et al., 2022). By comparing those who presented during the same period in the years 2016-2019 to those who presented during the same period in 2020, a time-series reconstruction analysis evaluated the impact of the COVID-19 pandemic on the number of children under 15 who presented with physical child abuse to children's hospitals from March 1 June 30 of that year. ICU admission, traumatic brain damage, death, and the chance of surgical intervention were all evaluated using hierarchical regression models (Hails et al., 2022)

3. Methodology

In this section, we discuss the connection between stresses associated with COVID-19 and the maltreatment of children. Child abuse has detrimental effects on a child's health, including early death, morbidity from chronic disease, and mental health issues. COVID-19 is regarded as a natural disaster that has interrupted society's functioning and economic activity, causing bad economic circumstances and employment losses. Child physical and mental abuse has historically increased during times of crises and economic recession.

3.1 Data collection

From May 29 to June 16, 2020, we carried out a cross-sectional online study with parents who met the following criteria: they were residents when the census was taken in Hong Kong, they were at least 18 years old, they were able to Chinese reading, they were engaged or cohabiting, and they had and were living with a child or children under the age of 10. Parents who were not mentally ready were not allowed. Messages by text were used to deliver invitations to participate to a casual selection of telephone numbers in order to produce a board of parents. Before the study's launch, those selected parents were required to read a page of paper outlining its goals and ethical concerns. Table 1 shows the participant's characteristics. The selected parents would then get an email or text message with a link to a computer-assisted online interview system where they could access the questionnaire and self-administer it. Before the poll began, informed permissions were gathered online. To evaluate and improve the questionnaire design, pilot research involving 10 participants was carried out. 600 target parents out of the 779 that were recruited to successfully complete the survey responded, for a rate of response of 77.0%.

Table 1: Features of participants

variable	Total (n = 600)	Fathers (n = 184)	Mothers (n = 416)	t-Test/Mann-Whitney U Test
	n (%) / Mean ± SD	n (%) / Mean ± SD	n (%) / Mean ± SD	p-Value
Age	37.1 ± 6.3	40.1 ± 8.5	37.2 ± 5.0	<0.001 *
Monthly Household				

income				0.35
HK\$20,000 or less	43 (6.7%)	12 (6%)	28 (7.4%)	
HK\$40,000-HK\$20,001	303 (50.4%)	87 (46.8%)	217 (52.1%)	
HK\$40,001 or above	260 (45%)	86 (46.4%)	174 (42.2%)	
Achievement in education	-	-	-	0.25
lower secondary level	404 (69%)	119 (63.8%)	287 (69.6%)	
At least the tertiary level	199 (34%)	68 (36.5%)	132 (32.5%)	
Changes in the economy during COVID-19				0.51
No modification/increase	353 (58.8%)	87 (47.3%)	268 (64.3%)	
decreased income	152 (25.3%)	63 (34.9%)	90 (21.5%)	
Either a job loss or a 50% income reduction	98 (16.2%)	39 (21.3%)	61 (14.6%)	
HLS-EU-Q16				.34
Insufficient (0–8)	46 (8.6%)	22 (12.1%)	27 (8%)	
Problematic (9–12)	62 (10.2%)	17 (9.8%)	46 (10.9%)	
Sufficient (13–16)	495 (82.4%)	149 (81.5%)	347 (83.3%)	
Parenting	-	-	-	-
The difficulty of bringing up COVID-19-related topics with children (0–10 level)	2.9 ± 2.2	3.1 ± 1.8	2.8 ± 2.2	0.12
The degree to which your kids feel confident putting health-related habits into practice (0–10 level)	8.7 ± 1.8	8.2 ± 2.7	7.9 ± 1.9	<0.0002 *
Parental time at the house (between 0 and 7 days)	3.6 ± 1.9	2.9 ± 1.8	3.9 ± 1.7	<0.0001 *

3.2 Analysis of data

Data verification processes were carried out prior to data analysis in order to evaluate the correctness of the input, fill in any missing values, and validate the assumptions of regression models. All the research variables' frequencies, means, and standard deviations (SD) were described using descriptive statistics. Child abuse was a dependent component in logistic regression, with participant age, gender, changes during the COVID-19 outbreak, parent's financial situation, health knowledge, and parental psychological distress, intimate partner violence (IPV), level of trouble in talking about COVID-19-related problems along their children, and level of

trust in their kids putting related to health actions into practice as independent variables. In order to analyze the data, SPSS 24.0 was employed. Each predictor's impact was shown by its 95% CI, and OR along with a determination of its statistical significance. Utilizing the Nagelkerke R², the resulting models using logistic regression were assessed using the goodness-of-fit test, Cox and Snell R², and Hosmer and Lemeshow.

3.3 COVID-19 Related Stressors

In COVID-19 income fluctuation (Jan. to April 2020): One question inquired as to whether the parent's income had changed. The outcomes were a loss of employment, a significant income decrease, a 50% income drop, a modest income decrease, no variation, or a gain in earnings.

Being a parent and self-assurance about COVID-19: In one question, parents were asked how challenging they found it to talk to their kids about COVID-19. The replies were graded on a scale of 0 to 10, with 0 denoting no difficulty at all and 10 denoting very difficult. In one question, parents were questioned about their degree of trust in using COVID-19 as a preventative measure. The ratings ranged from 0 to 10, with 10 being very confident and 0 meaning no confidence at all.

Relationship between a parent and their child during COVID-19: The connection between child maltreatment and violence towards intimate partners is recognized in the literature. The parent's connection to his or her spouse was also evaluated, specifically for any evidence of IPV. The Abuse Evaluation Screen's Chinese translation was used to evaluate IPV. It included three questions to determine if the parent had experienced psychological harm, bodily harm, or being compelled to engage in sexual activity during COVID-19.

Parental time spent at home during COVID-19: We were interested in learning if parental time spent at home contributed to various forms of child maltreatment. One question questioned a parent's average number of days off weekly stayed at home (the answer options were 0 to 7 days).

Distress in the mental health of the parent during COVID-19: The Patient Health Questionnaire-4 was used to measure the parent's mental health over the previous two weeks and offered a sign of anxiety and symptoms of depression.

3.4 Child Maltreatment during COVID-19

We assessed instances of child maltreatment, such as (a) psychological abuse, (b) punishment by force, (c) significant physical abuse, and (d) extremely harsh physical assault, utilizing the Chinese version of the Conflict Tactics Scale-Parent Child (CTSPC) scale. We requested the parent's oldest child, who was under ten years old, to report any improper behavior. Figure 1 shows the covid-19's depiction of child abuse.

- Psychological aggression includes the following: making threats to hit or spank the child without actually doing so, shouting, yelling, or screaming at the child, cursing or swearing at the child, calling the child names like dumb or lazy, and threatening to send the child away from the house.
- Corporal punishment includes the following: spanking the person with your bare hands, hitting the person on the bottom with a belt, hairbrush, stick, or other hard object, slapping the person on the hand, arm, or leg, pinching the person, and shaking the person
- Severe physical assault includes the following: slapping him/her on the face, head, or ears, striking him/her with something other than the bottom of the body, such as throwing or knocking down the victim, striking or kicking the victim hard, and slapping the victim on the face, head, or ears are all examples of violent methods of attack.
- Extremely violent physical abuse, such as beating him/her up, which means hitting him/her as hard as you can, grabbing him/her by the neck and choking him/her, intentionally burning or scalding him/her, threatening him/her with a knife or gun, and beating him/her up, which means hitting him/her as hard as you can.

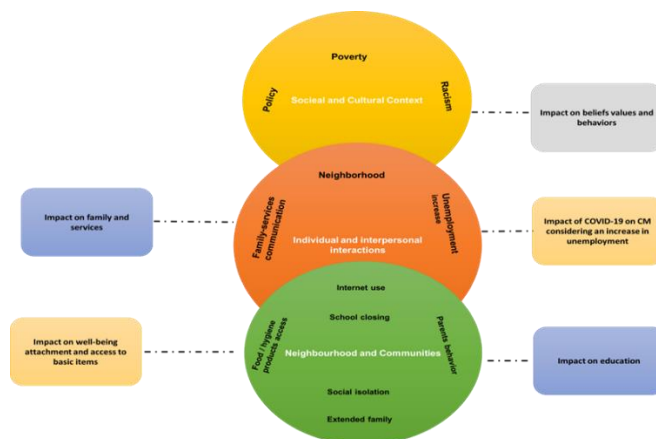


Figure 1: Child maltreatment of the covid-19

4. Result and discussion

In this section we discuss the finding of the changes in maltreatment of children that were self-reported during COVID-19, Analysis using logistic regression, Child maltreatment type, Covid-19 stressor, and percentage of people stress.

4.1 Changes in maltreatment of children that were self-reported during COVID-19

In general, during COVID-19, there were no significant differences in the occurrence of physical and psychological abuse, as well as severe and very severe physical assault (Table 2). 74 parents reported using physical punishment on their children at the same or a comparable frequency, 14 parents reported using it more often, and just one parent reported using it less frequently. In terms of psychological aggressiveness, only 6 parents indicated reduced frequency, while 22 parents reported increasing frequency. 226 parents reported the same or comparable frequency.

Table 2: Maltreatment of children that were self-reported during COVID-19

	Never	Same or Similar Frequency	Higher Frequency	Reduced Frequency
	Number	Number	Number	Number
Severe physical assault	574	18	7	1
Corporal punishment	511	74	14	1
Psychological aggression	346	226	22	6
Very severe physical assault	579	15	6	0

4.2 Analysis using logistic regression

The outcomes of the logistic regression results are shown in Table 3. Income loss was shown to be substantially correlated with both severe and extremely harsh physical attacks on children (OR = 3.27, 95% CI = 1.07, 10.26). Major associations between severe and extremely harsh physical attacks on children (OR = 4.06, 95% CI = 1.18, 14.09) and job loss or major income drop were also found. However, decreased psychological aggressiveness was substantially linked with lower income (OR = .30, 95% CI = .16, .56) and work loss (OR = 0=.48, 95% CI = 0=.29, .77). Similar trends were seen in the associations among the days in a week spent weekly at house and

other serious physical attacks (OR = 2.47, 95% CI = 2.13, 1.93; OR = 1.48, 95% CI = 1.08, 2.05; and less emotional aggressiveness (OR = 0.88, 95% CI = 0.78, 0.98); and extremely serious physical attacks (OR = 1.48, 95% CI = 1.08, 2.05). The use of physical punishment was not linked to a decline in earnings or loss of employment.

Parental exposure to IPV was a very powerful and important factor that was linked to physical abuse, severe and very severe attacks against children (OR = 11.59, 95% CI = 3.86, 39.20), and emotional hostility (OR = 11.73, 95% CI = 7.05, 16.32). In terms of parenting difficulties, greater physical punishment was strongly connected with higher difficulty levels in addressing COVID-19 with children, but no other child maltreatment. Lower abuse of children, including physical punishment (OR = .86, 95% CI = .78, .98) and extremely serious physical mistreatment (OR = .73, 95% CI = .59, .94), was shown to be substantially linked with a higher degree in managing with assurance preventative COVID-19 attitudes toward children.

Table 3: Child maltreatment is predicted via logistic regression analysis

Variables	Punishment of Corporal			A serious physical assault			Extremely Serious Physical Attack			Emotional Violence		
	OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI	
		Below	High		Below	High		Below	High		Below	High
Gender												
Women	2.00			2.00			2.00			2.00		
Men	0.96	0.56	1.65	1.88	0.74	4.76	1.84	0.64	5.32	0.71	0.45	1.13
Age	2.03	0.99	2.06	2.04	0.98	2.07	2.06	0.99	2.12	2.06*	2.02	2.07
Literacy in Health (HLS-EU-Q16)	.99	.95	2.05	.99	.87	2.08	1.04	.90	2.13	1.05	.95	2.08
Change in economic status												
No change or improvement	2.00			2.00			2.00			2.00		
decreased earnings	1.27	0.62	2.62	3.30*	1.07	10.26	7.98*	2.26	26.42	0.30**	0.17	0.55
job loss or a significant decrease in income	1.29	0.75	2.24	3.70*	1.38	10.20	4.08*	1.20	14.10	0.50*	0.30	0.80
loss of employment or significant income decline	0.95	0.85	1.15	1.50*	1.15	1.95	1.49*	1.09	2.05	0.87*	0.78	0.99
Anxiety												
No	1.00			1.00			1.00			1.00		
Yes	3.73**	2.20	6.35	6.70	2.25	19.20	10.60**	2.87	39.22	10.73**	7.05	16.31
Depression												
No	1.00			1.00			1.00			1.00		
Yes	0.50	0.16	1.73	1.15	0.24	5.73	0.27	0.03	2.95	0.78	0.28	2.15

The difficulty of bringing up COVID-19-related topics with your kids (0–10 level)	1.20*	1.03	1.35	1.25	0.97	1.53	0.94	0.73	1.24	1.00	0.93	1.14
Level of assurance that your kids will follow the recommended health habits (0–10 level)	0.90*	0.77	0.98	0.87	0.67	1.06	0.75*	0.59	0.94	0.92	0.83	1.04

4.3 Child maltreatment type

Different types of child maltreatment, such as physical, sexual, emotional, and emotional abuse, neglect, and exposure to domestic violence, are linked to serious negative consequences on mental and physical health as well as risky behavior. However, the majority of research examines the bidirectional correlations between a person's maltreatment kind and health indicators. Researchers and doctors risk attributing results incorrectly to one form of maltreatment if the whole of a person's experience with all types of maltreatment is not evaluated. Figure 2 and table 4 denote the type of child maltreatment and their levels. Furthermore, it is impossible to simply aggregate the results ascribed to different kinds of maltreatment to comprehend the effects of a combination of maltreatment.

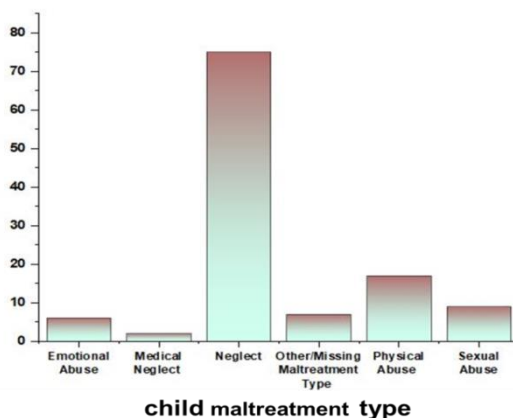


Figure 2: Type of child maltreatment

Table 4: Child maltreatment type

Child maltreatment type	Value (%)
Emotional Abuse	6
Medical Neglect	2
Neglect	75
Other/Missing Maltreatment Type	7
Physical Abuse	17
Sexual Abuse	9

4.3 Covid-19 stressor

All of the participants were questioned about whether they had encountered any stresses in the six categories of physical health, mental health, family/interpersonal relationships, work/financial, education, and everyday life throughout the previous month while the COVID-19 pandemic. The self-report stress views of life or personal health circumstances were mirrored in every area of the questions. Figure 3 demonstrates the COVID-19 stressor. For instance, the term "physical health" refers to a person's overall sense of their well-being. The purpose of these categories was to represent typical stressors during the COVID-19 crisis. "Yes" or "No" responses received one point each.

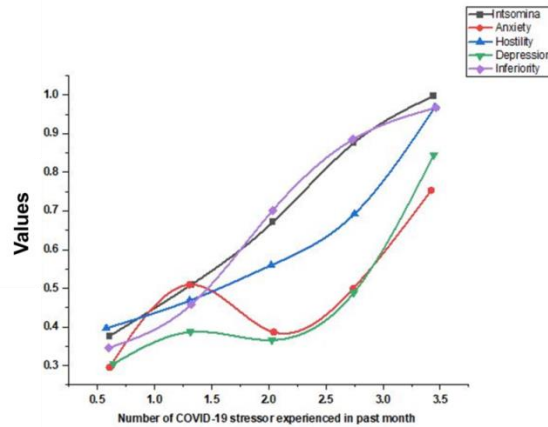


Figure 3: Covid-19 stressor

4.4 Percentage of People stress

Even after accounting for pre-COVID-19 results, the average decline from T1 to T2 was still statistically significant (p 0.01). Only 3.5% of participants reported significant stress before COVID-19, compared to 22.4% 12.2% at T2, and 12.5% at T1 (Figure 4). 71.1 percent of respondents indicated An upgrade in people's special pressure from the past COVID-19 to T1, and 55% of respondents reported an increase from T1 to T2. At T1, 85% of respondents said it was at least slightly challenging to go on as they had before COVID-19, and 45% said people were more difficult at T2 than it was at T1. Table 5 denotes the percentage of people's stress during covid-19.

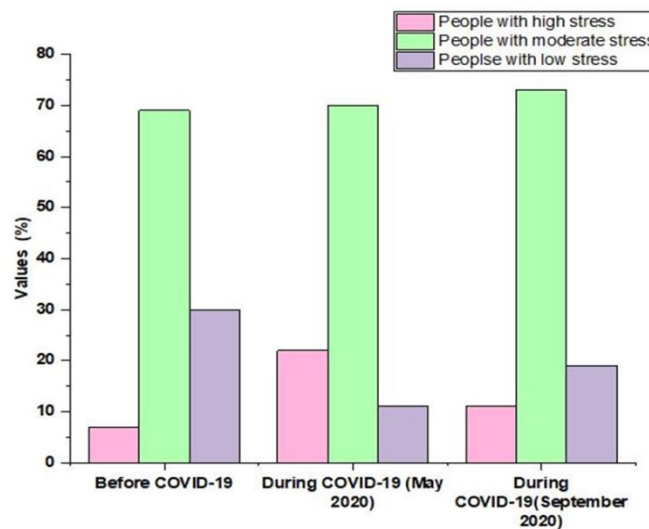


Figure 4: Percentage of people's stress

Table 5: Percentage of people's stress

	People with	People with	People with low
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	high stress (T1)	moderate stress (T2)	stress (T3)
Before COVID-19	7	69	30
During COVID-19 (May 2020)	22	70	11
During COVID-19 (September 2020)	11	73	19

Discussion

This is the first research to look at how the COVID-19 pandemic affected income, employment, parenting challenges, and health confidence. According to participant reports, an extremely large little rise in maltreatment of children overall throughout the epidemic (1-3.7% increase across the board). But even after taking into consideration the sex and age of the parents, these preliminary findings revealed that growing financial instability and social isolation practices coupled with extended lives at home significantly raised the potential for severe and extremely harsh physical abuse in children. In comparison to parents who had no modification or even a gain in income, parents who had a large fall in income or job loss as a result of the COVID-19 epidemic were roughly two to three times more likely to physically abuse their children during the pandemic.

Another cross-sectional investigation done in the United States that found that losing a job increased the incidence of child physical assaults confirmed these conclusions. However, contradictory results involving child psychological aggressiveness were found in the same research. The previous research discovered that parents one of the issues was job loss indicators of psychology in children's aggressiveness, while in our present study in the Chinese people, it was a protection of child emotional violence. Additionally, we discovered that social distancing practices forced parents to remain at home for extended periods of time, which acted as a buffer against the kid's psychological aggression.

5. Conclusion

In the COVID-19 epidemic, child maltreatment was reported to have somewhat risen. Children were shielded from psychological violence but were at increased danger for severe and very severe physical assaults due to financial instability, including financial decrease and loss of work. Furthermore, the use of physical punishment during the pandemic was strongly adversely connected with both the ability to manage preventative COVID-19 attitudes toward children and confidence in teaching COVID-19. Our research also revealed that during the COVID-19 epidemic, IPV can increase the likelihood of child abuse. Finally, given the proposed logistic regression model, more additional variables leading to physical abuse during the COVID-19 pandemic will need to be identified in future study.

References

- [1] Baron, E.J., Goldstein, E.G. and Wallace, C.T., 2020. Suffering in silence: How COVID-19 school closures inhibit the reporting of child maltreatment. *Journal of public economics*, 190, p.104258.
- [2] Brown, S.M., Doom, J.R., Lechuga-Peña, S., Watamura, S.E. and Koppels, T., 2020. Stress and parenting during the global COVID-19 pandemic. *Child abuse & neglect*, 110, p.104699.
- [3] Campbell, A.M., 2020. An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic science is international: reports*, 2, p.100089.
- [4] Dion, J., Hamel, C., Clermont, C., Blackburn, M.È., Hébert, M., Paquette, L., Lalande, D. and Bergeron, S., 2022. Changes in Canadian adolescent well-being since the COVID-19 pandemic: the role of prior child maltreatment. *International journal of environmental research and public health*, 19(16), p.10172.
- [5] Eguren, A., Cyr, C., Dubois-Comtois, K. and Muela, A., 2023. Effects of the Attachment Video-feedback Intervention (AVI) on Parents and children at risk of maltreatment during the COVID-19 pandemic. *Child Abuse & Neglect*, 139, p.106121.

- [6] Graupensperger, S., Calhoun, B.H., Patrick, M.E. and Lee, C.M., 2022. Longitudinal effects of COVID-19-related stressors on young adults' mental health and wellbeing. *Applied Psychology: Health and Well-Being*, 14(3), pp.734-756.
- [7] Griffith, A.K., 2022. Parental burnout and child maltreatment during the COVID-19 pandemic. *Journal of family violence*, 37(5), pp.725-731.
- [8] Hails, K.A., Petts, R.A., Hostutler, C.A., Simoni, M., Greene, R., Snider, T.C. and Riley, A.R., 2022. COVID-19 distress, negative parenting, and child behavioral problems: The moderating role of parent adverse childhood experiences. *Child Abuse & Neglect*, 130, p.105450.
- [9] He, Y., Ortiz, R., Kishton, R., Wood, J., Fingerman, M., Jacobs, L. and Sinko, L., 2022. In their own words: Child and adolescent perceptions of caregiver stress during early COVID-19. *Child Abuse & Neglect*, 124, p.105452.
- [10] Hynes, K.C., Tambling, R.R., Russell, B.S., Park, C.L. and Fendrich, M., 2022. A latent profile analysis of the COVID-19 Stressors Scale. *Psychological Trauma: Theory, Research, Practice, and Policy*, 14(4), p.705.
- [11] Kılınç, M., Arslan, G., Çakar, F.S. and Yıldırım, M., 2022. Psychological maltreatment, coping flexibility, and death obsession during the COVID-19 pandemic: a multi-mediation analysis. *Current psychology*, pp.1-9.
- [12] Kisely, S., Abajobir, A.A., Mills, R., Strathearn, L., Clavarino, A. and Najman, J.M., 2018. Child maltreatment and mental health problems in adulthood: birth cohort study. *The British Journal of Psychiatry*, 213(6), pp.698-703.
- [13] Lawson, M., Piel, M.H. and Simon, M., 2020. Child maltreatment during the COVID-19 pandemic: Consequences of parental job loss on psychological and physical abuse towards children. *Child abuse & neglect*, 110, p.104709.
- [14] Metcalf, S., Marlow, J.A., Rood, C.J., Hilado, M.A., DeRidder, C.A. and Quas, J.A., 2022. Identification and incidence of child maltreatment during the COVID-19 pandemic. *Psychology, Public Policy, and Law*, 28(2), p.267.
- [15] Schneider, W., Waldfogel, J. and Brooks-Gunn, J., 2017. The Great Recession and risk for child abuse and neglect. *Children and youth services review*, 72, pp.71-81.
- [16] Wu, C.F., Chou, L.W., Huang, H.C. and Tu, H.M., 2022. Perceived COVID-19-related stress drives home gardening intentions and improves human health in Taiwan. *Urban Forestry & Urban Greening*, 78, p.127770.
- [17] Wu, Q. and Xu, Y., 2020. Parenting stress and risk of child maltreatment during the COVID-19 pandemic: A family stress theory-informed perspective. *Developmental Child Welfare*, 2(3), pp.180-196.